

Building population resilience in Tasmania

The pandemic and beyond

**Research report for the
Department of State Growth**

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Acknowledgment of Country

The University of Tasmania pays its respects to elders past and present and to the many Aboriginal people that did not make elder status and to the Tasmanian Aboriginal community that continues to care for Country.

We acknowledge the profound effect of climate change on this Country and seek to work alongside Tasmanian Aboriginal communities, with their deep wisdom and knowledge, to address climate change and its impacts.

The Palawa people belong to one of the world's oldest living cultures, continually resident on this Country for over 65,000 years. They have survived and adapted to significant climate changes over this time, such as sea-level rise and extreme rainfall variability, and as such embody thousands of generations of intimate place-based knowledge.

We acknowledge with deep respect that this knowledge represents a range of cultural practices, wisdom, traditions, and ways of knowing the world that provide accurate and useful climate change information, observations, and solutions.

The University of Tasmania likewise recognises a history of truth that acknowledges the impacts of invasion and colonisation upon Aboriginal people, resulting in forcible removal from their lands.

Our island is deeply unique, with cities and towns surrounded by spectacular landscapes of bushland, waterways, mountain ranges, and beaches.

The University of Tasmania stands for a future that profoundly respects and acknowledges Aboriginal perspectives, culture, language, and history, and a continued effort to fight for Aboriginal justice and rights paving the way for a strong future.

Executive Summary

Despite Tasmania's relative insulation from the worst of the pandemic, COVID-19 has served to create and exacerbate challenges to life in Tasmania. It has also revealed opportunities.

As the size, composition and geographic distribution of the Tasmanian population is impacted, the Tasmanian Department of State Growth has commissioned this research to inform its update of Tasmania's Population Strategy. The report addresses the following key questions:

1. In light of the revised population projections, what are the likely key influences over the next five years, ten years and beyond?
2. What changes arose through 2020/2021 and amid COVID-normal that impact liveability in Tasmania?
3. How might Tasmania best leverage opportunities that have arisen out of the pandemic to retain residents and attract migrants from interstate and overseas to sustain the population and support growth?
4. In the context of above, are the three pillars of Tasmania's Population Growth Strategy – job creation and workforce development, migration, and liveability – still fit for purpose? How might they need to be adapted?

To address these questions, we first examine changes to Tasmania's population size and composition over the past decade and actual and projected impacts of the pandemic on Tasmania's population (Chapter 2). Overall, Tasmania's population increased by only about 1,000 people (or 0.18%) in the first 1.5 years of the pandemic, and some projections estimate that Tasmania's population will be 3.5% lower than if COVID-19 had not occurred. Chapter 2 also examines economic conditions in Tasmania over the past decade relative to Australia and considers how these may affect population projections. While gaps between Australia and Tasmania in terms of the unemployment rate, wages, and per capita Gross Domestic Product and Gross State Product have been slowly narrowing over the past decade, there is limited evidence that economic conditions have directly affected population change in Tasmania.

The recent increase in interstate departures and decrease in interstate arrivals may be driven by cost of living, especially for housing and health care. This suggests that the standard of living has been decreasing in Hobart compared to all Australia's capital cities combined, most notably since 2018.

We also examine liveability in Tasmania (Chapter 3) – in particular, the factors that help and hinder the attraction and retention of Tasmanian residents – as well as trends in liveability arising from the pandemic. The pandemic has led to several changes in the way many people live their lives and the amenities and infrastructure they utilise (e.g., increased work from home and decreased peak hour public transport demand). While the way in which people access essential services may change (e.g., with the advent of telehealth), there are still several essential services in Tasmania for which demand needs to be better met to increase liveability, including housing, childcare, aged care and healthcare. There are core subjective elements to liveability, such that only the individual can decide what they like about where they live and, ultimately, whether to stay. Chapter 4 examines the opinions of Tasmanian and mainland residents about life in Tasmania. Main concerns for the future among Tasmanian residents include health, life satisfaction, housing and income. In terms of external perceptions, mainland Australians associate Tasmania with the natural environment and lifestyle the most, and entertainment, arts and culture, and the economy and labour market the least.

While it is difficult to predict population movements, particularly given high levels of local and global uncertainty, social and economic trends and Tasmania's unique context, the pandemic presents challenges and opportunities for the retention and attraction of people to Tasmania. These are examined in Chapter 5. Key findings are summarised in the table below. Chapter 6 synthesises the findings about population change, liveability, and perceptions of Tasmania and details the implications for the Tasmanian Population Growth Strategy 2015.

As the report was prepared prior to the release of the 2021 Census data, an addendum was prepared to update key findings and recommendations based on an analysis of key variables published in the 28 June 2022 release of this data. The addendum describes several important findings that have implications for the report, including an increase in Tasmania's population when compared to the ABS quarterly estimates for 2016-2021 and increasing levels of cultural diversity in the Tasmanian community. Further information is available in the **addendum**.

Challenges and opportunities for the retention and attraction of people to Tasmania

CHALLENGES



Income and cost of living

The persistent gap in average earnings between Tasmanian and Australian workers is a factor that reduces Tasmania's relative appeal to people of working age. Costs of living that are rising faster than Australia's, particularly in large and inflexible household budget items such as housing, serve to make Tasmania unattractive and even untenable for prospective and existing residents.



Housing

Housing affordability is a key issue, as growth in house prices and rental unaffordability are both higher in Tasmania (particularly Hobart) than in Australia. While affordability disproportionately affects younger people and those on low incomes, supply-side issues (which are likely to persist due to material shortages and soaring costs) also affect older residents' ability to meet their housing needs (e.g., smaller dwellings).



Employment

While the overall unemployment rate in Tasmania is in line with Australia, there are concerns that there are not enough jobs available in Tasmania that offer the promotional and developmental opportunities sought by workers, particularly younger workers.



Interstate departures

Net interstate migration turned negative in 2021, such that departures overtook arrivals. This trend should be monitored, as it has implications for population size and composition (e.g., if younger people are disproportionately represented in departures, structural ageing can increase).



Perceptions of Tasmania

The perceived poor quality of healthcare, economic opportunities and cultural amenity (e.g., entertainment) hampers the attraction of new residents and may be a driver of attrition among existing residents. There are also key gaps between the perceptions and realities of Tasmania, both positive and negative. For instance, the prominence of Tasmania's art and culture scene (often referred to as the "MONA effect" or consequences of it) is a key tourism drawcard and point of pride for residents, yet mainlanders do not think of Tasmania as culturally vibrant. On the other hand, people who move here for pristine, 'untouched' nature may be surprised by traffic congestion and conservation worries.



Ageing population

Tasmania's ageing population is a challenge with regard to ensuring that there are enough workers to support the needs of an ageing cohort, as well as support other industries.

OPPORTUNITIES



Strategic interstate and overseas migration

Targeting migration into industries with skills shortages, enhancing communication about and marketing of Tasmania, and ensuring that migrants (overseas and interstate) are able to embed into communities (e.g., by fostering expat communities; increasing cultural amenity) will help to attract and retain residents that fulfil the needs of Tasmania.



Strengthen local food systems

The pandemic exposed significant issues with food supply and affordability in Tasmania, with high rates of food insecurity. Strengthening local food systems would facilitate increased affordability and increased food justice, reduced food waste (aligning with Tasmania's environmentally conscious brand) and reduce the 'perceptions-reality' gap between Tasmania being a foodie destination and many residents not being able to access and afford food.



Harness the creative industries

Cultural and creative industries are a unique selling point for Tasmania (particularly in the context of tourism), yet there is a perception among mainlanders that Tasmania lacks cultural amenity. In addition, cultural industries were disproportionately affected by COVID-19 and can make significant positive contributions to recovery (arguably more so than many industries). Thus, there exists an opportunity for Tasmania to harness the cultural and creative industries to increase liveability and economic conditions for prospective and existing residents.



Protect the natural environment and access to it

Another unique selling point of Tasmania, the importance of the natural environment has only been increased by the pandemic as people spend more time outdoors and some seek more sustainable lifestyles. Protecting the natural environment and people's access to it is critical to maintaining one of Tasmania's core drawcards.



Support new ways of working

Working from home and increased digitalisation of many aspects of work mean that, supported by state and federal governments, Tasmanian industries will have to adapt in order to remain attractive to workers and consumers.



Increase digital inclusion

Tasmania is the least digitally included state in the country, and this has implications for societal equality and individual wellbeing, which are both critical to prospective and existing residents. Increasing digital inclusion, both by investing in infrastructure and in people's skills, is therefore a key opportunity.



Embrace the economic and social opportunities of an ageing population

Along with challenges, an ageing population brings opportunities. Positioning Tasmania as an ideal destination to age in place and appreciating and leveraging the unique skills and perspectives of an ageing workforce are also key opportunities for population retention and growth (as well as productivity).

1. Introduction

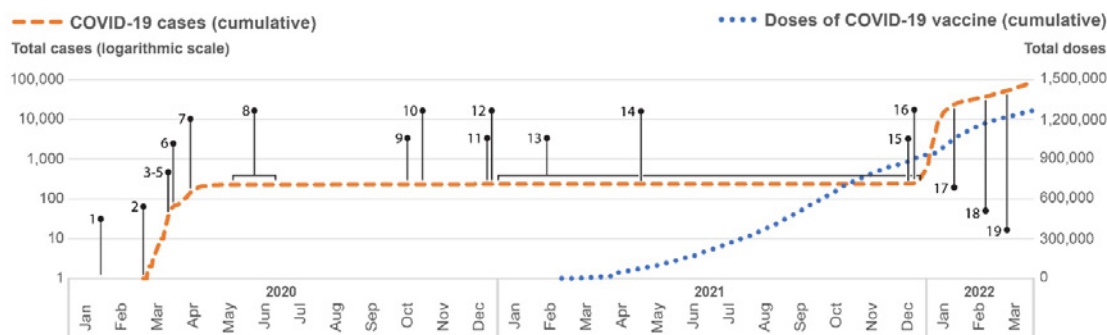
In this chapter, we introduce and outline the report, present the COVID-19 related events in Tasmania that directly and indirectly affected population changes, and present a short national and international literature review of: (1) the effect of COVID-19 on population changes and projections, (2) the effect of COVID-19 on liveability, and (3) the challenges of population retention.

In the subsequent chapters, we connect the theory of population change with practice: data and projections on population size and components, liveability, and population retention changes over time. Specifically, in Chapters 2-6, we will associate population projections for Tasmania with real population changes over time in the state, as well as with Tasmania's Population Growth Strategy (2015).

1.1 Tasmania and the COVID-19 pandemic

The COVID-19 pandemic, declared by the World Health Organisation on 11 March 2020, has interrupted social, economic and cultural life, with escalating rates of infection and death in many parts of the world despite increasing availability and update of vaccination. As of 12 May 2022, there have been over 516 million cases globally and more than 6.2 million deaths. In Australia, there have been over 6.3 million cases and over 7500 deaths (WHO, 2022). Tasmania, as an island off an island, has had a unique experience of COVID-19. As the first Australian state to instigate border restrictions and being secluded from the mainland, Tasmania was largely sheltered from the worst impacts as experienced by larger states such as Victoria and New South Wales over 2020 and 2021, where outbreaks and extended lockdowns were frequent.

Figure 1: COVID-19 in Tasmania: events, vaccinations, and cases

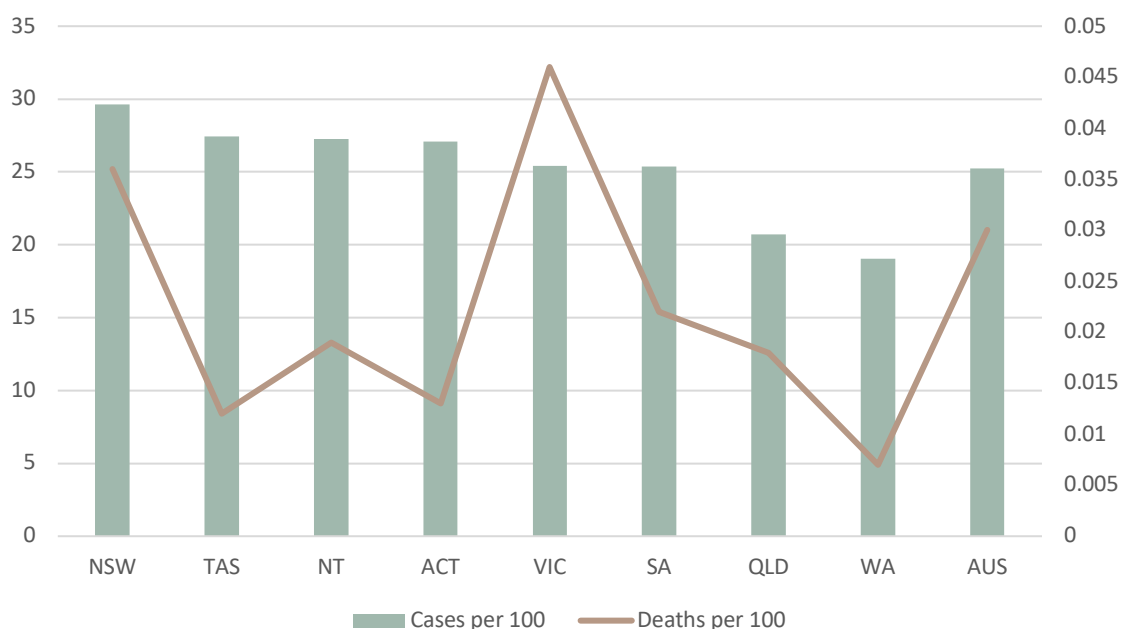


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|--|--|--|
| 1. 25 January 2020 First case of COVID-19 in Australia | 7. 12 April 2020 North West Regional Hospital closed due to an outbreak of COVID-19 | 13. Throughout 2021 Border restrictions implemented in response to outbreaks around Australia |
| 2. 2 March 2020 First case of COVID-19 in Tasmania, first case of community transmission | 8. 18 May – 26 June 2020 Restrictions lifted in stages | 14. 1 May 2021 Check in TAS app mandatory for contract tracing |
| 3. 17 March 2020 Public health emergency declared by Tasmanian government | 9. 15 – 18 October 2020 Three-day lockdown in Southern Tasmania | 15. 15 December 2021 Tasmanian borders open to vaccinated travellers |
| 4. 19 March 2020 14 day quarantine introduced for non-essential travellers into Tasmania | 10. 26 October – 27 November 2020 Tasmanian borders opened to all states in stages | 16. 21 December 2021 Masks mandatory in public indoor settings |
| 5. 20 March 2020 Border restrictions effective in Australia and Tasmania, social distancing rule introduced | 11. 18 December 2020 Quarantine reintroduced for arrivals from high-risk areas in NSW | 17. 20 January 2022 First COVID-related death in Tasmania since April 2020 |
| 6. 29 March 2020 First death due to COVID-19 recorded in Tasmania | 12. 22 December 2020 Mandatory recording of patron details at various venues/events | 18. 18 February 2022 Check-in requirements eased |
| | | 19. 5 – 11 March 2022 Mask mandate eased |

Tasmania remained relatively COVID-free throughout 2020 and 2021, recording only 238 cases (232 in 2020, 6 in 2021) and 13 deaths (all reported in 2020). Community transmission occurred within days of reopening its borders to the rest of Australia on 15 December 2021, forcing the Tasmanian community to adjust very quickly to living with the virus. In the months that followed, despite increasing vaccination rates, there has been widespread community transmission (*COVID-19 Weekly Surveillance Report*, Tasmania, 2022).

Between 15 December 2021 and 8 May 2022, there have been 137,354 cases, 896 hospitalisations with COVID-19 (381 because of COVID-19) and 46 deaths linked to COVID-19 reported in Tasmania. While cases in Tasmania are quite high, per capita, deaths remain low relative to other states (figure x). The population is highly vaccinated, at 12 May 2022 over 99% of Tasmanians aged 16 and over had received one dose of COVID-19 vaccine, 98% two doses and 70% three doses, all higher than national average (*Department of Health*, 2022).

Figure 2: Total reported COVID-19 cases and deaths per 100 residents at 12 May 2022, by state



Source: COVIDlive.com.au/report/cases-per-population; <https://COVIDlive.com.au/report/deaths-per-population>

A media release from (then) Premier Peter Gutwein published not long after borders reopened described '...a point where this is no longer a pandemic' and promising that Tasmanians would '...return to a more normal life.' Despite the easing of restrictions making life in Tasmania feel somewhat

'normal', as new variants emerge and vaccine efficacy wanes it is likely that cases will continue to increase and that the ever-elusive 'COVID-normal' will need constant re-evaluation. As the COVID-19 pandemic continues to evolve, it remains a key risk to the Tasmanian population.

1.2 The effect of the COVID-19 pandemic on population changes and projections

History tells us that pandemics generally result in major social and demographic transformations, including labour shortages, excessive numbers of deaths, (im)migration and fertility disruptions (Choi & Denice, 2021). The COVID-19 pandemic came after 28 years of uninterrupted economic growth in Australia, and it resulted in deteriorating economic conditions, compounded by border closures and quarantine requirements, which affected overseas and interstate movement. Australia has been accustomed to high levels of both economic growth and population movement (Australian Centre for Population, 2020¹), which means that a pandemic can have an even greater impact on Australian population changes than in many other countries. So far, COVID-19 has disproportionately impacted particular population subgroups, such as immigrants, lower-income populations, and non-whites (Choi & Denice, 2021).

The literature offers different projections of the impact of COVID-19 on Australia's future population, both nationally and in different states and regions (Charles-Edwards et al., 2021; Irving et al., 2021; Wilson et al., 2021), as well as the effect of the pandemic on particular population dimensions (e.g., ageing in Wilson et al., 2021).

Overall, it is predicted that the pandemic will result in Australia's population falling short of pre-pandemic projections. Further, studies have flagged potential increases in structural ageing of the population (an increased proportion of older people within the total population) and accelerations to regional population declines. Outside of Australia, countries have faced similar population issues because of the COVID-19 pandemic (e.g., Bonanad et al., 2020; Gerli et al., 2020; Macklin, 2022). What these studies have in common is the COVID-19 related health and economic uncertainty which can result in less robust conclusions and population projections.

We are presenting potential changes due to the pandemic by components of population change, population size, as well as structural changes such as ageing, as discussed in the relevant scientific literature published after the start of COVID-19. We are particularly interested in COVID-19 affected population changes with a prolonged (post-COVID or 'COVID-normal') effect. We also discuss any differences in population changes between national and state levels, as Wilson et al. (2021) concluded that COVID-19 has had an uneven effect on the Australian population across the country.

Prepared by Bernard, A., Charles-Edwards, E., Alvarez, M., Wohland, P., Loginova, J., and Kalembe, S.

1.2.1 Fertility

International literature suggests that fertility (births per woman) can be affected by pandemics, as well as other types of economic downturns (Charles-Edwards et al., 2021). There are two mechanisms that could lead to changes in fertility, based on previous epidemics: (1) biological, and (2) behavioural. While biological reduction of fertility is less likely to occur, behavioural mechanisms can have an impact through couples' family planning; this decision making around fertility intentions can be either directly affected by the pandemic (e.g., by health emergencies) or can be mediated by social values, gender roles, and changes to those during the pandemic (Voicu & Bădoi, 2021). Choi and Denice (2021) list three main behavioural reasons why fertility can be affected during COVID-19: (1) foregoing pregnancy as it is associated with higher risks for mothers, (2) foregoing pregnancy to protect infants, (3) economic uncertainty during pregnancy and after giving birth. Projections of fertility in Australia are mixed, with some models projecting a slight decrease in fertility arising from the pandemic, and some early data indicating increased access to fertility services suggesting a possible slight increase (Charles-Edwards et al., 2021). However, fertility is not expected to be a significant factor affecting population projections in Australia. With a long lag effect of fertility data, this will have to be confirmed in the future.

1.2.2 Mortality

The most substantial determinant of COVID-19 related mortality has been age; the relevant thresholds for mortality risk were reported to be >50 years and >60 years, with the highest mortality rate among the 80+ age group – up to about 21% mortality among octogenarians was reported in the UK and New York State (Bonanad et al., 2020). Some of the other factors increasing COVID-19 mortality are obesity, urbanization, and lower capital income levels (Upadhyaya et al., 2022). On the other hand, the study from Gerli et al. (2020) presented evidence that mortality is only affected by the time lockdown measures are introduced (relative to an outbreak), but not the population density or rigidity of the lockdown.

Charles-Edwards et al. (2021) suggest that, based on data available at the time of writing (prior to September 2021), the pandemic in Australia did not and will not substantially affect mortality, measured with excess deaths, but may have an indirect effect on mortality through delays in elective surgeries, suicides, domestic violence. In countries with substantial excess mortality, like the United States of America, higher mortality rates lead to a decreased life expectancy by 1.13 years, which is even higher for particular subpopulations, such as Hispanics (3.1 years) (Choi & Denice, 2021).

1.2.3 Interstate and intrastate migration

In Australia, nearly 40% of the population changes their residential address every five years (Australian Government Centre for Population 2020a). However, during economic downturns documented by historical data, there is significant volatility in population movement, particularly seen in drops in interstate migration, caused by delays in or foregoing of interstate moves foregone (Australian Government Centre for Population, 2020a). With regard to the current pandemic, it is predicted that interstate migration will reach pre-pandemic levels by 2022-23 (Charles-Edwards et al., 2021).

Besides interstate, intrastate migration can be affected by the pandemic, although to a lesser extent (Australian Government Centre for Population, 2020a). Irving et al. (2021), who studied pandemic-affected population changes in South Australia, explained that COVID-19 can also lead to low levels of migration from the capital to rural and remote areas.

1.2.4 Overseas migration

Overseas migration is generally the most affected by economic or health crises. COVID-19 disrupted transborder movement, while many states and countries introduced border closures and distinguished between essential and non-essential migrants (Macklin, 2022). Charles-Edwards et al. (2021) report that net overseas migration in Australia has been and will be affected due to a decrease in the numbers of temporary migrants, such as international students, working holiday makers, and citizens of New Zealand. Also, COVID-19 has had different impacts on different overseas migrants, including citizens and permanent residents, foreign workers, international students, family members, seasonal agricultural workers, and asylum seekers and refugees (Macklin, 2022). For example, COVID-19 was responsible for forced return migration – overseas migrants returned to their country due to unemployment or unsecured employment (because of lockdowns), or deteriorating healthcare, social and financial security which forced them to consider returning (Mencutek, 2022). Also, what is specific to the COVID-19 pandemic, is an anti-immigration sentiment, including towards Asian immigrants (Choi & Denice, 2021; Pickup, 2021). This might influence future overseas migration as well (Macklin, 2022).

Overseas migration can affect both the whole country and often even more the population size in peripheral states – Irving et al. (2021) explained that South Australia (and some of their economies) were historically reliant on positive net overseas migration (arrivals), which means that COVID-19 can lead to an economic shock and a half a decade of slow population growth until pre-pandemic overseas arrivals levels are reached.

1.2.5 Population size

The results presented by Charles-Edwards et al. (2021) suggest that the Australian population size in 2040 could be 6% lower in the case of an extended pandemic, mostly due to a negative effect on overseas migration. However, they introduced several different scenarios and not all of them have the same impact on the population size.

Irving et al. (2021) explained that while there has been a trend of the population concentrating in capital and regional centres, the pandemic has had the potential to accelerate that change and negatively affect population size in peripheral states such as South Australia due to negative economic impacts of COVID-19, largely due to reliance on overseas migration. On the other hand, in their projections Charles-Edwards et al. (2021) reported slightly different state/territory level projections – while NSW and Victoria should be affected the most by the pandemic in the long term, NT and Tasmania should expect about 3.5% lower population size in 2040, which would be directly associated with COVID-19.

1.2.6 Ageing

We distinguish between two types of ageing, i.e., numerical (increasing absolute number of older population) and structural (increasing relative proportion of older population), and ageing can be affected through changes to fertility, mortality, and migration (Wilson et al., 2021). As discussed previously, the COVID-19 pandemic could affect ageing through an impact on those population change components. In case of an extended pandemic, about a 1% increase of the 65+ population in Australia is expected for 2040 due to COVID-19 (Charles-Edwards et al., 2021), which is projected on top of existing structural and numerical ageing.

First, in addition to other factors such as growing expenses related to childcare, housing, and health insurance, which can already worsen population ageing, demographers predict a further decline of fertility in developed countries due to COVID-19 (Choi & Denice, 2021). Second, excess mortality tends to increase with age (Bonanad et al., 2020), which can also influence overall population ageing during the pandemic in countries with both high infection rates and high COVID-19 mortality rates. Third, low levels of net overseas migration, and especially negative net overseas migration during the pandemic in certain countries and states, can lead to higher levels of ageing, since overseas migrants tend to be younger on average (Wilson et al., 2021).

These issues will be presented for Tasmania in more details (and with relevant data on changes over time pre- and during-COVID) in Chapter 2.

1.3 The effect of the COVID-19 pandemic on liveability

A liveable place is defined as somewhere that is 'safe, attractive, inclusive, and environmentally sustainable; with affordable and diverse types of housing, public open space, local shops, health and community services, leisure and cultural opportunities; with opportunities for employment and education all accessible by convenient public transport, walking and cycling' (Lowe et al. 2013). Our short review of the most relevant literature on liveability identified several dimensions that have been generally impacted by the COVID-19 pandemic, including (but not limited to) health, lifestyle, housing, aged care, childcare, infrastructure, and employment.

First, the pandemic has had a substantial effect on people's health. It has had and is likely to continue to have a range of negative impacts on health outcomes, including mental health (Botha et al., 2022; Ahmed & Shaw, 2020a), chronic disease (Ahmed & Shaw, 2020b) and disorders linked to increases in excessive drinking, smoking or substance abuse (Ahmed & Shaw, 2020c). Besides excess mortality (which has luckily not been the case in Tasmania) and long-term conditions, research has generally shown a higher prevalence of loneliness (Buecker & Horstmann, 2022) and social isolation (Robb et al., 2020) during the pandemic.

Second, COVID-19 has generally affected how people live, work, study, shop, travel, and interact with each other. Some aspects were positive, for example there is emerging evidence of a positive experience of working from home and a strong preference to continue working from home (Beck & Hensher, 2021; Barrero et al., 2021). However, working from home is also associated with increased stress, decreased job satisfaction, conflict at work and home (Berkowsky, 2013; Rice, 2017), increased feelings of isolation from colleagues, and a negative effect on physical and mental health and job performance (Baym et al., 2021). Besides working from home more, people started to shop (and engage in other activities) from home more. From March to October 2020, the average annual increase of total online sales was 67.1% (Australian Bureau of Statistics, 2020). Online social activity, such as video calling, also increased during the pandemic and research suggests this is persisting even after restrictions have eased (Evans & Reeson, 2021). The pandemic has also highlighted the importance of the natural environment and changed the way many people viewed and interacted with it (Mell & Whitten, 2021), with many people spending more time outdoors during the pandemic (Nanda et al., 2021).

Third, the supply and affordability of housing, particularly in regional areas, has been significantly affected by the pandemic. COVID has also had a significant and disproportionate impact on the private rental market, particularly on lower income tenants (Verdouw et al., 2021). Renters, who compared to owner-occupiers tend to be younger, have lower incomes and spend a larger share of their disposable income on housing costs, were more vulnerable to the effects of the pandemic (Evans et al. 2020). Increases in the cost of building materials has also contributed to declines in the supply and affordability of housing during the pandemic (Australian Bureau of Statistics, 2022). A temporary decline in Airbnb listings in Tasmania, coinciding with border closures and the associated reduction of tourism, might have had a positive impact on housing supply (De Vries et al., 2021), however this was likely short-lived.

Fourth, essential services such as aged care and childcare have been impacted by the pandemic. High staff turnover and staff shortages within both industries have been exacerbated by the pandemic (Commonwealth of Australia, 2020). Aged care residents have endured extended periods of social isolation and separation from family and friends that will likely impact their long-term mental health and wellbeing (Brydon et al., 2022), and these experiences may contribute to greater demand for home-based care in the future (AIHW, 2021b). There are also potential implications for the availability and cost of childcare, with decreased demand linked to many parents keeping their children home to minimise the health risks (Wood et al., 2021) and emerging patterns of migration away from urban centres which have better accessibility (Hurley et al., 2022).

Lastly, the pandemic has had a notable effect on a range of industries, occupations and employment conditions. Many businesses were forced to adapt to changing conditions during the pandemic (O'Dwyer, 2021) and vulnerable industries such as international tourism and international education, the performing arts and leisure sectors, which are overrepresented in Tasmania (Eccleston et al., 2021), are likely to be impacted on a permanent basis (OECD, 2020a). Impacts on supply chains have also had significant impacts on a range of industries including the construction sector (Australian Bureau of Statistics, 2022) and on the daily lives and behaviours of the community (e.g., 'panic buying' (Whelan et al., 2021)).

A more detailed literature review and analysis of key data relating to the aforementioned liveability trends is presented in Chapter 3.

1.4 Challenges of population retention

Population retention can be quite challenging in many developed countries and their regions, but it might be even more challenging in peripheral parts of high-income countries (Irving et al., 2021). This literature review will primarily be based on retention in two peripheral states of Australia (i.e., South Australia (SA) and the NT). Carson (2016) defines 'peripheries' as sparsely populated or remote areas, and lists NSW, Victoria and ACT as 'core states' and the other Australian states as 'peripheral states', including Tasmania. Population retention in regional areas, including sparsely populated areas, face additional challenges that bigger states and capital cities in high-income countries do not face or at least not to the same extent. This section reviews those challenges.

Retention of the population in those regions or areas is often challenging, and there are several associated reasons for that. Irving et al. (2021) presented a cycle of population decline in certain regions (adapted from McKenzie, 2014), starting with reduced ancillary services and reduced employment opportunities and leading to lower retention of younger adults (who are the most mobile (Bernard et al., 2014)), structural ageing, and negative natural increase (NI) due to mortality rates exceeding fertility rates. Population retention in peripheral states is associated with various socio-demographic and socio-economic individual factors, including age, gender, indigenous status, familial and financial responsibilities (including having children), country of birth, home ownership, resident status (longer-term, newer in-migrants), and industry of employment (Dyrting et al., 2020; Thurmer et al., 2019).

In Australia, the seven largest cities contributed to 80% of national population growth. However, there was a decline or a stagnation in sparsely populated areas even before the pandemic (Dyrting et al., 2020). In the NT, population growth was largely dependent on interstate migration (for employment reasons) and overseas migration. After 2010, population growth was either slow or negative. Several economic, labour market and lifestyle factors contributed to this, including lower wages, new interstate arrivals not finding new jobs after finishing contracted jobs, the state not being perceived as a retirement state, and international migrants moving to states with more established communities (Thurmer et al., 2019).

Australian Government Centre for Population (2021) explained that the relative property prices in states and territories appear to have an influence on interstate migration – an increase in property prices results in an increase of interstate departures. On the other hand, Carson (2016) found that NIM in the NT is positively affected by lower housing costs in Australian capital cities, which seems to be related to the confidence of re-entering the housing market after returning from NT to their home state. Also, increasing job availability in peripheral states when conditions in the NT are similar to those in other peripheral states, as well as high costs of living in other states, positively affects NIM in NT. In SA, regions with higher levels of structural ageing and loss of employment experienced population decline. This initial decline had a negative effect on core industries which contributed to the loss of support services leading to further declines (Irving et al., 2021).

To positively affect population growth by increasing retention in peripheral parts or sparsely populated areas, the literature proposes different solutions. First, employment opportunities should be provided (Irving et al., 2021). Also, to improve retention of new migrants, longer-term and more secure employment should be offered (Thurmer et al., 2019). Second, recruitment of people from overseas should be more targeted – recruiting those who are more likely to stay, possible from established communities with existing connections to the area, with a focus on growing overseas communities (Dyrting et al., 2020; Thurmer et al., 2019). Third, for the older population, a strategy related to amenities and lifestyle should be developed (Thurmer et al., 2019). Fourth, solutions such as generous first homeowner schemes or encouraging family formation are generally recommended (Dyrting et al., 2020). Lastly, there is also an argument that peripheral parts of high-income countries should focus on providing good ancillary services to increase retention (Irving et al., 2021).

These issues will be discussed in more detail in Chapter 5, which will include a review of key population, societal, economic, attitudinal and liveability changes in Tasmania over time.

1.5 Key findings in the Tasmanian context

We conclude this chapter with some key findings based on the literature review:

- Tasmania has been less affected than NSW, the NT, Victoria, and the ACT in terms of COVID-19 cases and deaths (per capita), and it seems likely that 'COVID-normal' will continue;
- The literature suggests that fertility rates in Tasmania should not be (further) affected by the pandemic, however, there are other factors that will continue to (negatively) affect fertility;
- Similarly, mortality rates in Tasmania should not be affected by the pandemic;
- Interstate migration to Tasmania is generally difficult to predict and tends to be volatile;
- Overseas migration to Tasmania should be the most affected by the pandemic due to border closures, departures of temporary residents, etc.;
- The size of the Tasmanian population should be less negatively affected by the pandemic in the long term compared to larger Australian states/cities;
- The rate of ageing in Tasmania should increase due to COVID-19, since overseas migrants tend to be younger on average and NOM has been the most affected during the pandemic;
- The pandemic has had a notable and mostly negative effect on liveability globally, nationally and in Tasmania, including health (e.g., excess mortality, chronic conditions, mental health), lifestyle (e.g., working and studying from home, shopping and leisure behaviours), housing (e.g., worsening supply and affordability), aged care and childcare (e.g., access and quality), industries (e.g., adaptive and vulnerable industries, supply chain disruptions, negative impacts on employment conditions) and infrastructure (e.g., changing patterns of use);
- Population retention in peripheral states of high-income countries is a result of socio-demographic, socio-economic, labour market, economic, lifestyle, ancillary services, and housing affordability factors. To support population growth in Tasmania, retention of different groups such as interstate migrants, overseas migrants, young adults, and retirees should be supported by distinct and targeted policies (e.g., offering longer-term employment to migrants, homeowner schemes and incentives, supporting family formation of younger residents, embracing economic and social opportunities of an ageing population).

2. Population

2.1 Population projections (revised)

The literature has presented different potential Australian population size and structure scenarios for during and after the COVID-19 pandemic, from more optimistic to more conservative (Charles-Edwards et al., 2021; Wilson et al., 2021). Besides in scientific publications, population projections have been made publicly available by the Australian Government Centre for Population (2020b)² for Australia, Australian states and territories, and at the capital city/rest-of-state level. The most recent projections were for the 2020-21 to 2031-32 time period. The Australian Bureau of Statistics (ABS) (2018)³ previously released similar population projections with four possible series: (1) high series, (2) medium series, (3) low series, and (4) zero net overseas migration. The Tasmanian population was projected to increase in size to between 544,900 and 573,300 by 2027, and the share of the Tasmanian population living in Hobart was expected to increase from 44% in 2017 to 46% in 2027 (Australian Bureau of Statistics 2018). However, the ABS projections have not been updated since the start of the pandemic. Therefore, in this section we focus in more detail on the Australian Government Centre for Population (2020b) projections, which were last updated on December 20, 2021. We discuss the accuracy of all available projections, including from the Australian Bureau of Statistics (2018), in Section 2.4.

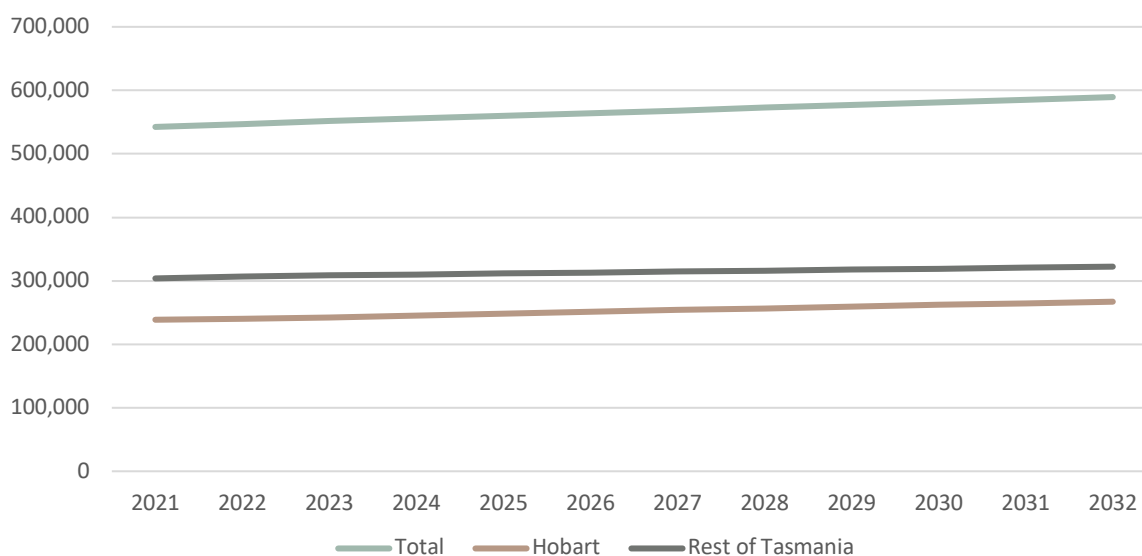
Population size. The Australian Government Centre for Population (2020b) projected that the population of Tasmania will gradually increase between the end of 2021 and the end of 2032, by about 0.7% annually (see Figure 1). This means that the population of Tasmania is expected to increase from 542,400 residents at the end of 2021 to 589,400 residents at the end of 2032. It is expected that the population of Tasmania will increase at a rate about 59% slower than growth in the overall population of Australia (Australian Government Centre for Population, 2020b). This projection for Tasmania's population is somewhat consistent with the "high series" projections from the Australian Bureau of Statistics (2018).

Between 2021 and 2032, it is expected that the Hobart population will increase in size faster than the population in the Rest of Tasmania (1.0% vs 0.5% annually, respectively). This means that the proportion of the residents of Hobart out of all Tasmanian residents is expected to increase from 44.0% in 2021 to 45.3% in 2032. These total population size projections are based on projections of NI, NOM and NIM in Tasmania and the Tasmanian regions. The Australian Bureau of Statistics (2018) projected a faster increase of the proportion of Tasmanians living in Hobart.

²population.gov.au/data-and-forecasts/projections#national

³abs.gov.au/statistics/people/population/population-projections-australia/2017-base-2066

Figure 1: Australian Government Centre for Population projections for population size (end of year)

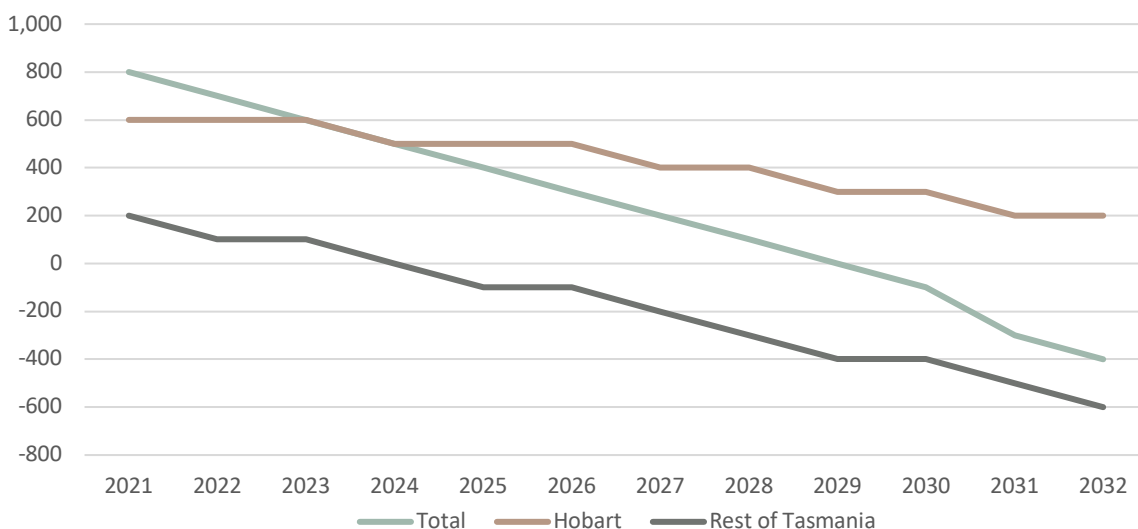


Source: Australian Government Centre for Population (2020a). Population Statement 2021, national projections, 2020-21 to 2031-32 (Last updated 20 December 2021), <https://population.gov.au/data-and-forecasts/projections#national>

Natural increase (NI). In Tasmania, NI (births minus deaths) is expected to decline from 800 persons in 2021 to 0 persons in 2029 (see Figure 2). After 2029, NI is expected to be negative. This is due to an increase of deaths, which could be a result of an

ageing population (i.e., structural ageing) and an increase of the total population size. On the other hand, births are expected to remain constant, despite of a projected 8.7% increase in the size of the Tasmanian population by the end of 2032.

Figure 2: Australian Government Centre for Population projections for NI



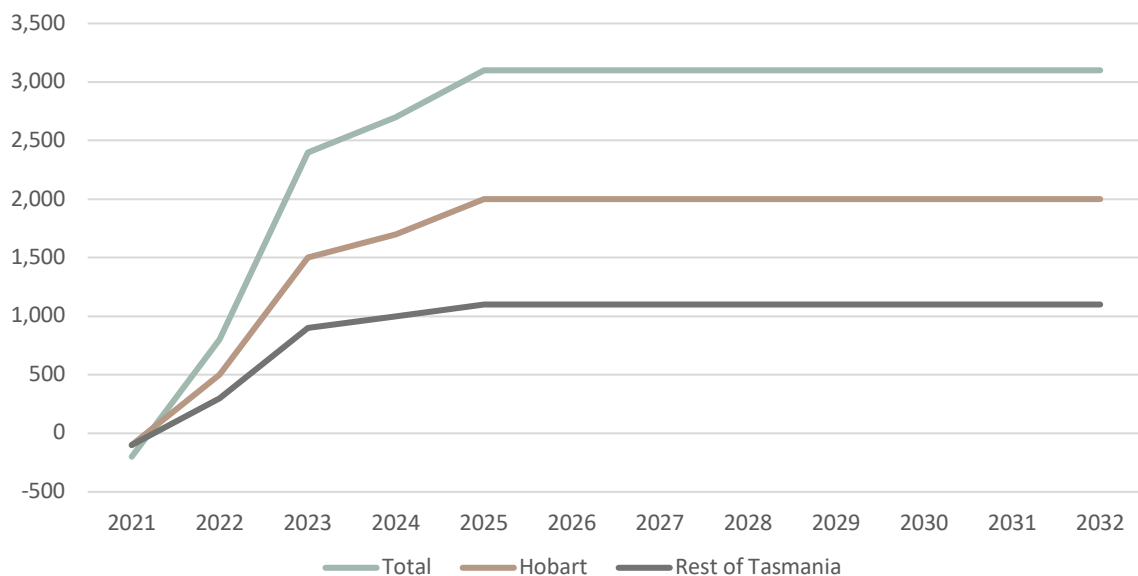
Source: Australian Government Centre for Population (2020a). Population Statement 2021, national projections, 2020-21 to 2031-32 (Last updated 20 December 2021), <https://population.gov.au/data-and-forecasts/projections#national>

We can observe notable changes in the projected NI between Hobart and the Rest of Tasmania. While natural increase in Hobart is expected to stay positive until the 2032, natural increase in the Rest of Tasmania is expected to reach negative figures by 2025. In 2032, there are projected to be 600 fewer births in the Rest of Tasmania than deaths, but 200 more births than deaths in Hobart.

Net overseas migration (NOM). On the other hand, NOM in Tasmania is, after negative figures in 2021, expected to increase substantially between 2022 and 2025 and remain stable until 2032 (at 3,100 people annually, see Figure 3). It is projected that NOM will represent about 73% of the total increase in population size in Tasmania between 2025 and 2032, but less than half of that (about 36%) between the end of 2021 and the end of 2023.

The population of Hobart is expected to experience higher levels of NOM than the Rest of Tasmania. Between 2025 and 2032, NOM is expected remain at 2,000 people in Hobart and 1,100 people in the Rest of Tasmania (64% of NOM), despite Hobart residents representing less than 45% of all Tasmanians.

Figure 3: Australian Government Centre for Population projections for NOM



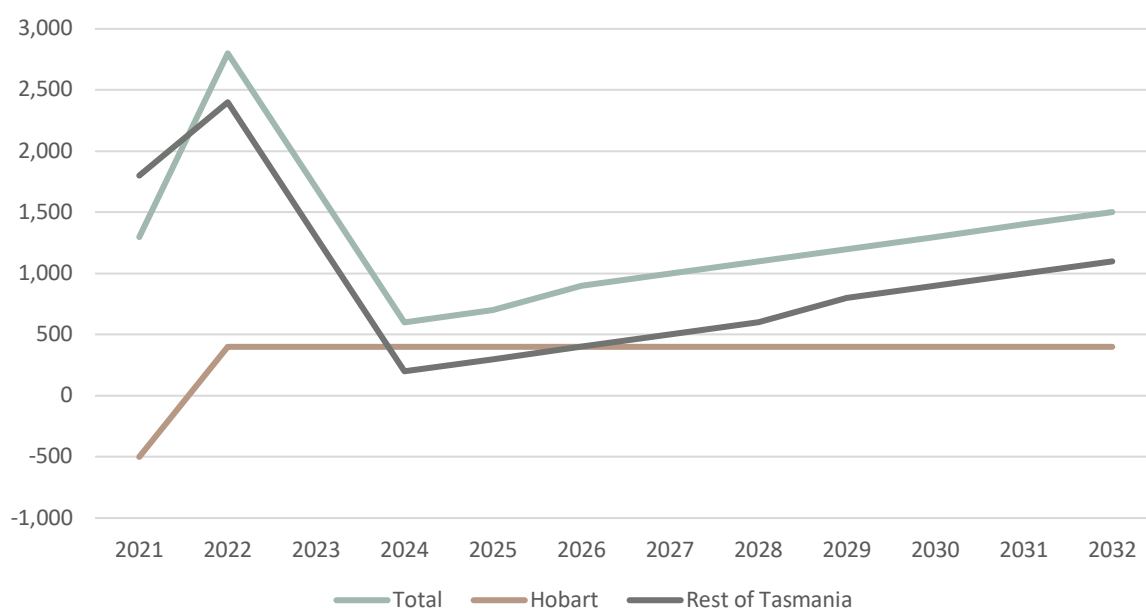
Source: Australian Government Centre for Population (2020a). Population Statement 2021, national projections, 2020-21 to 2031-32 (Last updated 20 December 2021), <https://population.gov.au/data-and-forecasts/projections#national>

Net interstate migration (NIM). The NIM figures for Tasmania, including for Hobart and the Rest of Tasmania separately, are presented in Figure 4. Between 2021 and 2023, NIM is expected to be a significant contributor to Tasmanian population growth, with a decline in 2024 and a slow increase between 2025 and 2032.

After a negative NIM in Hobart in 2021, it is expected that 400 more people will move to Hobart from other states/territories than from Hobart. The NIM projections for the Rest of Tasmania follow the same trend as the NIM projections for Tasmania overall (due to a constant NIM in Hobart from 2022 on).

Generally speaking, internal migration is challenging to predict due to a lack of historical local research on economic and health impacts of economic cycles. Also, the length of a pandemic cannot be easily estimated. Prospective migrants normally respond to changes in economic conditions, such as gross domestic product (GDP), unemployment rates and housing, in countries, states and territories. It was expected that GDP would grow over 2021-22, leading to a rebound of interstate migration during that period. In the case of the pandemic, which had a substantial effect in 2021 Q3 and Q4 in NSW and Victoria, a rebound of interstate migration would be delayed (Australian Government Centre for Population, 2020b).

Figure 4: Australian Government Centre for Population projections for NIM



Source: Australian Government Centre for Population (2020a). Population Statement 2021, national projections, 2020-21 to 2031-32 (Last updated 20 December 2021), <https://population.gov.au/data-and-forecasts/projections#national>

2.2 population size and structure in Tasmania over time

2.2.1 Population size in Tasmania between 2012 and 2021

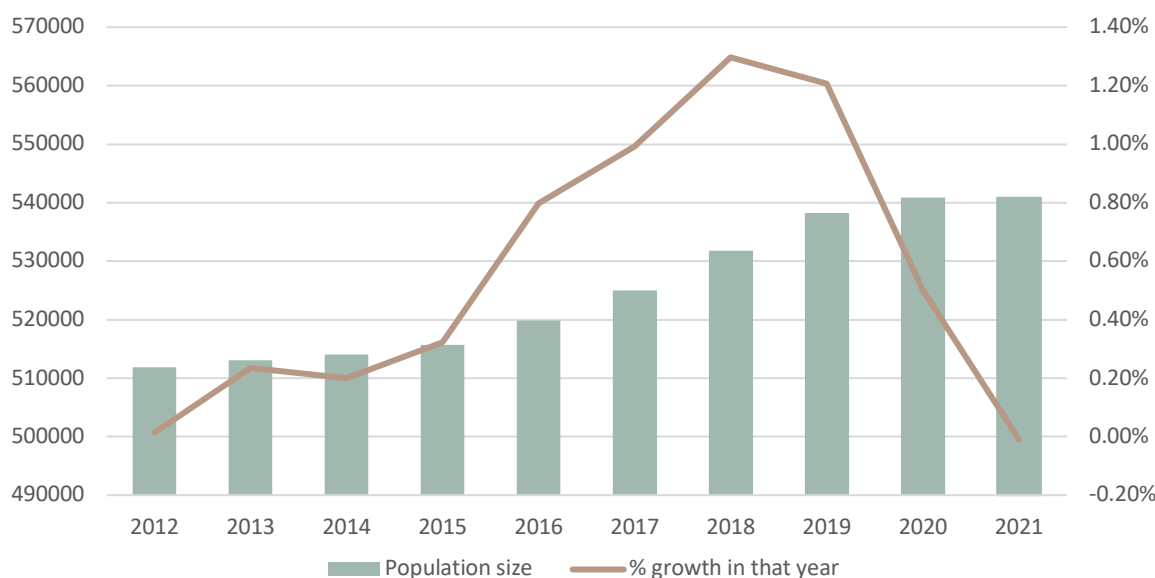
The population of Tasmania was about 541,000 residents in September 2021 (the most recent point in the time series released by the Australian Bureau of Statistics (2021)⁴). Between 2011 and 2021, the population increased by about 30,000 residents, from about 511,000 to about 541,000 residents. This means that the total population size increase was about 6%-points in the last decade. In the same period of time, the Australian population grew by about 14%, more than twice as fast as growth in the Tasmanian population. Also, the Tasmanian population growth rate was not constant over time (see Figure 5).

The growth in the population size was low between 2012 and 2015, below 0.5% annually, increasing to 1.3% and 1.2% in the two years before COVID-19 pandemic (i.e., 2018 and 2019). Compared to the 2012-2017 period, pre-pandemic (2018 and 2019) growth rates were more comparable to the Australian population growth rates (also see Table 1).

It seems like Tasmania became a more attractive destination for interstate and especially overseas migrants, at the same time as it became a more attractive location for Tasmanians to continue living in. However, the main contributor to the Tasmanian population growth was overseas migration and it increased substantially from 2015 and 2019 (see Section 2.3 for more information).

Please note that the analysis of key variables published in the 28 June 2022 release of the 2021 Census data found that the Tasmanian population increased more than the ABS's quarterly estimates for 2016-2021. Further information is available in the *addendum*.

Figure 5: Population size and growth rate in Tasmania over time



Source: Australian Bureau of Statistics (September 2021) 'TABLE 4. Estimated Resident Population, States and Territories (Number)' [time series spreadsheet], accessed 1 May 2022.

⁴www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release

2.2.2 Structural changes to the Tasmanian population between 2012 and 2021

Changes in the size of the population over time, and different contributors to the population growth (natural increase, net overseas migration, and net interstate migration), can lead to certain population structure changes, such as ageing. Table 1 presents those structural changes in Tasmania between financial years 2011-12 and 2020-21.

The population size increased from 511,724 in 2011-12 to 541,315 in 2020-21, and the annual population growth increased from 0.1% (in 2012-13) to 1.12% (in 2019-20), which is consistent with the figures discussed in Section 2.2.1 (figures for calendar years and not financial years are presented in Figure 5).

We can observe certain structural changes in the Tasmanian population over time, namely sex and age distributional changes. First, the proportion of females slowly increased over time. In 2011-12, there were 50.2% of women and 49.8% of men in Tasmania. In 2020-21, only 49.4% of Tasmanian residents were men.

Table 1: Structural changes in the Tasmanian population over time (for financial years 2011-12 – 2020-21)

Financial year	Population size*		Sex	Age				
	N	Annual growth in %		Percentage of younger than 18 yrs	Percentage of 65+ yrs	Median age	Mean age	Annual change in mean yrs
2011-12	511,724	/	50.2%	22.54%	16.72%	40.81	39.71	/
2012-13	512,231	0.10%	50.3%	22.31%	17.25%	41.18	39.96	0.25
2013-14	513,621	0.27%	50.4%	22.09%	17.77%	41.54	40.23	0.27
2014-15	515,117	0.29%	50.4%	21.87%	18.31%	41.87	40.51	0.28
2015-16	517,514	0.47%	50.5%	21.74%	18.81%	42.10	40.72	0.21
2016-17	522,410	0.95%	50.5%	21.50%	19.28%	42.22	40.93	0.21
2017-18	528,298	1.13%	50.5%	21.24%	19.69%	42.26	41.11	0.18
2018-19	534,575	1.19%	50.5%	21.04%	20.08%	42.25	41.30	0.19
2019-20	540,536	1.12%	50.6%	20.80%	20.50%	42.33	41.53	0.23
2020-21	541,315	0.14%	50.6%	20.73%	21.10%	42.67	41.83	0.30

* Updated population figures based on analysis of 2021 Census data are provided in the **addendum**

Sources: Australian Bureau of Statistics (September 2021) 'TABLE 4. Estimated Resident Population, States and Territories (Number)' [time series spreadsheet], 'National, state and territory population', accessed 1 May 2022. Australian Bureau of Statistics (March 2022) 'Table 3 Median age, by sex—at 30 June' [time series spreadsheet], '31010do002_202109 National, state and territory population, Sep 2021', accessed 1 May 2022. Australian Bureau of Statistics (March 2022) 'Table 4 Mean age, by sex—at 30 June' [time series spreadsheet], '31010do002_202109 National, state and territory population, Sep 2021', accessed 1 May 2022.

Second, all figures for age confirm that the Tasmanian population is gradually ageing, both numerically and structurally. The proportion of residents younger than 18 decreased from 22.54% in 2011-12 to 20.73% in 2020-21, and the proportion of residents 65 years of age or older increased from 16.72% to 21.10%. In 2011-12, there were almost 6% more residents younger than 18 than residents 65 years of age or older in Tasmania, but in 2020-21 there

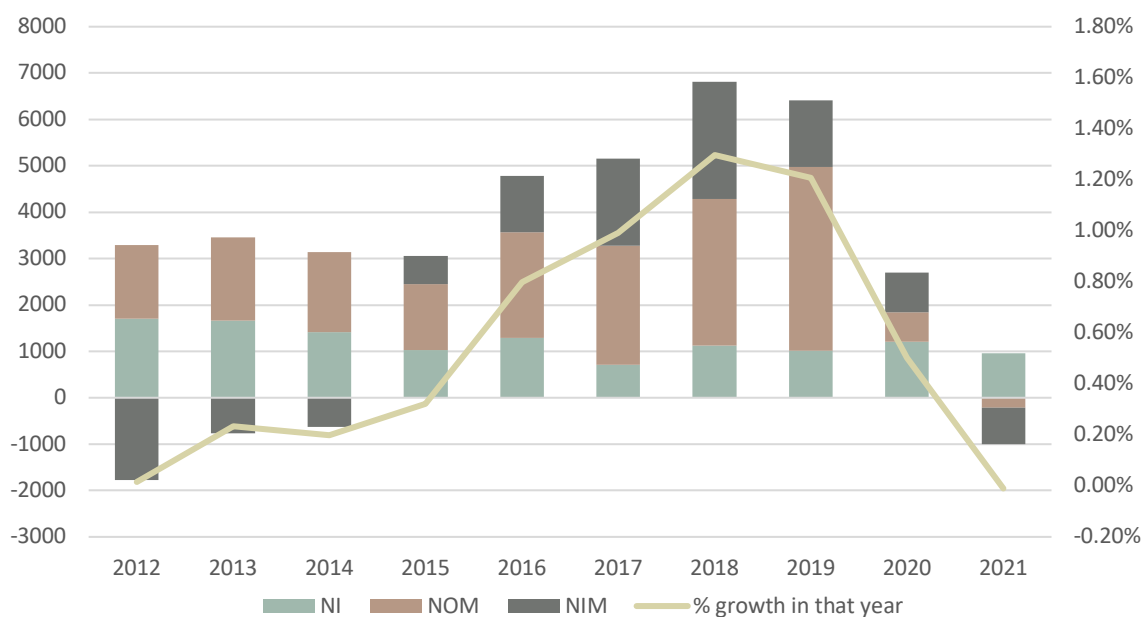
were already more 65+ than 0-17-year-old residents. In ten years, the median age increased from 40.00 to 42.00 years, and the mean age increased from 39.71 years to 41.83 years. The annual increase in mean age was lower between 2015-16 and 2018-19, during the time of the fastest population growth, and at the highest level in the last financial year of this time series (2020-21).

2.3 Components of population change in Tasmania over time

We will now present the main components of population change in Tasmania between 2012 and 2021, which can explain trends in both population size and population structure changes. NI, NOM

and NIM are the focus of the population analysis in this section. In Figure 6, we also present annual population growth rates, which are mostly associated with NOM, but also with NIM.

Figure 6: Components of population change in Tasmania between 2012 and 2021



*For 2021, data were available for the first three quarters (1 Jan - 30 Sep 2021)

Source: Australian Bureau of Statistics (September 2021) 'TABLE 2. Population Change, Components – States and Territories (Number)' [time series spreadsheet], 'National, state and territory population', accessed 1 May 2022.

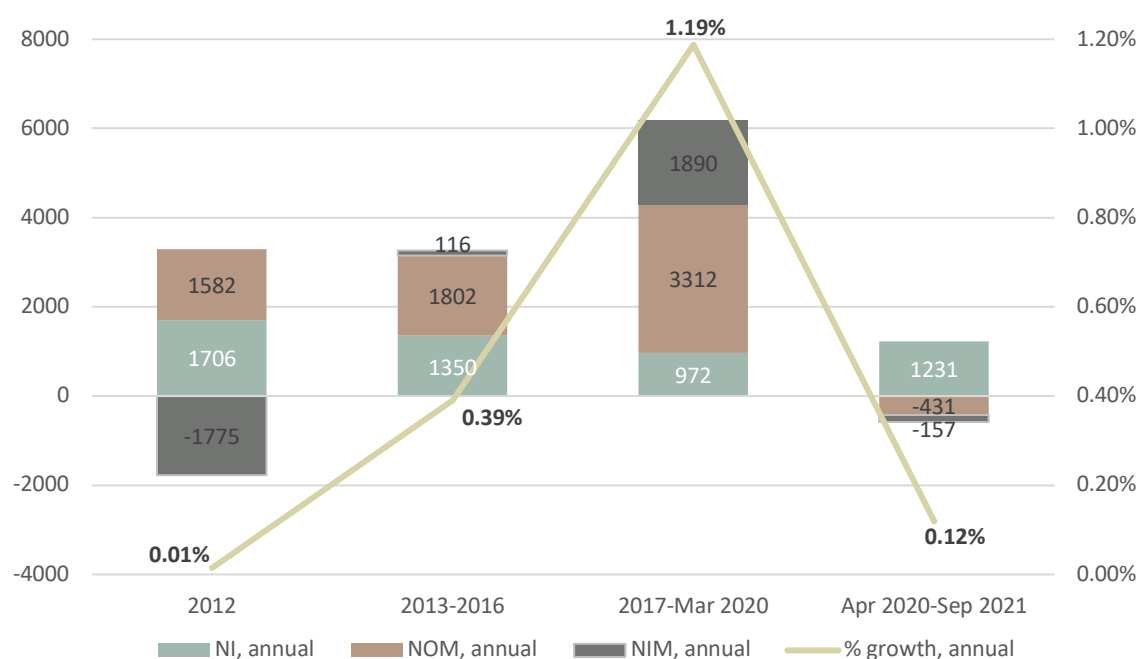
Between 2012 and 2021, the most substantial changes were in NIM and the least notable changes over time were in NI. NOM gradually increased between 2015 and 2019, which was parallel to the population growth. After 2014 and until 2021, NIM was a

positive contributor to population growth, but the contribution was smaller compared to NOM. After the start of the pandemic, both NIM and NOM declined and were negative in the first three quarters of 2021.

To analyse population changes over time in Tasmania, it is prudent to combine the quarterly population data (components of population change) for the last 10 years into three distinctive periods (see Figure 7):

1. 2012, the “negative NIM period”
2. 2015, the “slow growth period”
3. 2016 – March 2020, the “fast growth period”
4. April 2020 – September 2021, the “COVID-19 period”

Figure 7: Components of population change in combined homogenous time periods (average annual numbers for NI, NOM and NIM, growth rate)



*For 2021, data were available for the first three quarters (1 Jan - 30 Sep 2021)

Source: Australian Bureau of Statistics (September 2021) 'TABLE 2. Population Change, Components - States and Territories (Number)' [time series spreadsheet], 'National, state and territory population', accessed 1 May 2022

In 2012, negative NIM and positive NOM almost balanced out and the Tasmanian population grew for the NI amount (for a total of 0.01%). Between 2013 and 2016, NOM slightly increased, and NI slightly decreased (compared to 2012), and NIM was positive, but only contributed 116 people annually on average. Accordingly, the population growth rate was relatively low, at 0.39%. Between 2017 and the start of the pandemic, both NIM and NOM increased substantially while NI decreased further.

The annual growth was, therefore, relatively high at 1.19% annually, comparable to the Australian population numbers for the same time period. Between the start of the pandemic and September 2021, NI was the only contributor to the population growth (a total of 0.12% annually), and NIM and NOM were negative (for a combined total population increase of about 600 people in 1.5 years).

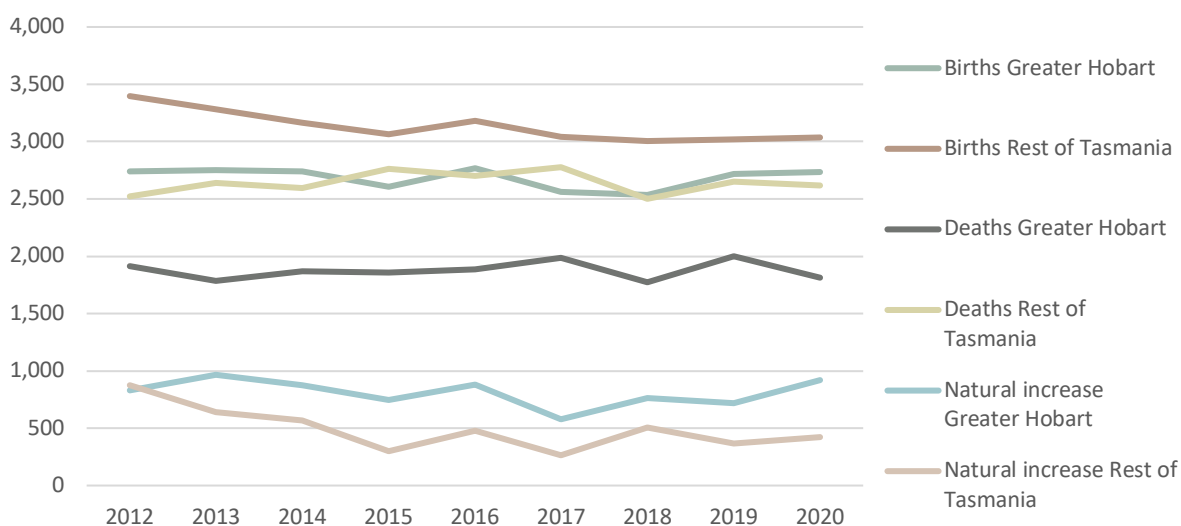
2.3.1 Fertility and mortality in Tasmania over time

Natural increase is dependent on fertility and mortality. To identify trends in Tasmania, we are presenting in Figure 8 the time series for (1) fertility, (2) mortality, and (3) natural increase in (a) Greater Hobart and (b) Rest of Tasmania (absolute numbers).

We can observe fluctuating numbers of births in Greater Hobart, but the number of births in 2020 was comparable to those between 2012 and 2014. In the Rest of Tasmania, the number of births decreased from about 3,400 in 2012 to about 3,000 in 2017 and remained stable until including 2020.

On the other hand, the numbers of deaths remained fairly consistent (with some fluctuation throughout the years) in both Greater Hobart and the Rest of Tasmania. As a result of those changes, NI remained at similar levels over time in Greater Hobart but declined after 2012 in the Rest of Tasmania. In 2020, NI was about 900 in Greater Hobart and about 400 in the Rest of Tasmania, while there were no changes in 2012. We also have to consider that the population size in Greater Hobart is smaller.

Figure 7: Components of population change in combined homogenous time periods (average annual numbers for NI, NOM and NIM, growth rate)

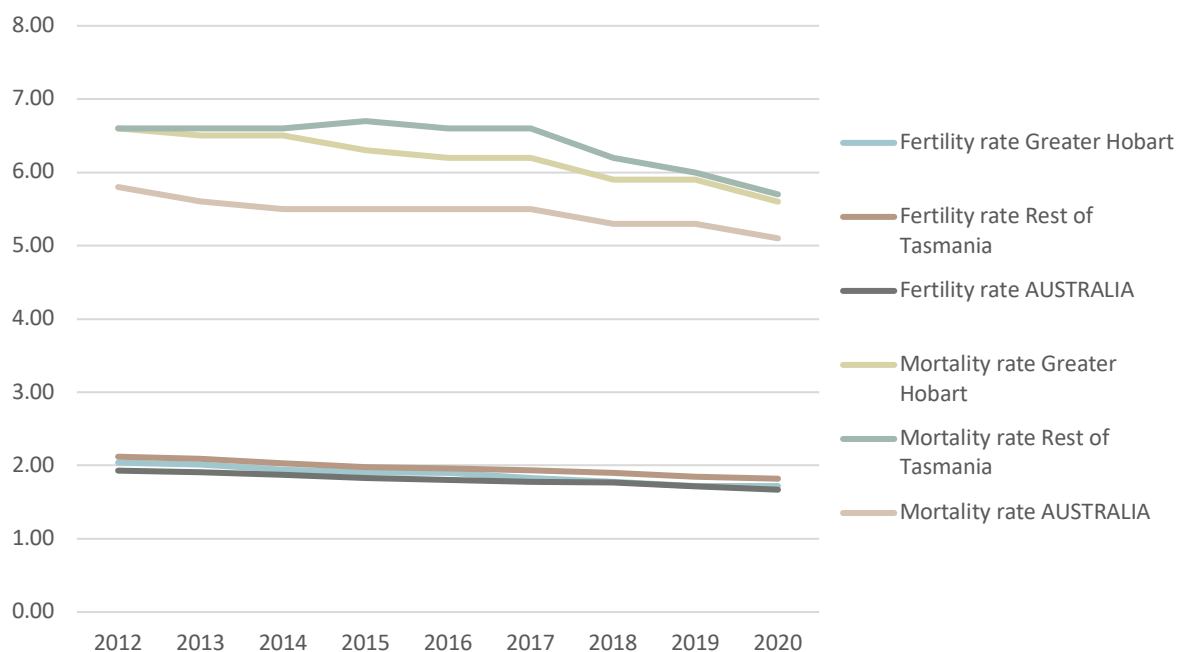


Sources: Australian Bureau of Statistics (2020) 'Births, Australia' [time series spreadsheet], 'Table 2.6 Births, Summary, Statistical Areas Level 2, Tasmania–2010 to 2020', accessed 1 May 2022. Australian Bureau of Statistics (2020) 'Deaths, Australia' [time series spreadsheet], 'Table 3.1 Deaths, Summary, Statistical Area Level 4–2012 to 2020', accessed 1 May 2022.

Due to the differences in population sizes between the two main Tasmanian regions, it is prudent to present fertility (births per woman) and mortality

(deaths per 1,000 persons) rates. We also present the same rates for Australia (see Figure 9) for 2012-2021 for comparability purposes.

Figure 9: Fertility and standardised mortality in Tasmanian regions and Australia, 2012-2020



Sources: Australian Bureau of Statistics (2020) 'Births, Australia' [time series spreadsheet], 'Table 2.6 Births, Summary, Statistical Areas Level 2, Tasmania-2010 to 2020', accessed 1 May 2022. Australian Bureau of Statistics (2020) 'Deaths, Australia' [time series spreadsheet], 'Table 3.1 Deaths, Summary, Statistical Area Level 4-2012 to 2020', accessed 1 May 2022

We can observe similar downwards trends in fertility and mortality in both Tasmanian regions and in Australia, with similar relative changes over time reported for both fertility and mortality. However, the mortality rate started declining in the Rest of Tasmania in 2017, while in Greater Hobart and Australia the same trend started a few years earlier and it was more gradual.

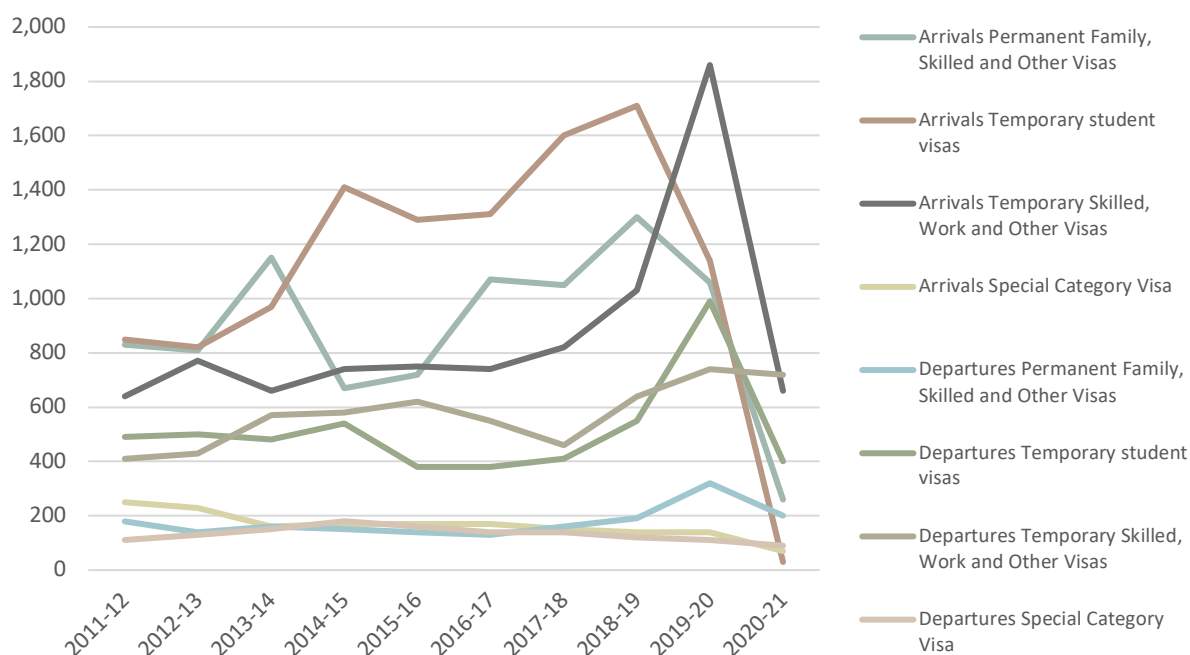
Over time, the mortality rate was between about 0.5 and 1.2 lower in Australia than in the main Tasmanian regions, and the gap in 2020 was smaller than in 2012. Also, the fertility rate in Australia is slightly lower in Australia than in Tasmania, especially in the Rest of Tasmania. These main findings are fairly consistent with the results presented in Figure 8.

2.3.2 Overseas migration in Tasmania over time

Figures 6 and 7 showed substantial differences in net overseas migration in Tasmania between 2012 and 2021. In this section, we focus on arrivals and

departures by visa type. Please note that Australian citizens, who represent most of the departures from and arrivals to Tasmania, and temporary visitors, are not included.

Figure 10: International arrivals and departures by main visa type group in Tasmania, financial years 2011-12 –2020-21



Source: Australian Bureau of Statistics (December 2021) 'Table 2.7 Overseas migrant arrivals and departures, by visa groupings, Tasmania, 2004-05 to 2020-21(a)(b)' [time series spreadsheet], 'Overseas Migration 2020-21', accessed 1 May 2022.

Generally speaking, we can see increasing numbers of arrivals for all visa types except for special category visas (New Zealand citizens) and fairly consistent numbers of departures between 2011-12 and 2018-19. Looking at the overall numbers, we can see that the total overseas arrivals (non-Australian citizens, non-temporary visitors) increased by more than 60% between 2011-12 and 2018-19, but the total overseas departures increased by about 25%. An increase of temporary visa arrivals (non-visitor) was more significant than the increase in permanent visa arrivals during this time period.

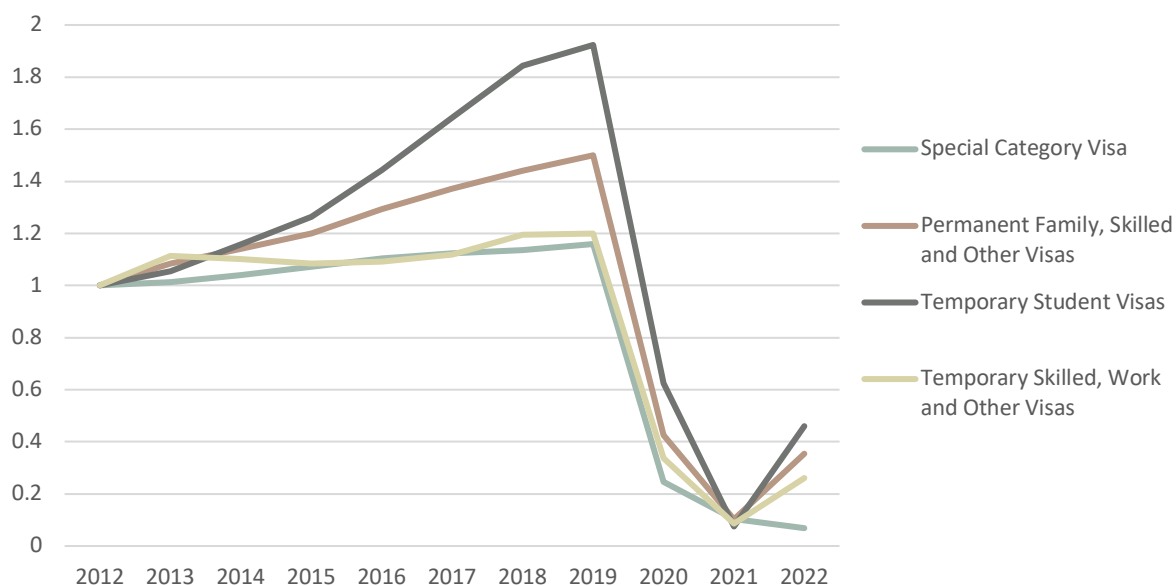
This resulted in increased rates of NOM, consistent with the results presented in Figures 6 and 7.

Due to the pandemic, arrivals decreased and departures of temporary (non-student) and permanent visa holders increased in 2019-20 and 2020-21. Departures of temporary student visa holders increased in 2019-20 and returned to pre-COVID numbers in 2020-21. This resulted in negative overseas migration rates after the start of the pandemic (see Figure 7).

As the data for Tasmania are not yet available for July 2021-February 2022, we looked at the data for arrivals to Australia for four key main types of visas to

identify any trends in (restarting) overseas migration to Australia (i.e., arrivals). We are presenting relative figures for Australia with 2012 as the reference year.

Figure 11: International arrivals to Australia by main visa type*, relative coefficient (reference year: 2012), Australia, 2012-February 2022**



*Australian citizens and temporary visitor visa arrivals are excluded **as of April 2022, only the figures for January and February 2022 are available; the combined Jan-Feb 2021 numbers are compared to the Jan-Feb 2012 numbers.

Source: Australian Bureau of Statistics (February 2022) 'Total Arrivals by Visa Group, Jul-2004 to Mar-2022' [time series spreadsheet], 'Overseas Arrivals and Departures, Australia', accessed 1 May 2022.

We can report similar relative trends for Australia as previously for Tasmania, with less volatility. The most substantial relative increase over time, i.e., between 2012 and 2019, was for temporary student visas (almost 100% increase in 7 years), followed by permanent visas (about 50% increase in 7 years). Arrivals of New Zealand citizens increased gradually, by about 2% annually; arrivals of temporary skilled, work and other visa holders plateaued between 2013 and 2017 (a total of about 20% increase in 7 years). In 2020, all arrivals decreased substantially, and reached the lowest point (about 7-10% of the 2012 figures) of the decade in 2021.

Based on the 2022 figures (compared to 2012 figures for the first two months of the year), we can already report a gradual return of overseas arrivals of the main visa groups (Australian citizens and temporary visitors excluded). A decline in 2022 compared to 2021 can only be reported for special category visa holders. In terms of the recovery of overseas arrivals, temporary student visa arrivals recovered slightly quicker (to about 50% of 2012 arrivals) than permanent visa arrivals and temporary non-student visa arrivals.

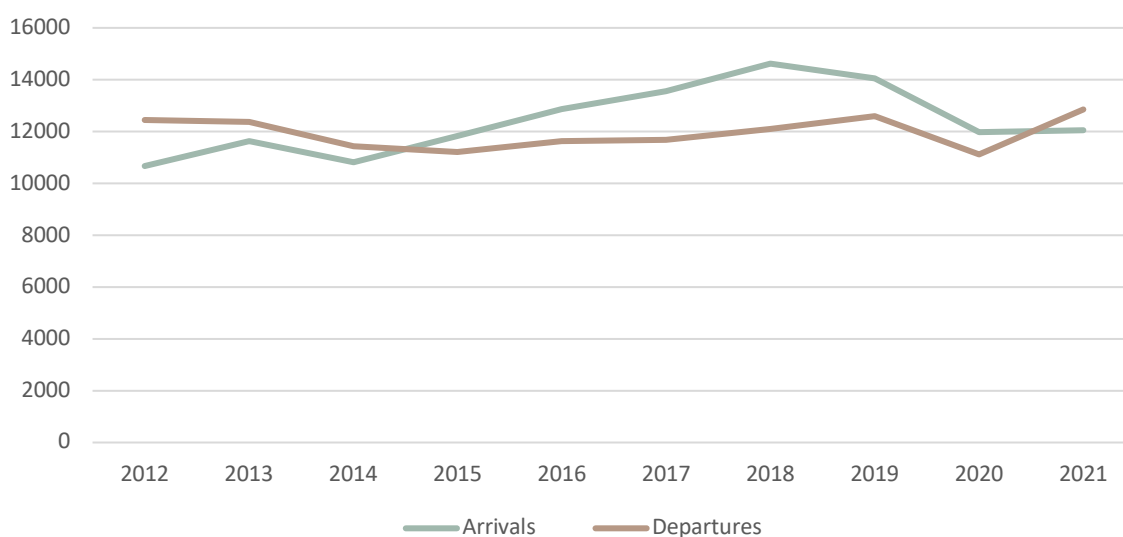
2.3.3 Interstate and intrastate migration over time

In this section, we look at both interstate and intrastate migration to/from Tasmania between 2012 and 2021. After discussing departures and arrivals, we focus on the Tasmanian region of arrivals/departures, including during the pandemic, as well as intrastate migration (Hobart, Rest of Tasmania).

2.3.3.1 Arrivals to and departures from Tasmania

Between 2012 and 2014, a larger absolute number of Tasmanian residents moved to other Australian states and territories than continental Australians moved to Tasmania, which resulted in negative NIM (see Figures 6 and 8). After 2014, the trend was reversed, i.e., the arrival numbers were greater than the departure numbers. NIM contributed between about 20% and 40% of Tasmanian population growth between 2015 and 2019.

Figure 12: Arrivals and departures in Tasmania



Sources: Australian Bureau of Statistics (September 2021) 'TABLE 16A. Interstate Arrivals, States and Territories (Persons)' [time series spreadsheet], 'National, state and territory population', accessed 1 May 2022. Australian Bureau of Statistics (September 2021) 'TABLE 16B. Interstate Departures, States and Territories (Persons)', 'National, state and territory population', accessed 1 May 2022.

In 2020, three quarters of which were during the pandemic, both arrivals and departures decreased substantially, but NIM remained positive. In 2021, the number of departures notably increased (to the highest level in the analysed 10-year period), but the number of arrivals remained unchanged. This led to negative NIM for the first time since 2014. Quarterly details for interstate migration for Tasmania during the pandemic are presented in section 2.3.3.2.

2.3.3.2 Arrivals to and departures from Tasmania since the start of the pandemic

Between 2012 and 2014, a larger absolute number of Tasmanian residents moved to other Australian states and territories than continental Australians moved to Tasmania, which resulted in negative NIM (see Figures 6 and 8). After 2014, the trend was reversed, i.e., the arrival numbers were greater than the departure numbers. NIM contributed between about 20% and 40% of Tasmanian population growth between 2015 and 2019.

Table 2: Interstate migration to Tasmania during COVID-19 (quarterly data)

Quarter	Arrivals	Departures	NIM
Apr-Jun 2020	3160	2773	387
Jul-Sep 2020	2427	2360	67
Oct-Dec 2020	3356	3250	106
Jan-Mar 2021	3333	3250	83
Apr-Jun 2021	3994	4359	-365
Jul-Sep 2021	4730	5243	-513
Total	21000	21235	-235

Sources: Australian Bureau of Statistics (September 2021) 'TABLE 16A. Interstate Arrivals, States and Territories (Persons)' [time series spreadsheet], 'National, state and territory population', accessed 1 May 2022. Australian Bureau of Statistics (September 2021) 'TABLE 16B. Interstate Departures, States and Territories (Persons)', 'National, state and territory population', accessed 1 May 2022.

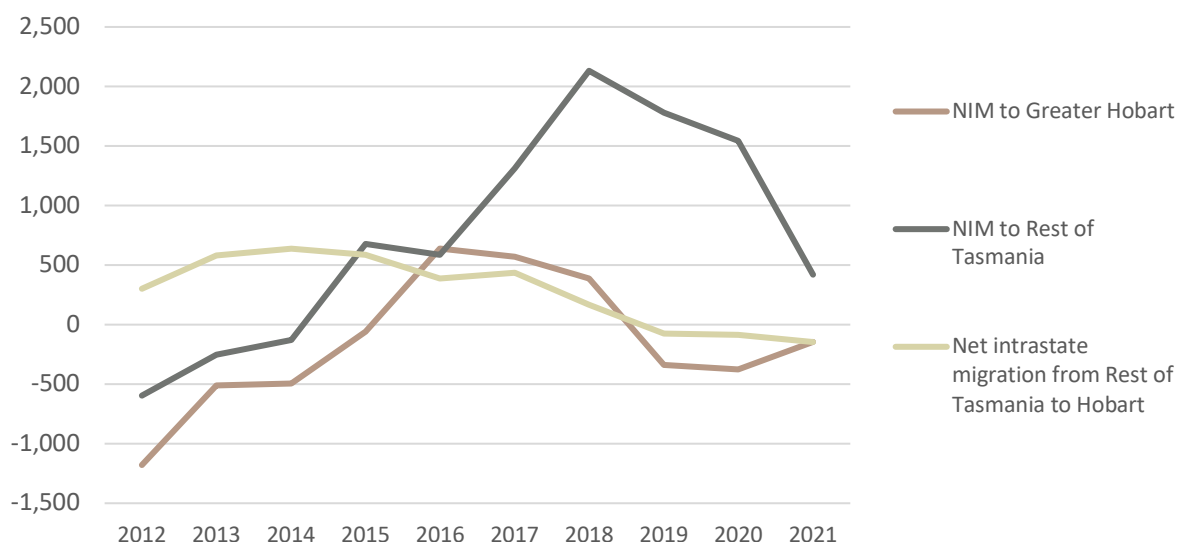
Overall, arrivals to Tasmania decreased slightly and departures from Tasmania increased slightly due to COVID-19 pandemic. In the first 1.5 years of the pandemic, Tasmania lost 235 people overall due to negative NIM after a positive contribution to the Tasmanian population growth between 2017 and March 2020 (see Figure 7).

2.3.3.3 Net interstate and intrastate migration by Tasmanian regions

There were some notable differences in interstate migration between the two main Tasmanian regions – Hobart and the Rest of Tasmania. NIM from the mainland to Hobart gradually increased between 2012 and 2016 and declined to negative figures by 2019. It remained negative during the first year of the pandemic. NIM from the mainland to the Rest of Tasmania gradually increased between 2012 and 2018 (though it was negative until 2015) and declined from 2019 to 2020.

In the first quarter of 2021, it was still positive (and at similar levels as in the first quarter of 2020). NIM from the Rest of Tasmania to Hobart gradually decreased between 2012 and 2020. It was negative in 2019 and 2020, as well as in the first quarter of 2021. It means that, over 2019 and 2020, more Tasmanians moved from Hobart to the Rest of Tasmania than in the other direction.

Figure 13: Net intrastate and interstate migration in Tasmania (Hobart, Rest of Tasmania), 2012-Q1 2021



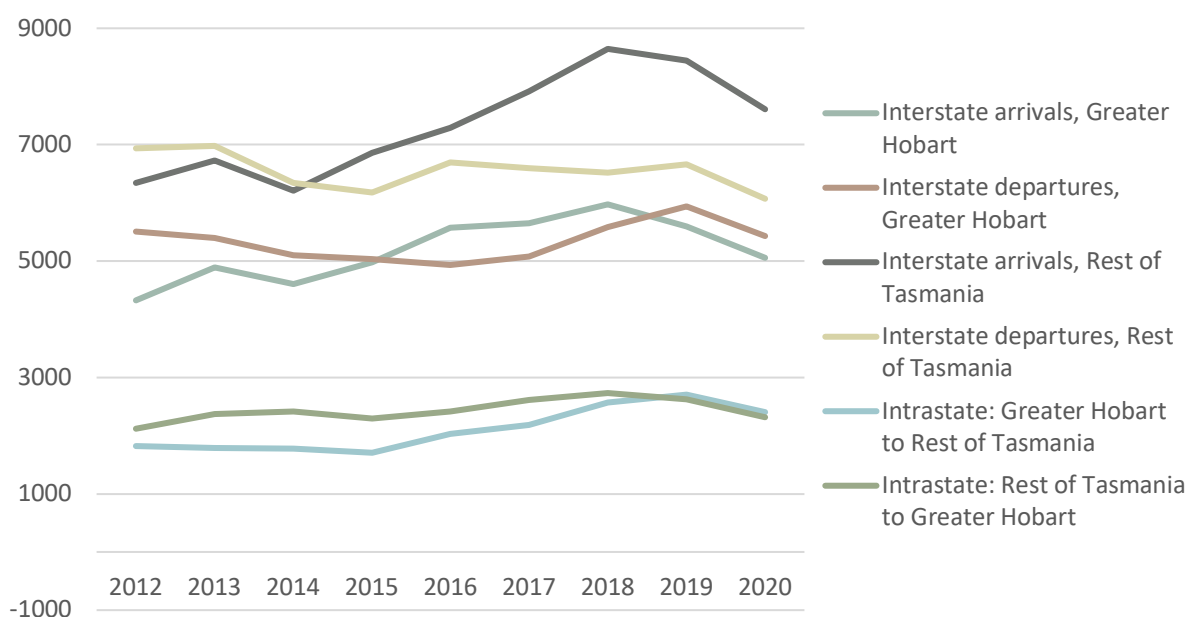
Sources: Australian Bureau of Statistics (August 2021) 'Table 2. Internal migration (arrivals, departures, net), greater capital cities – intrastate, interstate and total(a)' [time series spreadsheet], 'Regional internal migration estimates, provisional, Mar 2021', accessed 1 May 2022. Australian Bureau of Statistics (August 2021) 'Table 3. Internal migration (arrivals, departures, net), rest of state areas – intrastate, interstate and total(a)' [time series spreadsheet], 'Regional internal migration estimates, provisional, Mar 2021', accessed 1 May 2022.

2.3.3.4 Arrivals to and departures from Tasmanian regions (interstate, intrastate)

NIM (net interstate migration) and intrastate migration are dependent on interstate and intrastate arrivals and departures. In Figure 14, we present the interstate and intrastate figures for 2011-2020 for Greater Hobart and Rest of Tasmania. First, we can observe a notable steady increase of interstate arrivals to Greater Hobart and the Rest of Tasmania between 2014 and 2018, with a slight decline in the last two years of the available time series. On the other hand, while interstate departures declined in the Rest of Tasmania between 2012 and 2020, interstate departures in Hobart grew by about 20% between 2016 and 2019. This resulted in a notable gap between NIM in Greater Hobart and NIM in Rest of Tasmania, presented in Figure 13.

Between 2012 and 2017, more Tasmanians from the Rest of Tasmania moved to Greater Hobart than Tasmanians from Greater Hobart moved to the Rest of Tasmania. From 2018 and 2020, the intrastate migration figures are comparable, which means that net intrastate migration between the two main Tasmanian regions was close to 0. Generally speaking, we can report much higher levels of interstate than intrastate migration. From the regional internal migration figures (available for the first quarter of 2021), we can report an increase in internal (i.e., both interstate and intrastate) migration in Tasmania compared to Q1 2020 (similar to internal

Figure 14: Arrivals and departures to by Tasmanian region (interstate and intrastate migration)



Sources: Australian Bureau of Statistics (August 2021) 'Table 2. Internal migration (arrivals, departures, net), greater capital cities – intrastate, interstate and total(a)' [time series spreadsheet], 'Regional internal migration estimates, provisional, Mar 2021', accessed 1 May 2022.

Australian Bureau of Statistics (August 2021) 'Table 3. Internal migration (arrivals, departures, net), rest of state areas – intrastate, interstate and total(a)' [time series spreadsheet], 'Regional internal migration estimates, provisional, Mar 2021', accessed 1 May 2022.

2.4 Accuracy of population projections for Tasmania

In Sections 1.2 and 2.1 we introduced different population projections for Australia and Tasmania, including for different components of population change. In this section, we assess the accuracy of the following projections:

1. from the Australian Government Centre for Population (2020b),
2. from the Australian Bureau of Statistics (2018),
3. from academic literature (Charles-Edwards et al., 2021).

The main aim of this assessment is to determine the extent to which available projections can be relied upon for periods beyond 2022. We must note that different projections use slightly different methodologies. Pre-COVID projections from the ABS and Centre for Population did not take into account the COVID-affected population changes investigated in the literature; for example, in the study from Charles-Edwards et al. (2021).

The Centre for Population (2020) projections are produced using the cohort-component method with age and gender cohort-specific assumptions about future components of population change, including fertility, mortality, and migration. Overseas migration estimates are also based on detailed historical data and current government policy, and interstate projection is based on gross migration rates (for more information see Centre for Population, 2021). Similarly, ABS projections are based on demographic trends over the decade, with the base population being the estimated resident population for 30 June 2017. Due to the unpredictability of fertility, mortality and NOM, a range of possible outcomes were proposed. The projections did not take into account non-demographic factors such as policy decisions, catastrophes or wars (ABS 2018). In comparison, the projection of Charles-Edwards et al. (2021) was based on assumptions informed by: (1) scientific literature on demographic responses to natural disasters, economic recessions, and pandemics, (2) a review of historical data on impacts of shocks on population in Australia, (3) an expert survey of Australian demographers.

We can report different levels of accuracy for different sources of projections and different components of population change in Tasmania and Australia:

1. Australian Government Centre for

Population (2020b): the projection for Tasmania's population for financial year 2020-21, which was the first year in the projected time series, was only partially correct. The number of births was projected relatively accurately, while the number of deaths was overestimated by about 300 deaths or about 6%. Consequently, NI in Tasmania was larger. Second, NOM was fairly accurately projected (slightly more loss than projected). Third, the projection for NIM was inaccurate – arrivals were overestimated and departures were underestimated. NIM was negative (about -100), while it was supposed to be positive (+1,300 people). Consequently, the population growth was less than half of what was projected (0.14% instead of 0.35%).

2. Australian Bureau of Statistics (2018): for the first three years of the time series (2017-2019), the high series was the most accurate for projection of Tasmanian population size. The Tasmanian population size increased even faster than anticipated in the most optimistic scenario. NI and NIM were also fairly consistent with the high series. NOM was projected to decline after 2017, but this did not happen until the start of the pandemic. Ageing of the population was also consistent with the projections.

3. Charles-Edwards et al. (2021): four different COVID-affected scenarios were proposed for Australia: shorter, moderate, special shift, and longer. So far, the Australian fertility rate has been little affected by the pandemic (and not affected in Tasmania), which is consistent with the 'shorter' scenario. Mortality, especially in Tasmania, has not been increased by the pandemic, which is also consistent with their assumptions. In terms of NOM, 'moderate' and 'longer' scenarios seemed to be the most accurate since the start of the pandemic (projecting NOM to fully recover by between 2024-25 and 2028-29), since international arrivals already restarted. The study also projected that Tasmania would be less affected than the other Australian states/territories (except for the NT) while, in reality, the Tasmanian population stopped growing and the Australian population has still been growing during the pandemic, albeit slowly. This might be due to increasing levels of interstate departures from Tasmania in 2021.

2.5 Economic indicators and population change in Tasmania over time

After reviewing population projections, population size and structural changes over time, as well as changes in components of population change, we steer the focus to some key economic (including labour market) indicators. The theory explains that migration and population retention are dependent on economic and labour market opportunities, especially during economic and health crises. Australian Government Centre for Population (2020b) suggested monitoring the following indicators which can inform population projections: GDP per capita, state/territory unemployment rates, and labour and housing market conditions. Therefore, we analyse the 2012-2021 time series for key indicators for Tasmania and Australia, including Gross Domestic/State Product, the unemployment rate, average weekly earnings, and the Consumer Price Index. Additionally, we identify the indicators that were somewhat associated with population growth and changes between 2012 and 2021, including in the first 21 months of the pandemic.

2.5.1 Economic indicators for Tasmania and Australia

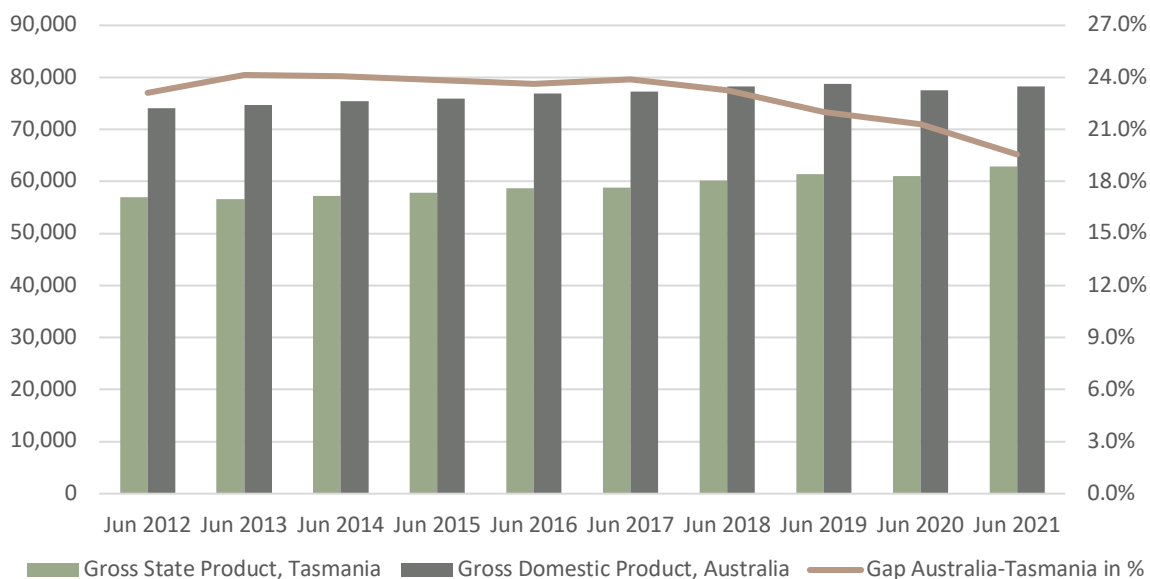
In this section, we present time series for the following economic (and labour market) indicators: (1) Gross Domestic/State Product, (2) unemployment rate (also youth unemployment rate), (3) average weekly earnings, and (4) Consumer Price Index (CPI). For each of these indicators, we present the results for Tasmania and Australia, and calculate either the relative or absolute gap between them. This gap can be an indicator of how Australians identify opportunities in Tasmania or Tasmanians in other Australian states and territories. This will be further discussed in the 'Population retention and attraction' chapter (Chapter 4). As the ABS indicators are provided for the whole country (and not, for example, for Australia excluding Tasmania), Tasmanian figures are directly compared to Australian figures. Since only about 1 in 50 Australians live in Tasmania, the Tasmanian figures should have little impact on national economic and labour market figures. The absolute/relative gaps are, therefore, just slightly underestimated.

2.5.1.1 Gross Domestic Product/Gross State Product

Gross Domestic Product (GDP) is the monetary market value of goods and services produced in a country during a specified time period. Gross State Product (GSP), which is also a standard measure of the value of the production of goods and services, is instead reported at the state/territory level.

The results show that both GDP (Australia) and GSP (Tasmania) gradually increased over time between 2012 and 2019. During that time period, the growth in Tasmania was greater (7.8%) than in Australia (6.2%). Between 2013 and 2019, the relative GDP-GSP gap decreased from 24.1% to 22.0%.

Figure 15: Gross Domestic/State Product per capita, annual (Australia and Tasmania)



Source: Australian Bureau of Statistics (November 2021) 'Table 1. Gross State Product, Chain volume measures and current prices' [time series spreadsheet], 'Australian National Accounts: State Accounts', accessed 1 May 2022.

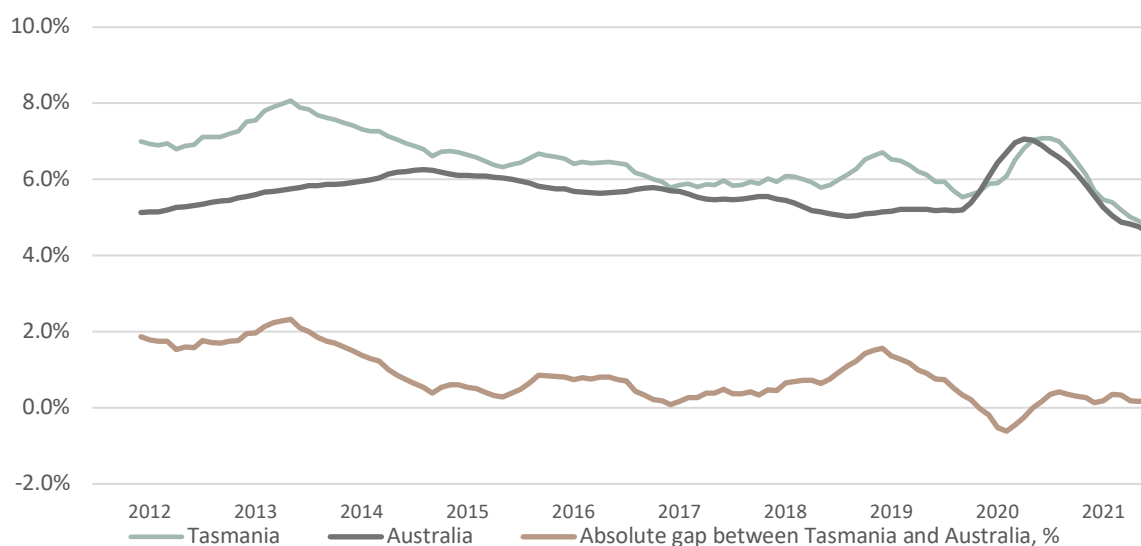
After a slight decline in 2020, GDP/GSP increased in 2021 to almost pre-COVID levels (Australia) and above pre-COVID levels (Tasmania). These numbers indicate that the Tasmanian economy recovered slightly faster than the Australian economy. The total increase in Tasmania was 10.5% in 10 years and the total increase in Australia was almost half that, i.e., 5.6%. However, most of the gap remained – in 2021, the relative GDP-GSP (Australia-Tasmania) gap was 19.6%.

2.5.1.2 Unemployment rate

The unemployment rate is a labour market indicator and is measured as a proportion of the labour force that is unemployed. We distinguish between registered unemployment (i.e., people registered at employment agencies) and harmonised unemployment (reported with, for example, Labour Force Surveys). The harmonised unemployment rate defines unemployed people of working age who are available and actively looking for work. We present and discuss harmonised unemployment rates for working age residents (see Figure 16) and those aged 15-24 (i.e., youth unemployment rate, see Figure 17).

The results show that, after an increase in unemployment between 2012 and 2013 (to about 8%), the unemployment rate in Tasmania (among the working age population) was slowly and gradually decreasing until early-2020. On the other hand, the unemployment rate in Australia remained fairly stable over time, i.e., between 5 and 6%. For most of the 2015-2018 time period, the absolute gap in the unemployment rate between Tasmania and Australia was below 1%. Soon after the start of the pandemic, the unemployment rate increased by about 2% in both Australia and Tasmania, and it was lower in Tasmania than in Australia for a short period of time. After unemployment rates peaked in late-2020, unemployment decreased by the end of 2021 and reached the lowest rates in the analysed time series. During that time, the absolute gap between Tasmania and Australia was close to 0.

Figure 16: Unemployment rate, persons, seasonally adjusted, Jan 2012-Dec 2021 (Tasmania and Australia)

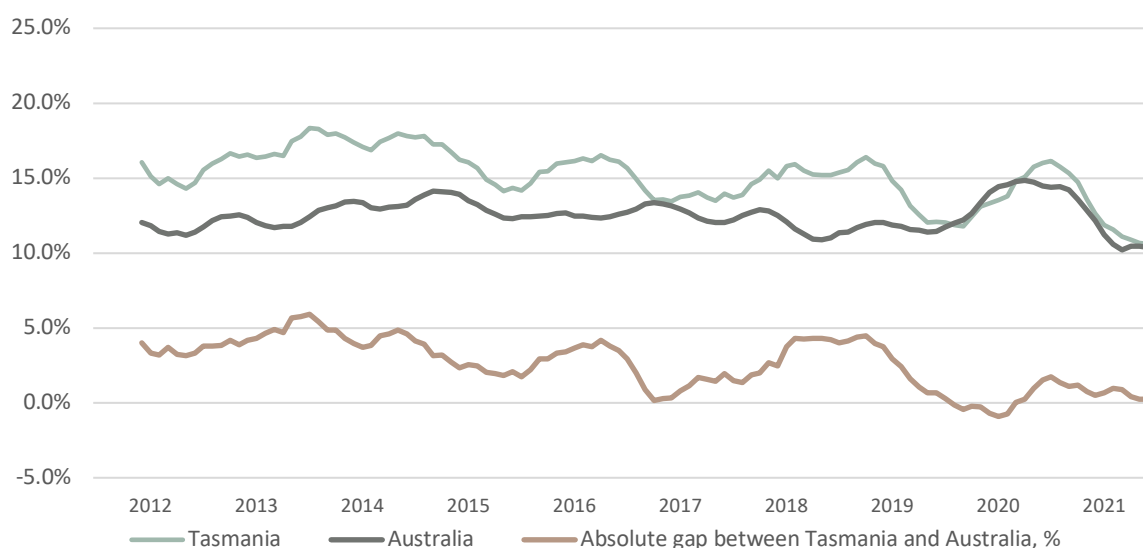


Sources: Australian Bureau of Statistics (February 2022) 'Table 1. Labour force status by Sex, Australia - Trend, Seasonally adjusted and Original' [time series spreadsheet], 'Labour Force, Australia', accessed 1 May 2022. Australian Bureau of Statistics (February 2022) 'Table 9. Labour force status by Sex, Tasmania - Trend, Seasonally adjusted and Original' [time series spreadsheet], 'Labour Force, Australia', accessed 1 May 2022.

For the 15-24 age group, we can report a very similar trend – a slowly declining youth unemployment rate over time in Tasmania and an increase of unemployment rates in both Tasmania and Australia (by about 4%) at the start of COVID-19. While it was

initially between about 3 and 6% (2012-2015), the absolute gap in youth unemployment decreased over time to between -1% and +2% in the first 21 months of the pandemic (close to 0 at the end of 2021).

Figure 17: Unemployment rate, 15–24 age group, seasonally adjusted, Jan 2012-Dec 2021 (Tasmania, Australia)



Source: Australian Bureau of Statistics (February 2022) 'Table 16. Labour force status for 15-24 year olds by State, Territory and Educational attendance (full-time)' [time series spreadsheet], 'Labour Force, Australia', accessed 1 May 2022.

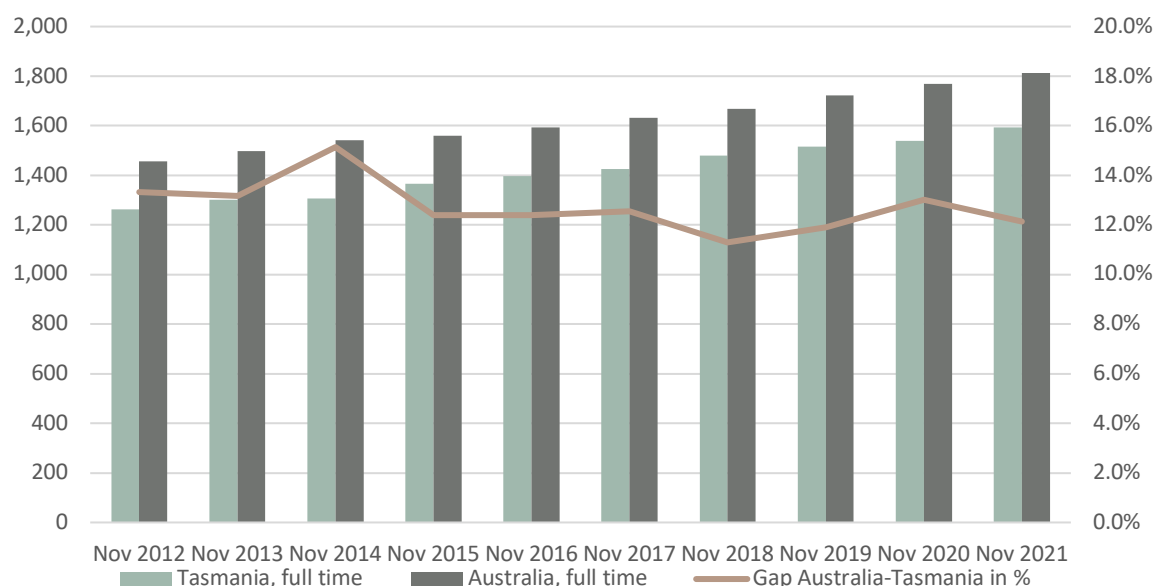
2.5.1.3 Average weekly earnings

Here we present full time total weekly earnings in AUD to highlight the differences between Tasmania and Australia for 2012-2021. We also calculate the gap in weekly earnings.

The results show a consistent growth of weekly earnings in both Tasmania and Australia between 2012 and 2021. In nine years, average weekly earnings increased from \$1,262 in 2012 to \$1,592 in 2021 in Tasmania, an increase of 26.2%. In Australia, average weekly earnings increased from \$1,456 in 2012 to \$1,813 in 2021, an increase of 24.5%.

As the increase was more substantial in Tasmania than Australia, the relative gap in average weekly earnings gradually decreased over time from 13.3% in 2012 to 12.1% in 2021. It was highest in 2014, 15.1%, and lowest in 2018, 11.3%. Average weekly earnings in Tasmania in 2021 are comparable to average weekly earnings in Australia in 2016 (a five-year gap).

Figure 18: Average weekly earnings*, full time, total earnings, seasonally adjusted (Tasmania, Australia), 2012-2021 (data release in November each year)



* Updated and more detailed weekly earnings figures based on analysis of 2021 Census data are provided in the **addendum**

Sources: Australian Bureau of Statistics (November 2021) 'TABLE 2. Average Weekly Earnings, Australia (Dollars) - Seasonally Adjusted' [time series spreadsheet], 'Average Weekly Earnings, Australia', accessed 1 May 2022.

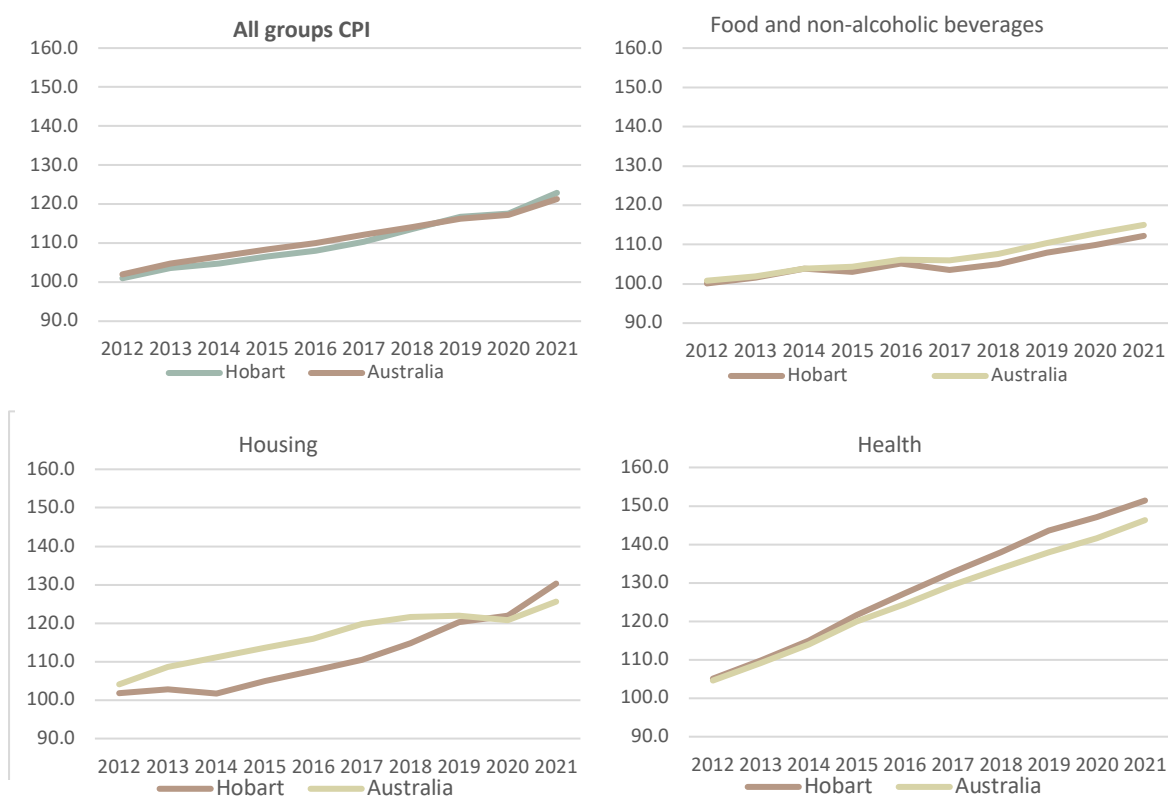
Australian Bureau of Statistics (November 2021) 'TABLE 12F. Average Weekly Earnings, Tasmania (Dollars) - Seasonally Adjusted' [time series spreadsheet], 'Average Weekly Earnings, Australia', accessed 1 May 2022.

2.5.1.4 Consumer Price Index

Consumer Price Index (CPI) is a general measure of price inflation in Australia, and measures changes in the price across the 8 capital cities of goods and services which represent a large proportion of metropolitan household expenditure. The following groups of goods and services are included: food and non-alcoholic beverages, alcohol and tobacco, clothing and footwear, housing, furnishings, household equipment and services, health, transport, communication, recreation and culture, education, insurance and financial services.

In Figure 19, CPI is presented for all groups of products combined and for selected groups of products that are of the most basic need: food and non-alcoholic beverages, housing, and health. Housing and health are two of the issues identified as key for Tasmania (see Chapters 3 and 4). We present changes for 2012-2021 (with reference year=2011 when CPI=100) and compare the increase in prices between Hobart and all eight Australian capital cities (hereafter referred to as "Australia"). The result will serve as an indicator of affordability in Hobart in 2021 compared to 2012 (and relative to the other 7 capital cities).

Figure 18: Average weekly earnings, full time, total earnings, seasonally adjusted (Tasmania, Australia), 2012-2021 (data release in November each year)



Sources: Australian Bureau of Statistics (December 2021) 'TABLES 3 and 4. CPI: Groups, Weighted Average of Eight Capital Cities, Index Numbers and Percentage' [time series spreadsheet], 'Consumer Price Index, Australia', accessed 1 May 2022.

Australian Bureau of Statistics (December 2021) 'TABLE 5. CPI: Groups, Index Numbers by Capital City' [time series spreadsheet], 'Consumer Price Index, Australia', accessed 1 May 2022.

All groups. The results show a similar overall increase in prices for all groups of products in Hobart and Australia between 2012 and 2021 (by between 19% (Australia) and 22% (Hobart)). This is approximately an annual increase of 2-2.5%. Between 2013 and 2017, the prices of goods and services were increasing slower in Hobart than in Australia, and after 2017 they were increasing at a higher rate in Hobart.

Food and non-alcoholic beverages. We can observe a more substantial increase in prices of food and non-alcoholic beverages in Australia than Hobart between 2012 and 2021 (especially after 2015). In 9 years, the prices increased by a total of 12% in Tasmania and 14% in Australia.

Housing. The results show substantial differences between Hobart and the other capital cities. In Australia, the increase was almost linear between 2012 and 2017, and then it plateaued until 2020. In Hobart, it started increasing in 2014 and reached Australian CPI numbers in 2020. Between 2012 and 2021, the price of housing increased by 28% in Hobart (more than 8% in last year alone) and 21% in Australia.

Health. We can observe a fairly linear increase in prices of health-related goods in services in both Hobart and Australia. The growth was slightly faster in Hobart compared to Australia. In 9 years, prices of health-related goods and services increased by 44% in Hobart and 40% in all capital cities combined.

2.5.2 Association between economic indicators and population change

In this section, we examine relationships between economic indicators and components of population change. As our time series is relatively short, i.e., from 2012 and 2021, and for one state and Australia only, the findings will be mostly indicative.

Fertility, mortality and natural increase. We can conclude that since fertility and mortality rates both decreased (and NI remained at similar levels), and economic indicators show improving conditions for Tasmanians and Tasmanian companies over time, there was no observable association between improved economic conditions and natural increase in population in Tasmania between 2012 and the start of the pandemic. This is unsurprising, as only severe economic crises tend to markedly impact fertility, mortality, and therefore NI (Charles-Edwards et al. 2021).

Overseas migration. NOM gradually increased between 2014 and 2018/2019. During that time, the unemployment rate (for 15-64 and 15-24 age groups) decreased, and the gap in both unemployment and average weekly earnings between Tasmania and Australia decreased. Around 2019, both temporary and permanent visa arrivals peaked. Consequently, increasing NOM could well be a result of improving labour market conditions, success of the University of Tasmania in attracting new international students, and more permanent and temporary work visas made available to people overseas.

Interstate migration. Similar to NOM, NIM gradually increased between 2014 and 2018, mostly due to an increase in arrivals. Further, NIM contributed much more to the Rest of Tasmania than it did to Hobart. This happened simultaneously with improved employment conditions. Interestingly, in 2019, both the unemployment rate and the average weekly earnings gap increased, while NIM decreased. Also, CPI shows that since the beginning of the pandemic prices of housing and health increased substantially in Hobart, more than in all Australian capital cities, which might be associated with increasing numbers of interstate departures in 2021.

Generally speaking, changing economic and labour market conditions seem to have minimal direct and measurable impact on all components of population change. Based on the available data, we conclude that the association between those indicators and interstate migration might be the most significant of all components of population size change (albeit associated weakly).

2.6 Key findings

We conclude this chapter with some key findings:

- The most substantial growth in population in Tasmania within the 2012-2021 time series was observed between 2017 and March 2020, largely due to high levels of NIM and NOM. These changes had a positive effect on ageing (i.e., slowed it down), though ageing remains an issue in Tasmania (the average age increased by more than 2 years between 2011-12 and 2020-21).
- Both fertility and mortality rates are simultaneously declining in Greater Hobart and the Rest of Tasmania. NI in Tasmania has consistently contributed to the population growth and was the only contributing component in 2021.
- Interstate arrival numbers were greater and increased faster over time in the Rest of Tasmania than in Greater Hobart. Net intrastate migration to Hobart was initially positive (between 2012-2018) but has been slightly negative in 2019 and 2020. Over time, internal migration stopped contributing to an increase of proportion of Tasmanians living in Hobart. We assume that the main reason for a negative interstate and intrastate migration to Greater Hobart before the pandemic were increasing housing/property prices (consistent with the report from the Australian Government Centre for Population (2021)). This issue is further discussed in Chapters 3 and 5.
- While no data are available for Tasmania, temporary and permanent visa arrivals restarted in Australia in the first two months of 2022. This may result in an increase or increased proportion of population growth arising from overseas migration in Australia and Tasmania.
- The analysed population projections slightly underestimated the Tasmanian population growth prior to the pandemic, as well as underestimated the (negative) impact of COVID-19 on the population growth (especially on departures from Tasmania in 2021).
- The selected economic indicators revealed improving conditions for Tasmanian residents and the Tasmanian economy between 2012 and 2018/2019 (also relative to Australia). However, an increase in prices of housing and health-related goods and services (and also of some basic products/services) was more substantial in Hobart than in the other Australian capitals, especially since the start of the pandemic. These changes in economic conditions might be associated with certain population change components (like NIM), such that increased cost of living may have a negative impact on the standard of living and drive departures from Tasmania.

3 Liveability

Liveability is a common term in academic research and policy that generally encompasses several physical and social attributes of a place as a measure of community wellbeing. For example, Lowe and colleagues (2013) define a liveable place as somewhere that is ‘safe, attractive, inclusive, and environmentally sustainable; with affordable and diverse types of housing, public open space, local shops, health and community services, leisure and cultural opportunities; with opportunities for employment and education all accessible by convenient public transport, walking and cycling’.

Tasmania fares comparatively well with other states and regions in terms of liveability. The Australian Urban Observatory developed a Liveability Index based on thirteen measures of liveability found to be associated with health and wellbeing outcomes: 13 measures which comprise the liveability index are: street connectivity; dwelling density; access to community, culture and leisure destinations; access to childcare services; access to public schools; access to health services; access to sport and recreation facilities; access to fresh food; access to convenience stores; access to regular public transport; access to large public open space; low housing affordability stress; and local employment opportunities (Arundel et al., 2017). Analysis of liveability in Hobart and Launceston using this index based on data from 2018 found wide variation throughout each city (Gunn et al., 2020a; Gunn et al., 2020b). Compared to Australia's 19 other largest cities, Hobart and Launceston performed relatively well on housing affordability, alcohol environment (average distance to an off-licence alcohol outlet) and access to local employment, but relatively poorly in terms of access to social infrastructure such as childcare and healthcare.

The liveability of Tasmania as experienced by current residents and perceived by those elsewhere is key to growing the Tasmanian population. This is acknowledged in the Tasmanian Population Growth Strategy 2015, in which liveability is one of three key pillars. Although the strategy does not explicitly define liveability or apply a framework, several dimensions of liveability are identified:

*Tasmania's liveability is one of its strengths. Brand Tasmania markets our state as a place that offers rewarding **career opportunities**, an enviable **lifestyle**, a comfortable **climate** and vibrant, **welcoming communities**. **Balancing work, family life and recreation** is easier in Tasmania where **housing is affordable**, good **schooling and services** are available and average **commute times** are among the shortest in the nation. Tasmania also offers a stunning **natural environment** and **cultural, arts and sporting** events and attractions that are world-class. - p.26, Population Growth Strategy*

This chapter explores the question: What are the key changes arising out of 2020/2021 and amidst COVID-normal that are impacting liveability in Tasmania?

These changes are summarised in the following sections:

1. Adaptive lifestyles
2. Adaptive industries
3. Essential infrastructure, goods and services

3.1 Adaptive Lifestyles

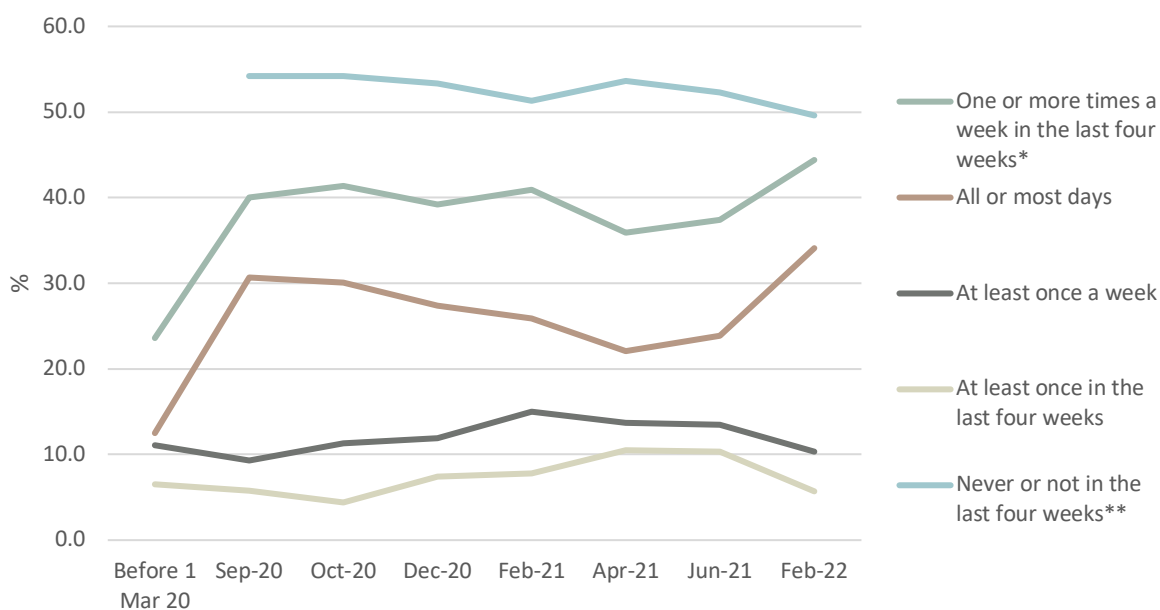
Key trends	Impacts on liveability
 <p>Higher rates of working from home that are likely to persist.</p>	<ul style="list-style-type: none"> • Changes to where people can and want to live is increasing demand for certain types of housing, particularly in regional areas, exacerbating existing affordability and supply issues. • Working from home has been shown to have both positive and negative impacts on individual wellbeing. • People will use infrastructure differently, for example, reduced demand for peak hour public transport and increased demand for high-speed internet with good coverage in regional areas. • The function and vibrancy of urban / commercial centres may be reduced if there are less workers and businesses based there. • It is important to note that many roles in Tasmania's most prominent employing industries (e.g., healthcare and social assistance) cannot be performed from home. Accordingly, the work from home trend may be less pronounced than in other states. However, it is still a major change for many workers.
 <p>Changes to the way and how frequently people are accessing goods and services and engaging in recreational activities. Increased online activity and avoidance of certain activities are likely to persist.</p>	<ul style="list-style-type: none"> • Accessibility of goods and services may increase, especially for people living in areas where services are limited and typically hard to get to. • High rates of digital exclusion in Tasmania suggest that accessibility will be decreased for some people, especially if there is a transition to and reliance on online modalities. • Individual wellbeing may decline for those avoiding social interactions.
 <p>Adoption of some sustainable lifestyle behaviours, though it is unclear if these will remain in the long-term</p>	<ul style="list-style-type: none"> • Preservation of the natural environment. • Increased efforts to access to healthy food and general improvements in health. • Increased appreciation of ready access to nature in Tasmania among residents, and possibly prospective residents.
 <p>Increased access to and appreciation of public open space and the natural environment.</p>	<ul style="list-style-type: none"> • Improved individual and community wellbeing.

3.1.1 Working from home

Despite restrictions lifting progressively across the country, many Australians are still working from home. In February 2022, 44.4% of Australians with a job worked from home one or more times a week in the last four weeks (see Figure 20). This is the highest recorded since the beginning of the pandemic, when only 12.5% of Australians were working all or most days from home and is also much higher than early in the pandemic, when working from home rates first peaked at 30.7% in September 2020. After this point, there appeared to be a gradual return to the workplace, with only 35.9% working from home at least once a week in April 2021. Interestingly, this downwards trend reversed from April 2021. During the same period there was a decline in the number working from home only one per week or once per month.

This suggests flexible work arrangements are persisting beyond the initial stages of the pandemic, when working from home was either mandated due to lockdowns or strongly advised to reduce the spread of COVID-19 in the community. It also suggests that most people who are working from home are either working from home exclusively or working from their workplace minimally, rather than the other way round. An analysis conducted by CSIRO using ABS and NBN data also suggests that remote working will continue at higher levels than before the pandemic, however there will be regional variations due to occupational and demographic differences and the level of COVID the area has experienced (Evans & Reeson, 2021).

Figure 20: Proportion of Australians aged 18 years and over working from home, 2020-22



*Includes all days, most days or at least once a week

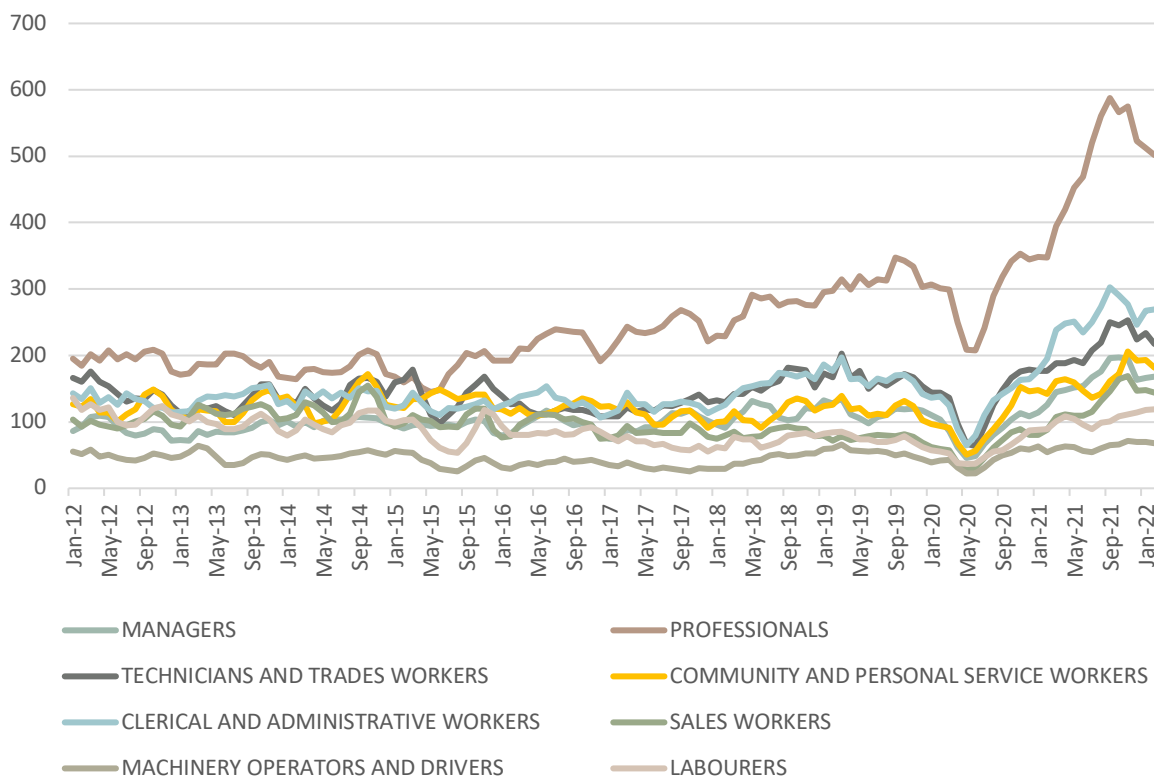
**Not included as a response option for before 1 March 2020 data

Source: Australian Bureau of Statistics (February 2022) 'Table 3.1 Persons aged 18 years and over, Frequency of activity in the last four weeks, by selected characteristics: Proportion' [data set], *2022 Household Impacts of COVID-19 Survey, February 2022*, accessed 17 May 2022.

In Tasmania, the impact of COVID-19 has been exacerbated by an over-representation of vulnerable industries such as the arts and recreation or accommodation and food services sectors, many of whom were not able to work remotely or lost work completely. There has also been a disproportionately high impact on women and younger people and those living in regional areas (Eccleston et al., 2021). State-level data on working from home is not available, however data from The Tasmania Project suggests there have been similar trends observed in Tasmania. In the fifth general survey of The Tasmania Project (TTP5), open from 24 September to 3 October 2021, respondents were asked about working from home. At this time, border restrictions were in place with COVID-affected states (Victoria, NSW and the ACT) and several high-risk premises were declared in other states. Importantly, there was no COVID-19 transmission in the community. Most employed respondents (55%, n=414) indicated they had been given the option to work from home at some point during the pandemic.

Just over a quarter (28%, n=189) were currently working from home to some extent, but most were not working from home at all (74%, n=508). When asked how they would like to work in the future if working from home was an option, 16% (n=123) indicated they would prefer to work exclusively from home, while 52% (n=387) would prefer a combination of working from home and their workplace. 25% (n=186) would prefer to not work from home at all, while 7% (n=52) did not plan to work at all in the future. It is not clear how the borders reopening in December 2021 and the subsequent spread of COVID-19 in the community will impact working from home in Tasmania, however it is unlikely to decrease given the relationship longer outbreaks of COVID-19 and more persistent working from home (Evans & Reeson, 2021).

Figure 21: Jobs advertised (absolute value) quarterly by occupation, 2012-2022, Hobart and Southeast Tasmania



Source: Labour Market Information Portal Vacancy Report, <https://lmip.gov.au/default.aspx?LMIP/GainInsights/VacancyReport>

There is emerging evidence of a strong preference for employees to continue working from home, underpinned by the simple fact that the pandemic has clearly established that many jobs can be performed remotely. There is also evidence that workers had a positive experience and recognised the flexibility and time savings associated with working from home during the pandemic (Beck & Hensher, 2021). The Taking the Pulse of the Nation Survey conducted by the Melbourne Institute in January 2022 found that most Australians (89%) would like to continue working at least part of their work week at home - one-third would like to spend all of their workweek at home and 64% would like to work at least half of their work week from home. Other research conducted with Australian samples suggests a preference to work from home for at least 1 or 2 days a week (Beck & Hensher, 2020; Barrero et al., 2021). Globally, more than half (54%) of more than 16,000 surveyed employees would consider leaving their job post-COVID-19 pandemic if they were not allowed some degree of flexibility (EY, 2021). In Tasmania, many residents are employed in occupations and industries that cannot be performed remotely (Eccleston et al., 2021), however jobs vacancies data shows growing demand for roles that have seen high rates of remote work during the pandemic such as professionals and managers (Evans & Reeson, 2021) (see Figure 21).

The extent to which employers will support sustained flexible working arrangements is unclear. In January 2022, over one-third of Australian workers (32%) reported that they have employers who agree with them on the proportion of their work week they would spend at home, down from 44% in April 2021 (Petrie, 2022).

There has been an upwards trend in the number of workers who want to work more from home than their employer would permit, increasing from 31% in April 2021 to 34% in Sep/Oct 2021 to 40% in Jan 2022 (Petrie, 2022). It is possible that long-held stigmas around working from home and flexibility, particularly in certain industries and sectors, will see many workers pressured into returning to the workplace (Ballantine et al., 2022). On the other hand, there was a trend towards remote working before the pandemic, which may be difficult to reverse given the huge improvements in communications technology and shifts in organisational culture achieved during the pandemic.

Working from home is expected to continue at higher rates than before the pandemic (Productivity Commission, 2021). Australian data suggests that nearly one in five Australian workers may continue working from home even as COVID-19 restrictions ease (Evans & Reeson, 2021), and analysts also predict a permanent increase in remote working in Tasmania (Eccleston et al., 2021). Working from home is largely restricted to professional, highly skilled and educated workers for whom flexible working arrangements are possible (see Figure 22), but in Tasmania there is an overrepresentation of workers in industries that are less likely to be able to work from home, such as hospitality, accommodation, tourism, retail and construction. Given the unique characteristics of the Tasmanian population in terms of occupations, industries, sociodemographic characteristics, age, and health status, it is important that the impacts of sustained working from home be carefully considered.

Figure 22: Occupations with the highest ‘telework persistence’ (most likely to be working from home in May 2021) during the pandemic in Australia

1. Business and systems analysts and programmers	6. Financial and insurance clerkss
2. Database and system administrators and ICT security specialists	7. Information and organisation professionals
3. Arts professionals	8. Architects, designers, planners and surveyors
4. Media professionals	9. ICT managers and sales
5. ICT network and support professionals	10. Marketing and PR professionals

Source: Evans & Reeson, 2021

The impacts of a sustained increase in working from home, though uncertain, will likely be far-reaching for not only individuals and workplaces, but for entire communities, cities and regions. At an individual level, the reduction of time spent travelling to and from the office may increase the amount of time available for leisure and the time spent in their local community, which may increase social cohesion, increase utilisation of public infrastructure, and increase demand for new and/or upgraded facilities. However, working from home can also increase stress, decrease job satisfaction, lead to conflict both at work and home (Berkowsky, 2013; Rice, 2017), increase feelings of isolation from colleagues, and affect physical and mental health and job performance (Baym et al., 2021). The negative impacts of working from home are likely to disproportionately affect women (Oakman et al., 2022), especially those with multiple children (Pennington & Holmstrom, 2021), and there are also concerns regarding equal access to professional development opportunities and promotion (Productivity Commission, 2021).

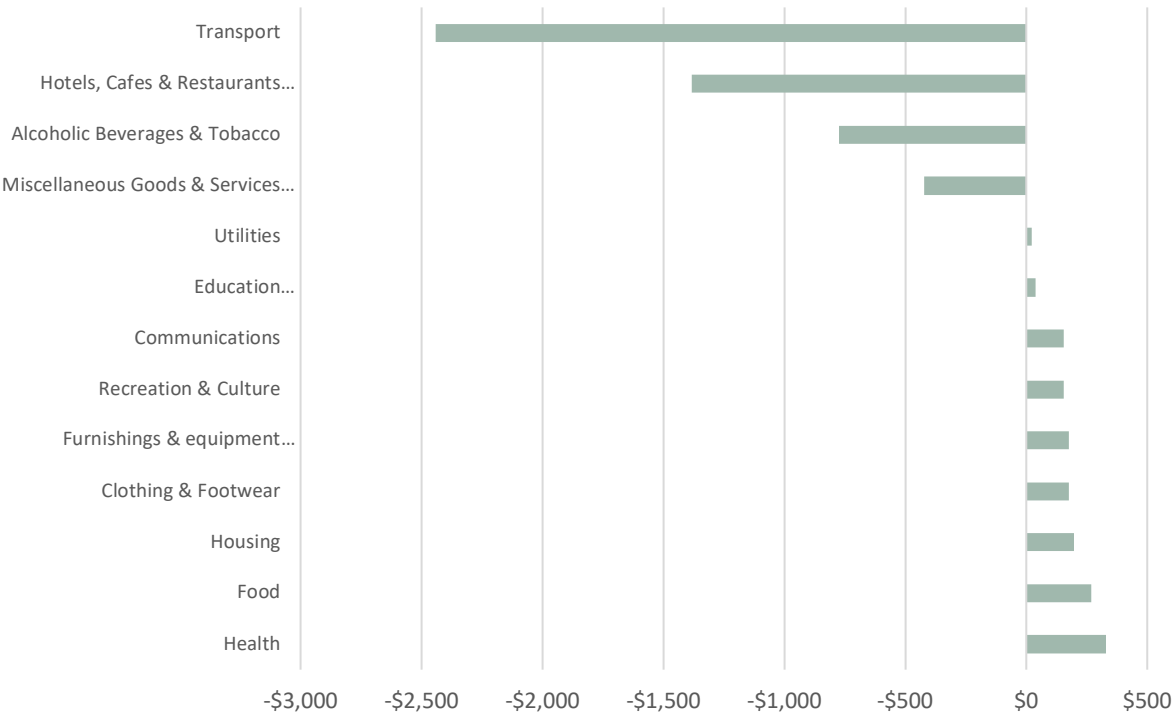
Other impacts may include: altered transport and commuting patterns, such as decreased use of public transport (particularly peak-hour services); changes to where people want to live as they no longer need to live close to the office, for example many people moving to outer suburbs and regional areas; changes to the kind of housing people need and want, for example larger houses with space for a home office or to accommodate extended family (e.g., parents due to concerns around the safety of aged care residences, adult children due to a lack of affordable housing); a reduction in businesses operating in CBDs and commercial centres impacting their vibrancy; and changing consumer behaviours that are linked to work (e.g., where people buy their lunch, how people spend their leisure time before/after work) (Productivity Commission, 2021). Emerging evidence supports the prediction that working from home arrangements will enable people to relocate to regional areas, with increased NBN activity observed in regional areas in NSW and Queensland (Evans & Reeson, 2021). This data is not available for Tasmania, however, increases in the population and housing prices in regional parts of Tasmania (see section 3.3) suggest a similar inflow of remote workers has occurred, though to what extent is unclear. The broader implications are yet to be seen; however, it is likely that this will increase demand for public facilities, infrastructure and essential services in these regional areas which tend to be governed by small, poorly funded local councils that struggle to meet the needs of their existing populations.

3.1.2 Changing consumer and citizen behaviour

The COVID-19 pandemic has fundamentally changed the way people live their lives. Physical distancing and other restrictions to limit the spread of the virus meant people were required to or chose to stay home more and go out less, limiting their ability to travel and participate in recreational activities as they once did and impacting the extent to which and how they accessed goods and services. Reductions in household incomes linked to loss of employment has also changed spending behaviours.

The impact is visible in household expenditure data, which shows that in 2020/21 the average Tasmania household spent \$3,504 less overall (\$98,253 compared to \$101,757) and \$2,443 less (on transport, \$1,383 less on hotels, cafes, and restaurants, \$774.59 less on alcoholic beverages and tobacco, and \$423.12 less on miscellaneous goods and services (see Figure 23). This is unsurprising given the nature of the restrictions imposed on consumers during the pandemic.

Figure 23: Change in household expenditure, Tasmania, 2018/19 to 2020/21

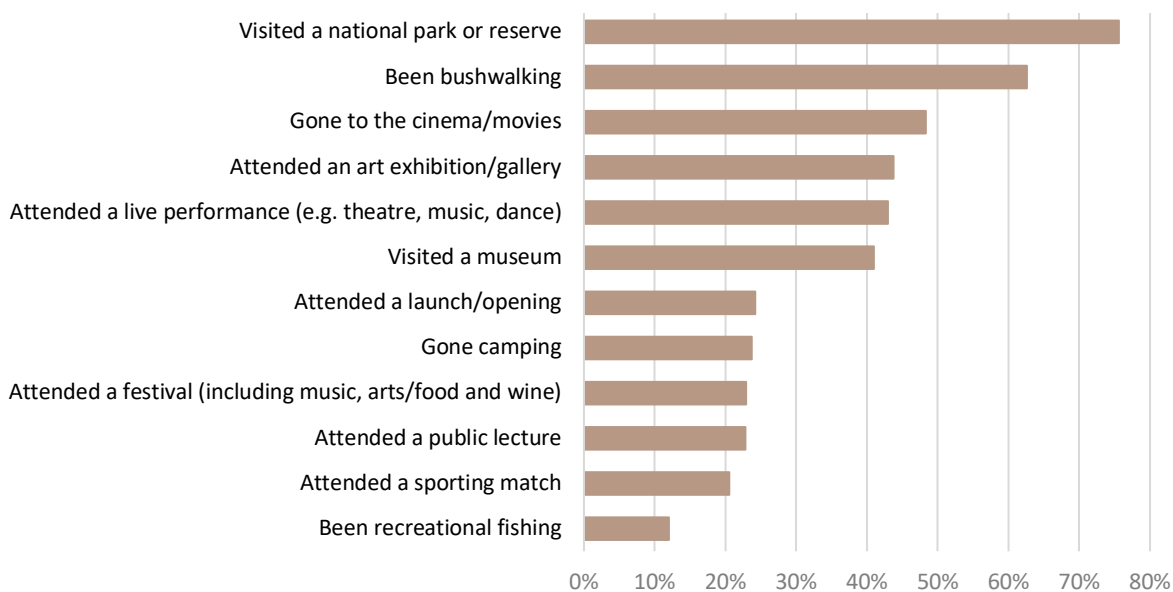


Source: National Institute of Economic and Industry Research (NIEIR)©2021.

Findings from a survey conducted by The Tasmania Project during September and October 2021 (n=1143) also show the impact on citizen behaviour, with in-person engagement with arts and cultural events far below pre-pandemic levels: 44% of respondents had attended an art exhibition/gallery in person in 2021 so far; 41% had attended a museum; 23% had attended a festival; 43% had attended a live performance; 48% had gone to the cinema/movies; 23% had attended a public lecture; and 24% had attended a launch/opening. A previous Tasmania Project survey conducted in May 2020 (n=1258) found that 80% had attended art exhibitions/galleries, museums, cultural festivals, performing arts, and the cinema in the year prior to the pandemic.

Although participation in certain activities was lower than pre-pandemic levels, with relatively fewer restrictions in place throughout much of 2021 compared to 2020 Tasmanians appeared to be engaging in a range of activities unheard of in other parts of Australia experiencing more severe restrictions and lockdowns, including going to the movies, attending live performances, and going to the museum (see Figure 24).

Figure 24: Proportion of respondents to The Tasmania Project Fifth General Survey (n=1008) who have undertaken selected activities, in person, in 2021

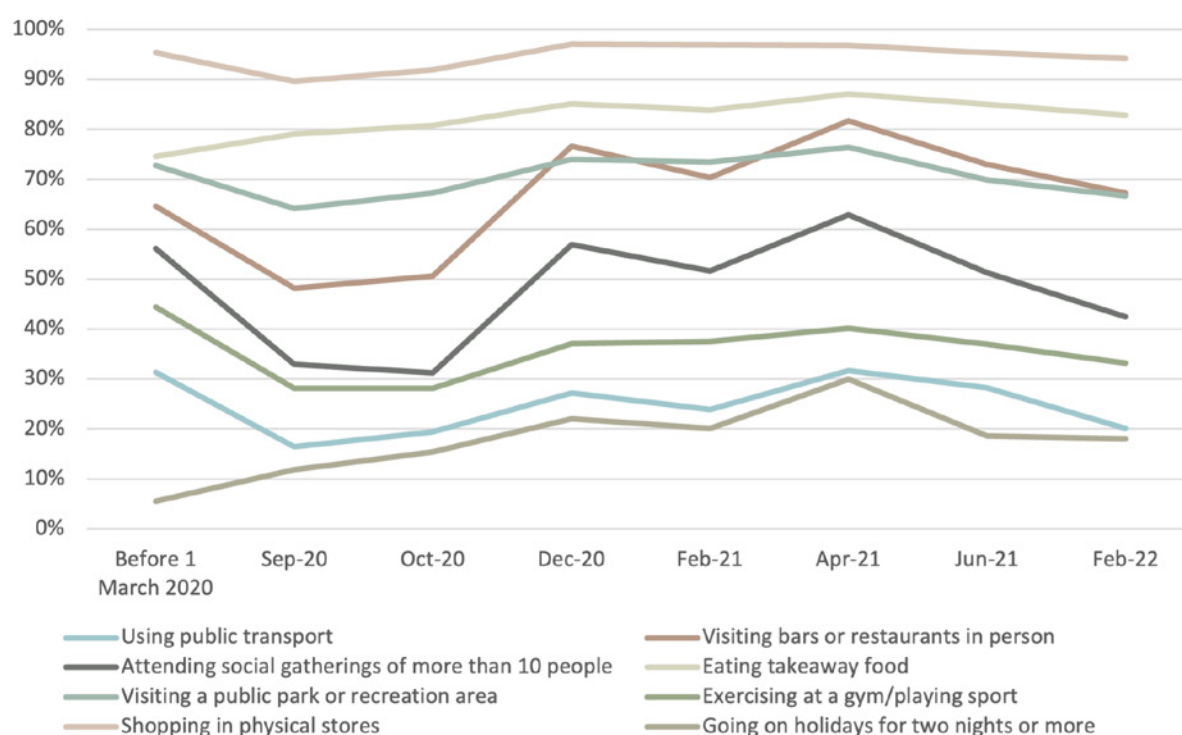


Source: The Tasmania Project General Survey 5 (September/October 2021) (Seiwright, 2021)

The situation drastically changed when borders opened on 15 December 2021, after which there was a rapid surge in infections. Data is not available from The Tasmania Project to show engagement in these activities since the borders opened, however retail activity in Tasmania slowed dramatically and there was a reduction in spending across many categories such as clothing, footwear and accessories, household goods including furniture and appliances (Department of Treasury and Finance, 10 May 2022). This suggests that, despite there being no lockdowns, Tasmanians behaved in similar ways to the first year of the pandemic, staying home more and going out less. Data from The Tasmania project suggests Tasmanians were very concerned about the borders opening, though concerns were largely about health rather than economic impacts (Seivwright, 2021).

National data about rates of participation in activities suggests that life is returning somewhat to normal, with Australians more likely to go shopping, visit a public park or recreation area, visit a bar or restaurant or exercise at a gym or play sports in February 2022 compared to June 2021 (see Figure 25). In Tasmania, increases in spending in May 2022 (relative to the previous month) on a range of goods and services including other retailing (up 4.2%), cafés, restaurants and takeaways (up 6.3%) and household goods (up 0.6%) suggests people are going out and spending more (Department of Treasury and Finance, 10 May 2022).

Figure 25: Proportion of Australians aged 18 years and over participating in selected activities at least once in the last four weeks*



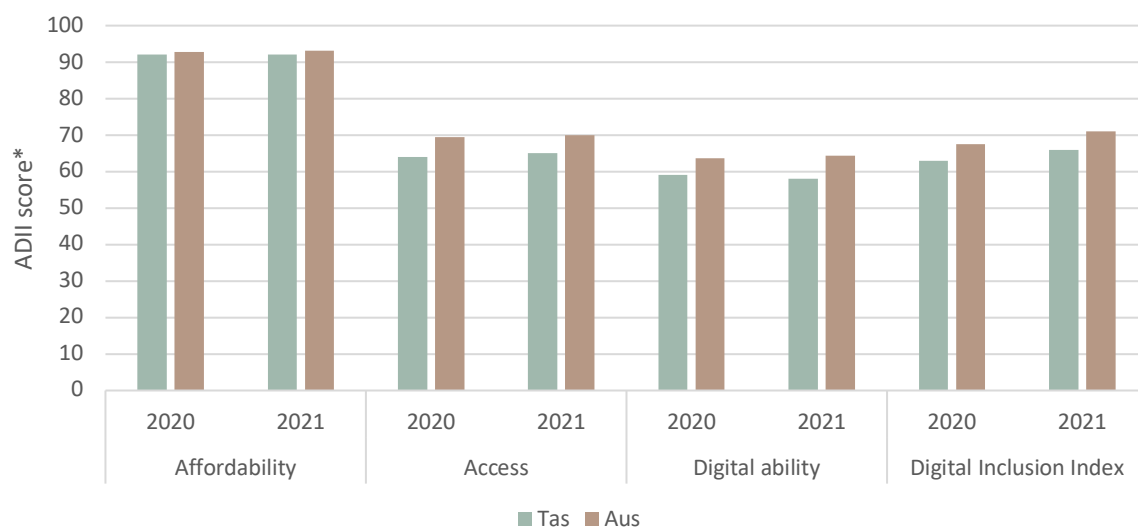
*At least once in the last four weeks includes all days, most days, at least once a week and at least once in the last four weeks.

Source: Australian Bureau of Statistics (February 2022) 'Table 3.1 Persons aged 18 years and over, Frequency of activity in the last four weeks, by selected characteristics: Proportion' [data set], *2022 Household Impacts of COVID-19 Survey, February 2022*, accessed 17 May 2022.

With lockdowns and restrictions limiting access to retail outlets, there was a rapid and significant increase in online shopping that appears to have persisted throughout the pandemic. From March to October 2020, total online sales averaged an annual rise of 67.1% (ABS, October 2020). Data from Australia Post suggests initial increases were even steeper, with four in five (82%) Australian households making an online purchase during 2020, up from 75% in 2019. The trend in online shopping continued in 2021, growing 31.8% in the 12 months to 30 June 2021, with 9.1 million households purchasing online in 2021 (Australia Post, 2021). As this is national data, it likely reflects the fact that many Australians were in lockdowns during that time. Online social activity, such as video calling, also increased during the pandemic and research suggests this is persisting even after restrictions have eased (Evans & Reeson, 2021).

This research also found activity levels were lowest in areas with a greater proportion of older residents, which is a relevant finding for Tasmania given its ageing population. No data is available for online activity for the Tasmanian population, however it is reasonable to assume there was an increase in online participation during the pandemic by Tasmanians based on other available evidence (e.g., increased rates of working and studying from home, uptake of telehealth, etc.). Concerningly, data from the Australian Digital Inclusion Index (see Figure 26) based on the Australian Internet Usage Survey (AIUS) shows Tasmania was the least digitally included state in 2021, performing below than the national average across three key domains of digital inclusion: access, affordability and digital ability.

Figure 26: Performance across key measures of digital inclusion, 2020 and 2021, Tasmania vs National average



*ADII (Australian Digital Inclusion Index) scores range from 0 to 100. The higher the score, the greater the level of digital inclusion. Each of the Index dimensions – Access, Affordability and Digital Ability – are equally weighted to derive the total Index score.

Source: Thomas, J., Barraket, J., Parkinson, S., Wilson, C., Holcombe-James, I., Brydon, A., Kennedy, J. (2021). Australian Digital Inclusion Index: 2021, Dashboard Dataset Release 1. Melbourne: RMIT and Swinburne University of Technology, and Telstra.

There are also signs that the pandemic has encouraged aspirations for and perhaps even transitions to a more sustainable lifestyle due in part to the slower pace of life, food supply chain disruptions highlighting of the importance of local food systems, and having more leisure time (to, for example, garden and bake bread). In 2021, despite extensive lockdowns and reduced installations across NSW and Victoria, Australia installed its highest ever number of rooftop solar photovoltaic systems (Clean Energy Regulator, 2021a). This has been attributed to sustained low technology costs, increased work from home arrangements, and a shift in household spending to home improvements during the pandemic (Clean Energy Regulator, 2021b). There has also been an increase in the uptake of small-scale solar energy generation and storage in Tasmania (CSIRO, 2022). Data from The Tasmania project also suggests the pandemic highlighted the importance of Tasmanian produce and led Tasmanians to consume more local food and decrease their food waste (Yanotti & Ripoll Gonzalez, 2020; Gale et al., 2020). These findings are supported by research from Europe which found that young people were intending to buy more local and sustainable products after a COVID lockdown (Alexa et al., 2021).

The pandemic has also highlighted the importance of the natural environment and changed the way many people viewed and interacted with it (Mell & Whitten, 2021), with many people spending more time outdoors during the pandemic (Nanda et al., 2021). For city dwellers, who were subject to the greatest levels of community transmission of COVID-19 and the most extensive restrictions, a lack of access to the outdoors during the pandemic has become a key driver behind to relocate to regional areas.

This is reflected in migration data, which shows a huge increase in migration from capital cities to regional areas since the beginning of the pandemic (see Chapter 2). Research has also found that one-in-five city residents in Australia were looking to move to a regional area at some point during the pandemic, and more than half within the next 12 months (Regional Australia Institute, 2021a). The key factors driving the desire to relocate included traffic congestion, cost of living, access to space, connection to nature and improved wellbeing.

From late March 2020, access to national parks and reserves in Tasmania was restricted. The Tasmania Project found that strong opposition to restrictions limiting access to natural environments. This is echoed by data reported by the Tasmanian Parks and Wildlife Service, which showed the number of Tasmanians purchasing a one or two-year parks pass increased by 160% in 2020 (over 2019) (Parks and Wildlife Service, 2020), though this may also reflect the fact that Tasmanian residents were unable to travel elsewhere due to border closures. The Tasmania Project also found that during the pandemic, the natural environment ranked 3rd in importance for wellbeing (Lester et al., 2020) and research conducted by Women's Health Tasmania found that the natural environment had positive impacts on the physical and mental health of temporary visa holders in Tasmania during the COVID-19 pandemic through providing the ability to engage with natural places, hiking, swimming, camping or simply the relative 'quiet' of Tasmanian urban environment (Shannon, 2022). It is difficult to know if these changes will persist as the pandemic continues, however The Tasmania Project found that less Tasmanians were experiencing a slower pace of life in September/October 2021 compared to the beginning of the pandemic (Seivwright, 2021), suggesting a return to pre-pandemic lifestyles. It is too early to tell if preferences and behaviours adopted during the pandemic will translate into long term changes.

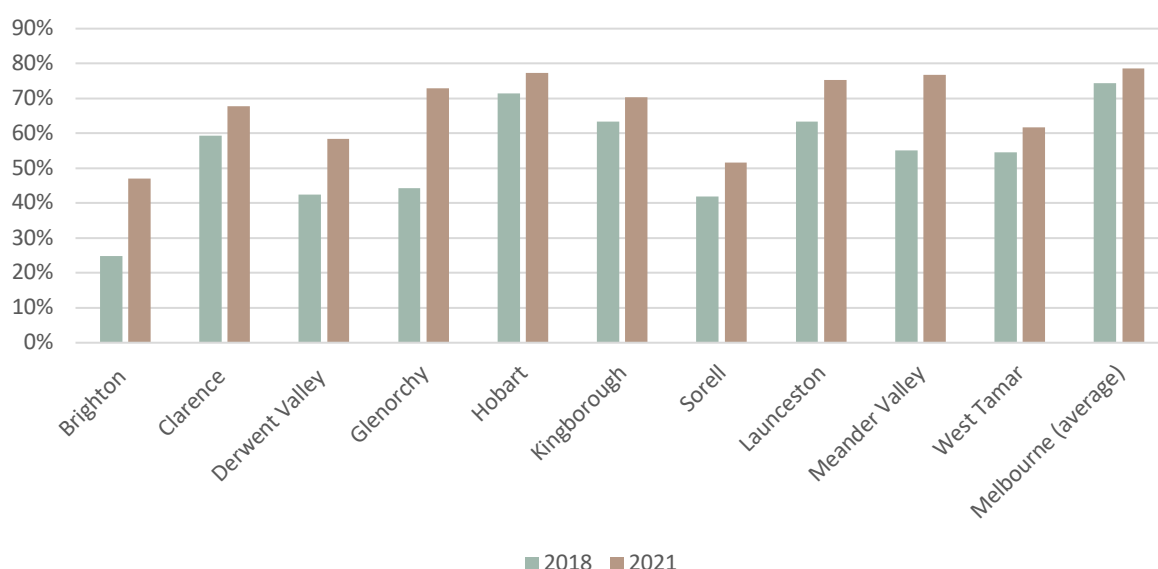
3.1.3 Infrastructure

At a national level, the pandemic has impacted infrastructure in many ways, including: increased use of public open space due to people spending more time at home, a reduction in the use of public transport reflecting changing consumer behaviours and work patterns, and greater demands on telecommunications infrastructure due to the rapid adoption of technology by businesses and individuals (Infrastructure Australia, 2020). In regional areas experiencing population growth due to the pandemic, increased demand is likely to exceed the capacity of existing infrastructure.

In Tasmania, there are several infrastructure gaps that are at risk of being exacerbated by the pandemic including the availability, diversity and affordability of housing, access to and capacity of health and aged care infrastructure, and the capacity, quality and accessibility of early, primary and secondary education (Infrastructure Australia, 2021).

Analysis conducted by the Australian Urban Observatory in 2020 also identified gaps in access to a range of infrastructure including social infrastructure, public transport and supermarkets in both Hobart and Launceston (Gunn et al., 2020a; Gunn et al., 2020b), however the analysis noted that there was wide variation across both cities. One of the key infrastructure trends emerging from the pandemic that is of particular relevance for Tasmania given the importance of the natural environment to the residents and those visiting or considering living in Tasmania (see Chapter 4) is the increased access to and appreciation of public open space (e.g., playgrounds, parks, streets, nature reserves, community gardens, civic squares) (DPIE, 2020). In particular, older people have relied on public open spaces during pandemic restrictions as a way of remaining active and increasing social interactions, and those without access to outdoor spaces were more likely to report feelings of loneliness and isolation (Nanda et al., 2021).

Figure 27: Proportion (%) of dwellings within ≤400m of public open space*, Hobart and Launceston LGAs, 2018 vs 2021



*400m represents a 5-minute walk for most people based on a walkable road network distance, public open space refers to urban parks greater than or equal to 1.5 hectares.

Source: Australian Urban Observatory, RMIT University, viewed 7 May 2022, auo.org.au. DOI: 10.25956/5dcb85fa3bdfc.

In a survey of Tasmanian residents early in the pandemic, The Tasmania Project found access to 'nature' was a top priority for the majority of respondents (58%) (Banham & Pisanu, 2020). Although public open space was a key infrastructure objective prior to the pandemic (as identified by Infrastructure Tasmania in the 30-Year Infrastructure Strategy Consultation Draft), not all neighbourhoods in Tasmania have access to public open space.

Data published by the Australian Urban Observatory shows that despite improvements between 2018 and 2021, access to public open space in several Tasmanian LGAs remains lower than the average of all Melbourne LGAs (see Figure 27). It also shows stark differences across the state, with limited access in more remote LGAs such as Brighton, Sorell and Derwent Valley compared to the urban centres of Hobart and Launceston.

3.2 Adaptive Industries

Key trends

Impacts on liveability



Several vulnerable industries (many overrepresented in Tasmania) have been negatively impacted during the pandemic, however there are signs of recovery.

- As pandemic recovery is uneven across industries, and Tasmania has an overrepresentation of vulnerable industries, workers in some industries may have lost work and/or struggle to find more.
- Similarly, several businesses have closed and new entries have slowed, and some still may scale back or close, affecting the availability of local goods and services.
- Decreased employment and activity in certain industries, such as arts and recreation services and accommodation and food services, may reduce cultural amenity.



A range of industries have rapidly adopted digital technology, reflecting the need to adapt during the pandemic and accelerating existing trends.

- Is likely to facilitate greater rates of remote work across more industries, however, those with low levels of digital literacy may struggle with new requirements in the workplace (or even be displaced by new technology) and this in turn may impact employment, income, and wellbeing.
- The digital divide may increase, as those who are digitally included reap the benefits of increased digitisation in both their work and consumption, and those who are digitally excluded fall further behind.
- Businesses that do not 'keep up' may struggle to remain competitive and this may impact their viability, especially if new businesses enter the market from outside Tasmania.



Several skills and labour shortages have emerged across the Tasmanian economy in key areas such as agriculture, tourism and hospitality, and health, social and community care, and construction.

- The liveability implications, should there be insufficient people to perform essential functions in the community, are far-reaching. Given that the pandemic has placed immense pressure on the health system and exacerbated housing shortages, skills shortages in these areas may result in worsening health outcomes for the Tasmanian population and further decrease access to affordable housing.



Supply chain disruptions have made certain goods and services (e.g., building materials and food) more expensive and harder to access, however these impacts are likely to ease as global markets return to 'normal'.

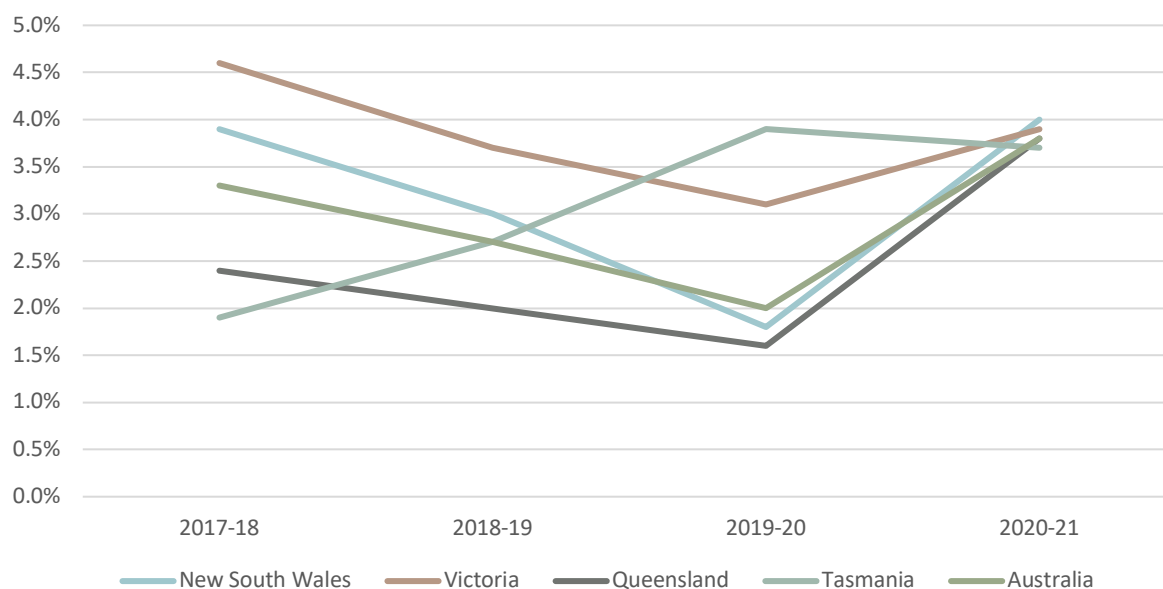
- Ongoing issues obtaining building materials (as well as soaring costs) are likely to exacerbate housing issues in Tasmania for some time, as there is likely to be a backlog of work after the extended period of limited supply.
- Food insecurity emerged as a key issue for Tasmania during the pandemic. Any future issues with food supply chains may contribute to increased food insecurity, which is likely higher than pre-pandemic levels due to compounding issues such as inflation.

3.2.1 Impacts and adaptations

COVID-19 restrictions throughout 2020 and 2021 including closure of borders, lockdowns, physical distancing measures and increase in operating costs linked to hygiene and contact tracing requirements interrupted business operations in most sectors and placed them under immense pressure, though the magnitude and nature of these impacts has not been uniform across industries or regions. While some were able to access government support and adapt to the situation, many businesses were forced to close (e.g., tourism due to border closures and lockdowns), whereas others were able to radically transform operations in a short period of time in order to survive.

Some were even able to grow their business or develop a new product (e.g., distilleries manufacturing hand sanitiser), though a survey of Australian businesses found that most businesses simply adapted to changing conditions during the pandemic, rather than innovated (O'Dwyer, 2021). Figure 28 suggests there was a more favourable business environment in Tasmania compared to the rest of Australia before the pandemic. However, a decline in the rate of increase of the number of businesses in Tasmania in 2020-21 compared to an upward trend for the other analysed states (and Australia) suggests conditions in Tasmania were no longer favourable.

Figure 28: Increase in number of businesses (%) compared to previous year by state

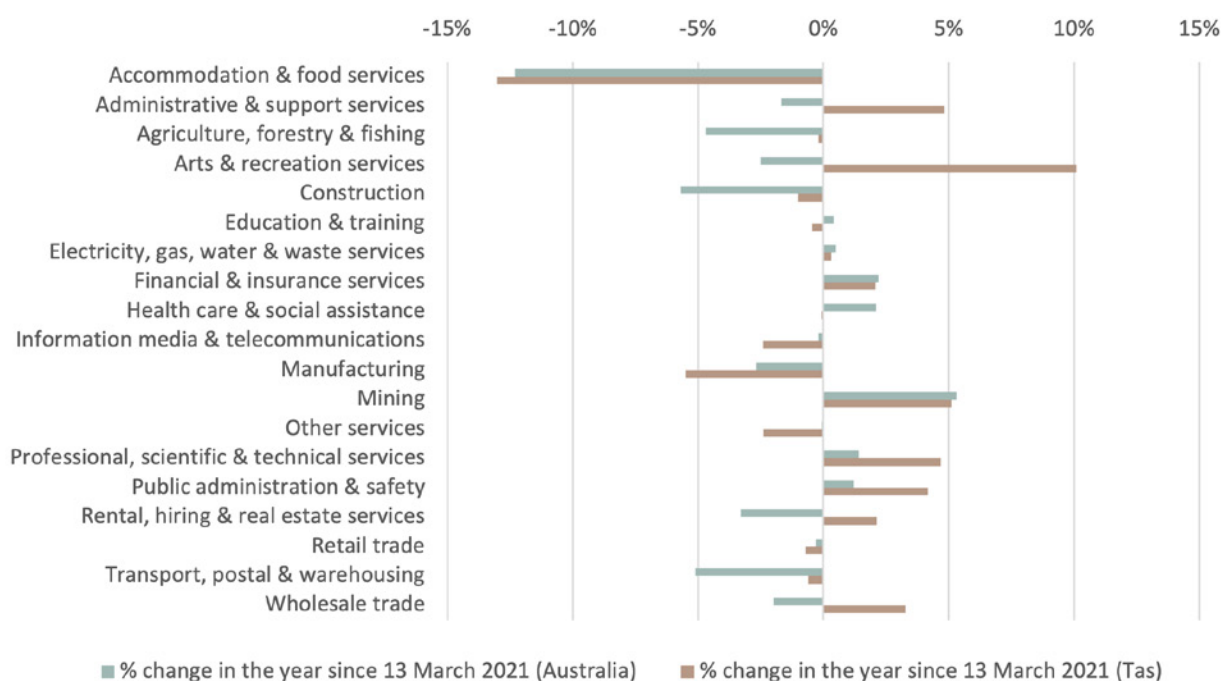


Source: Australian Bureau of Statistics (2022), 'Table 4. Businesses by Main State, June 2017 – June 2021 (a)', *Counts of Australian Businesses, including Entries and Exits*, accessed 17 May 2022.

At a national level, several industries appear to have been most impacted by the pandemic. Accommodation and food services and Arts and recreation services were the hardest hit in the early weeks of the pandemic, with payroll jobs declining by almost 35% by mid-April 2020. Other industries that rely on travel and social interaction also experienced declines in payroll jobs such as retail trade (-8.3%) and retail, hiring and real estate services (-10.4%) (ABS, March 2021). There has been a similar pattern of impacts in Tasmania (see Figure 29), with Accommodation and food services, arts and recreation, information media telecommunications and wholesale and retail trade all experiencing a decline in payroll jobs in Tasmania between 14 March and 18 April 2020. The magnitude of the impact, however, has been exacerbated by an overrepresentation of vulnerable industries in Tasmania (Eccleston et al., 2021).

There has been some recovery in affected industries, however payroll jobs in Accommodation and food services were still down -12.3% nationally and -13.0% in Tasmania at mid-March 2021 from a year earlier. In the same period, payroll jobs in Arts and recreation services grew by 10.1% in Tasmania, the highest increase of all industry sectors. Recovery in this sector is strong compared to the situation nationally, which recorded a 2.5% decline in payroll jobs. Tasmania appears to be performing better than the rest of the country across several industries including Administrative and support services, Construction, Agriculture, forestry and fishing, Rental, hiring and real estate services, and Wholesale trade, but worse in some key areas such as Manufacturing, health care and social assistance, and Electricity, gas, water and waste services.

Figure 29: Percentage change in payroll jobs index* by industry, Tasmania & Australia



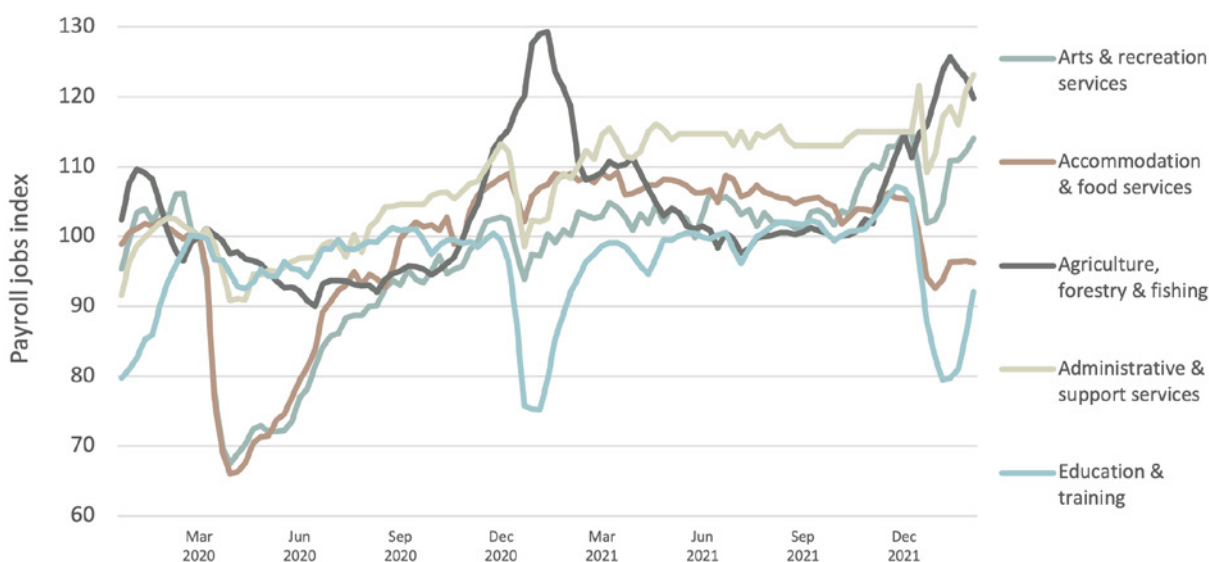
*The payroll jobs index provides a measure of changes in jobs over time since the week ending 14 March 2020 (the week in which Australia recorded its 100th confirmed coronavirus case).

Source: Australian Bureau of Statistics (Week ending 12 March 2022), Weekly Payroll Jobs and Wages in Australia - Payroll jobs index [time series spreadsheet], **Weekly Payroll Jobs and Wages in Australia**, accessed 17 May 2022.

One of the main ways businesses were able to continue to operate during the pandemic was to rapidly invest in and adopt technology. 35% of Australian businesses reported bringing forward their e-commerce integration response to COVID-9 trading restrictions (ACCI, 2020) and a global survey of over 1,800 individuals representing a range of organisations conducted in May/June 2021 found that 56% report AI adoption in at least one business function (McKinsey & Company, 2021). Other adaptations by businesses to maintain operations during the pandemic included exploring supply chain diversification, broadening their client base and carrying more inventory to meet short-term demand (ACCI, 2020). For businesses that diversified (for example, fresh packaged salmon and trout from Tasmania that was unable to be exported to Japan due to the pandemic which is now sold for a lower price in Australian supermarkets (Jones et al., 2022), it remains to be seen if these changes will persist as there is a gradual return to pre-pandemic business conditions.

It is difficult to predict how the pandemic and other global conditions will influence the performance of various industries at a national level and indeed in Tasmania. International tourism and international education along with the performing arts and leisure sectors are likely to be impacted on a permanent basis (OECD, 2020a), however the impact on other industries is less certain with significant variability in payroll data observed in several key industries (see Figure 30). Analysis conducted by the Tasmania Policy Exchange (Eccleston et al., 2020) predicts strong growth in employment opportunities in Tasmania for technology workers, business and finance professionals, logistics specialists, construction, and health and community care workers, and recommends capitalising on future demand for jobs in renewable energy systems and low-emissions technology. The analysis also predicts an acceleration in automation and the adoption of artificial intelligence (AI) in many important Tasmanian industries that is likely to have a significant impact on inner-regional communities due to the disproportionately high share of jobs at risk of automation in these areas.

Figure 30: Top 5 industries by variability in payroll jobs index over time (Jan 2020-Feb 2022), Tasmania



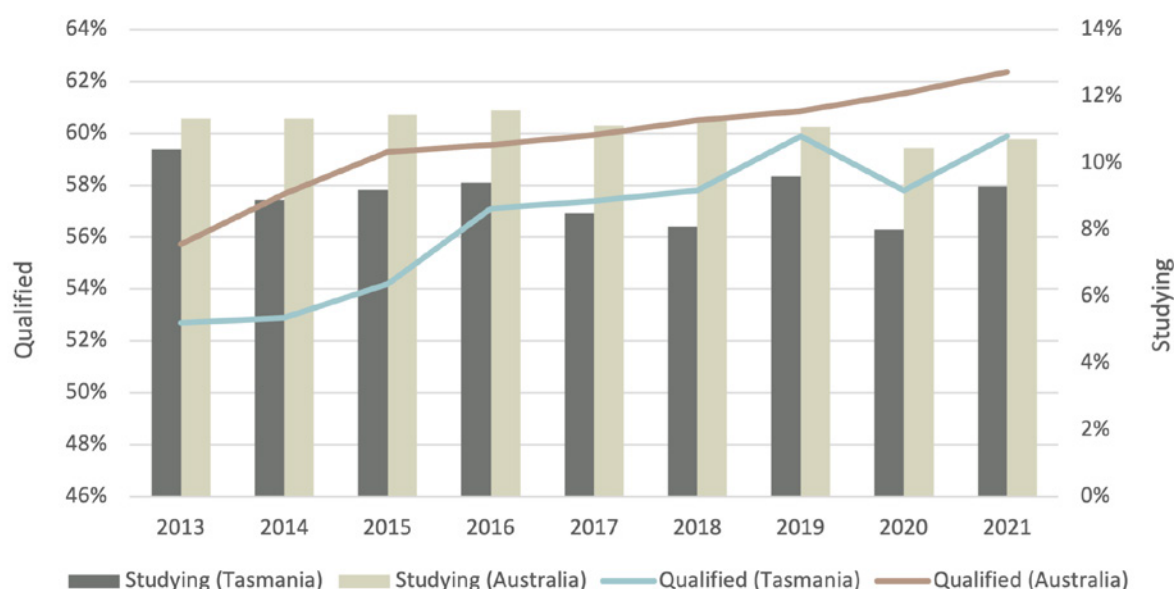
Source: Australian Bureau of Statistics (Week ending 12 March 2022), Weekly Payroll Jobs and Wages in Australia - Payroll jobs index [time series spreadsheet], *Weekly Payroll Jobs and Wages in Australia*, accessed 17 May 2022.

3.2.2 Skills shortages

The pandemic has both exacerbated existing and created new challenges linked to labour and skills shortages. The reduction in travel from the mainland and the number of overseas migrants including those on Temporary Skilled Visas, international students and people having working holidays has impacted the pool of workers who are relied on in key industries such as agriculture and healthcare, and to provide specialist and technically skilled labour, such as pregnancy scanners, shearers, wool handlers and AI technicians (DNRE, 2021). An analysis of the impact of the pandemic on work and employment in Tasmania (Eccleston et al., 2021) identified several skills and labour shortages emerging across the Tasmanian economy, with agriculture, tourism and hospitality, and health, social and community care the most impacted sectors, in addition to areas where the risk of exposure to COVID-19 is high, such as accommodation and food services, electricity, gas, water, and waste, manufacturing, and construction. The Tasmanian Skilled Occupations List (TSOL) 2021-2022, published in August 2021, is a list of occupations identified by the Tasmanian Government as areas of skills shortage in the State based on the extent of evidence currently available. All occupations designated as “High demand” in this list are in healthcare. Infrastructure Australia has also forecast quite significant labour shortages in Tasmania relating to infrastructure project commitments, predicting that between 2021 and 2025 it will require a workforce that is approximately twice the size of projected supply available (Infrastructure Australia, 2021). These shortages are anticipated in all infrastructure-related occupational groups, particularly within finishing trades and labour.

The pandemic has also impacted the vocational education and training (VET) sector by presenting new challenges and exacerbating existing weaknesses. With demand for digital skills and infrastructure likely to intensify (Eccleston et al., 2021), the VET system may not be equipped to provide the necessary skills to support the digitalisation of Australian manufacturing, amongst other industries (Dean et al., 2021). It is unclear to what extent the pandemic has impacted the commencement and completion of vocational education. Due to declining numbers before the pandemic, apprenticeship commencements were forecast to decline by 45,000 in 2021 and 2022 compared with pre-COVID-19 levels (Hurley, 2020). However, there was no decline in the proportion of the Australian population aged 25-64 with a non-school qualification in 2020 or 2021 (Figure 31). There was, however, a small decline in the proportion studying for a non-school qualification, declining 0.6% between 2019 and 2020, followed by a small increase of 0.2% in 2021. On the other hand, Tasmania experienced a sharp decline in both the proportion qualified and studying between 2019 and 2020, but the trend had reversed by 2021. Short-lived declines in commencements observed in 2020 may result in reduced numbers of completions in later years.

Figure 31: Proportion of people aged 15-74 years with or studying for non-school qualifications (Certificate III or above) (%)



Source: Australian Bureau of Statistics (2021), 'Table 25. NON-SCHOOL QUALIFICATIONS, 2013 to 2021, Persons aged 15 – 74 years' and 'Table 12. STUDYING FOR A NON-SCHOOL QUALIFICATION AT CERTIFICATE LEVEL III OR ABOVE, 2013 to 2021, Persons aged 15–74 years', *Education and Work, Australia*, accessed 17 May 2022.

The National Skills Commission (2021) predicts the pandemic will accelerate increased demand for post-secondary qualifications, increase employment in STEM occupations (using science, technology, engineering and maths skills) and highlight the importance of skills relating to health and care and communication and collaboration across a broad range of occupations (summarised by the 'Four Cs': care, computing, cognitive and communication skills). The analysis also predicts the fastest growth will occur in occupations related to food services, computer and electronics, and performance evaluation and efficiency improvement.

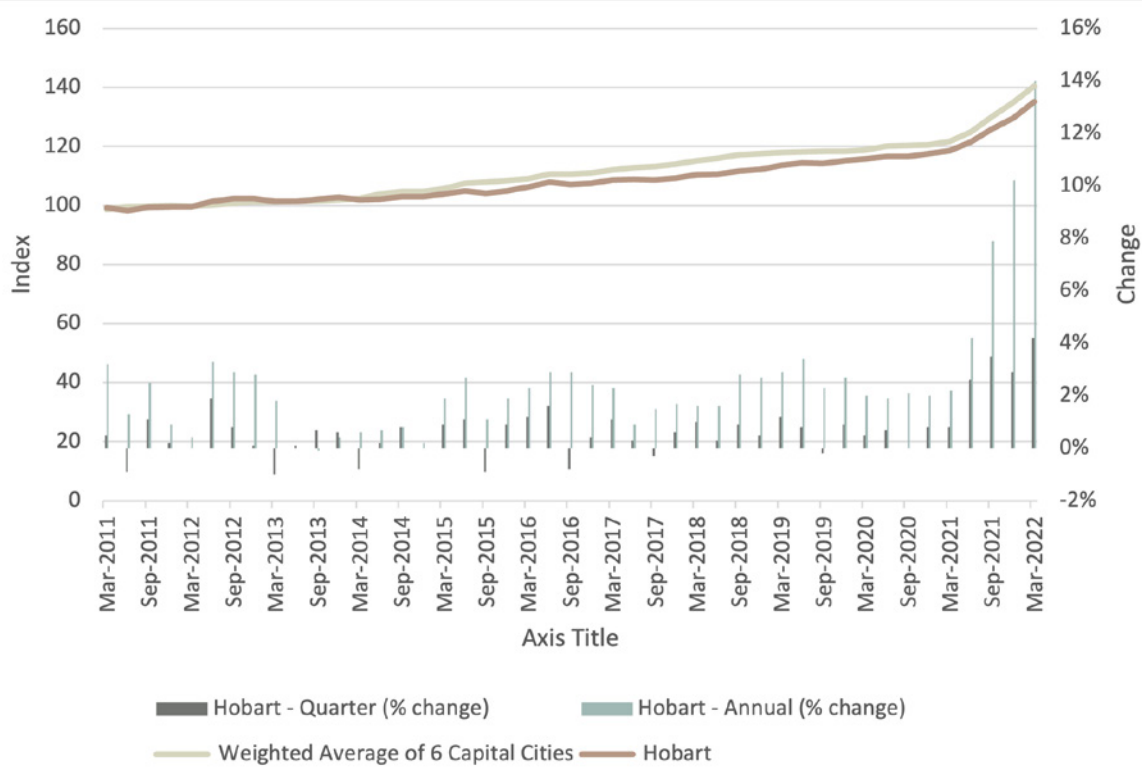
3.2.3 Supply chain disruptions

The pandemic has led to shortages in materials and labour and changed patterns of production and demand, disrupting global and national supply chains, and making it harder to access certain goods and services in most parts of Australia. With Australia resolving to live with the virus and removing restrictions such as lockdowns and quarantining for close contacts, pressures on domestic supply chains are expected to largely resolve over the first half of 2022 (Department of Treasury and Finance, 2021).

However, global supply chain disruptions are likely to persist for some time given uncertainty regarding not just the pandemic but other issues of global significance such as the war in Ukraine and climate-related events. Despite widespread lifting of restrictions on commercial activities and reopening of international borders, the impact on the flow and price of consumer goods is likely to persist for some time given continued closure of key global ports (in countries like China) and a backlog of goods after nearly three years of global logistics disruptions (KPMG, 2022). The shift in consumption patterns from services to goods has also exacerbated supply chain issues, mainly due to transportation issues linked to a global shortage of shipping containers, congestion at global ports and reduced capacity due to restrictions imposed during the pandemic (RBA, 2021).

ABS data suggests that supply chain disruptions continue to impact Australian businesses, with more than 2 in 5 businesses reporting they were experiencing disruptions in April 2022 (41%). This is more than 10% higher than April 2021 (30%) when the data was first collected and 4% higher than February 2022 (37%) (ABS, February 2022). The industries with the highest proportion of businesses experiencing supply chain disruptions in April 2022 were Retail trade (84%), Accommodation and food services (67%) and Construction (54%).

Figure 32: Input prices to house construction over time (2011-22), index numbers and percentage changes, Hobart & Capital Cities



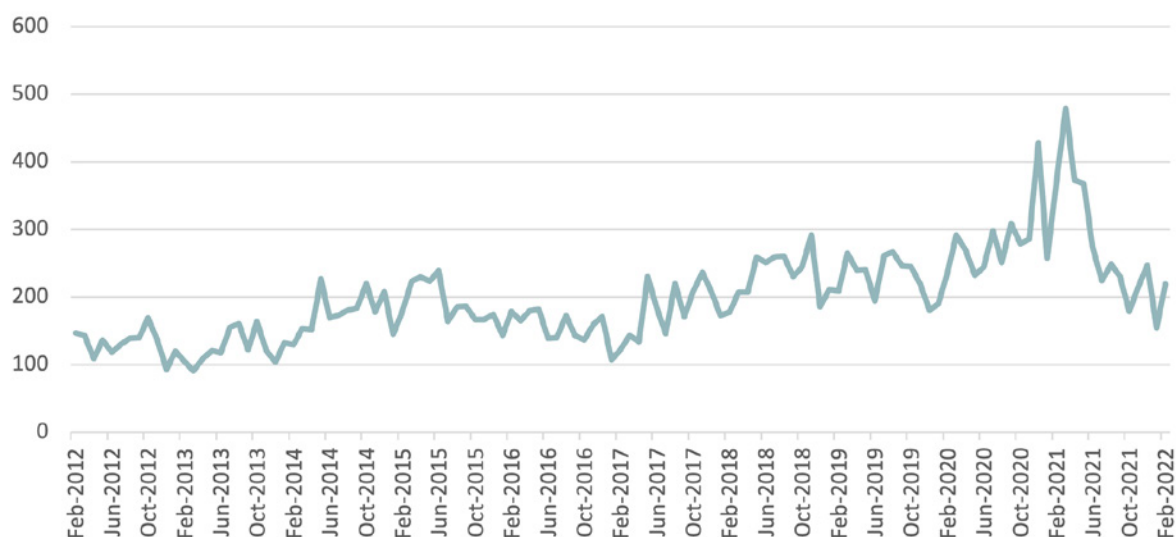
Source: Australian Bureau of Statistics (2022), 'Table 18. Input to the House construction industry, six state capital cities, weighted average and city, index numbers and percentage changes', *Producer Price Indexes, Australia*, accessed 17 May 2022.

Supply chain issues in the construction sector have been compounded by global increases in demand for building materials. A report from Tasmania's building and consumer regulator Consumer, Building and Occupational Services (CBOS) about building materials shortages in Tasmania (CBOS, 2021) also cites the loss of vast amounts of plantation timber due to bushfires and stimulus measures introduced by Federal and state governments to increase housing supply and affordability, many of which have been introduced or extended during the pandemic, as key drivers of the shortages. The impact of these supply issues on the Tasmanian construction sector has been significant, with unforeseen price increases and delays. For example, in the twelve months from June 2020 to June 2021 there was an 11.7% increase in the price of structural timber and an increase in wait times for some materials of between 2 to 8 times those experienced before the pandemic (CBOS, 2021). In March 2022, supply chain issues continue to impact the construction sector, with input prices to house construction (prices paid for selected inputs used in the construction of detached houses) rising by 15.4% nationally in the past 12 months (see Figure 32).

Prices in Hobart appear to be increasing in line with the national trend and there have been significant annual increases in input prices during the pandemic in Hobart, however prices are slightly lower than the weighted average of all six capital cities. This is surprising as the additional requirement to transport goods across the Bass Strait is generally regarded as increasing prices relative to the mainland.

Despite evidence that prices are slightly lower in Hobart, with housing a key issue for Tasmania, particularly in regional areas experiencing a surge in population due to the pandemic, ongoing material shortages and price increases in the construction sector are of great concern and a huge barrier to addressing supply issues. These issues will be exacerbated by ongoing demand in residential construction (see Figure 33) bolstered by stimulus measures such as the Regional Home Guarantee (RHG) which aims to boost construction in regional areas and the plan by the Tasmanian Government to build 10,000 affordable homes by 2027, and

Figure 33: Total number of private sector* houses approved per month, Tasmania, 2012-2022**



* Building ownership is classified as either public or private sector and is based on the sector of the intended owner of the completed building at the time of approval

** House = A detached building primarily used for long term residential purposes consisting of one dwelling unit. Includes detached residences associated with a non-residential building, and kit and transportable homes.

Source: Australian Bureau of Statistics (2022) 'TABLE 17. Number of Dwelling Units Approved, By Sector, Original – Tasmania', *Building Approvals, Australia*, accessed 17 May 2022.

Another key issue for Tasmania is the impact of supply chain disruptions on food, highlighting the risks of highly centralised food processing and distribution and the importance of local food security. In the early stages of the pandemic, temporary shortages of staple foods in the major supermarkets were associated with increased demand due to consumers stockpiling food ('panic buying') and shopping more frequently (Whelan et al., 2021). At the same time, there was a decrease in demand for certain foods and wholesale suppliers due to border closures and the subsequent reduction in tourists, physical distancing restrictions leading to the closure or reduced operations of many restaurants and cafes, cancellation of large events and reduced freight capacity for international export (Jones et al., 2021). Increased transmission of the virus and associated restrictions, as well as ongoing border closures limiting the entry of seasonal workers into Australia, also reduced labour for essential roles in the food chain (e.g., processing and transport), leading to shortages. In addition to labour, the pandemic has also impacted the price of other important inputs including seed, pesticides, fertilisers, and energy (OECD, 2020b).

Tasmania has a thriving food and agricultural sector, with land-based agri-food products accounting for approximately 21% of Tasmanian international merchandise exports in 2019-20 (DERN, 2021). There is evidence the pandemic impacted certain key exports, particularly those highly dependent on a small number of international markets such as rock lobster, abalone, salmon and trout (Jones et al., 2021; Collis, 2022) and some vegetables (DERN, 2021), as well as the harvest of perishable crops with reports that some crops were not harvested due to labour shortages (DPIPWE, 2021). It has also highlighted the dependency on key international markets.

For individuals, a survey of Tasmanian residents conducted by The Tasmania Project in April/May 2021 found that the pandemic had long-lasting impacts on food security, with 18% of respondents (n=1,110) reporting they had run out of food because they could not afford to buy more (Kent et al., 2021). The survey also found that households that experienced a reduction in income due to the pandemic were twice as likely to be food insecure, suggesting food supply disruptions are only one contributing factor. As a result of these findings, the Premier's Economic and Social Recovery Advisory Committee (PESRAC), established by the Tasmanian Government to support the State's short to medium, and longer-term recovery from the COVID-19 pandemic, made key recommendations to improve food security in Tasmania.

It is likely that the short-term and more direct impacts of the pandemic on food supply chains will resolve as restrictions impacting labour and production are continually lifted in Australia and globally. However, there are likely to be ongoing issues with food supply due to extreme weather events such as flooding in Queensland and NSW, the conflict in Ukraine, political tension with China, and inflation. This is reflected in the most recent consumer price index data for food, which had an annual increase of 4.3% in Australia for the March 2022 quarter. The increase was slightly higher for Tasmania (4.4%). This has been attributed to supply chain disruptions and high transport costs for meat and seafoods, particularly beef and veal, vegetables and fruit, and waters, soft drinks and juices (Department of Treasury and Finance, 27 April 2022).

3.3 Essential Infrastructure, Goods and Services

Key trends	Impacts on liveability
 <p>Exacerbation of housing supply and affordability issues, particularly in regional areas which have experienced unprecedented population growth.</p>	<ul style="list-style-type: none"> As housing affordability decreases, Tasmanian residents may be forced to spend a greater proportion of their household income on housing to stay in their current neighbourhood or be priced out of the area altogether. With demand for housing far exceeding supply, people may not be able to find the right kind of housing to meet their needs (e.g., older people wanting to downsize, people with growing families needing something bigger and close to local schools). This is likely to have several negative impacts on individual and community wellbeing, education, access to services, employment, income, and many other liveability factors. The capacity of regional areas experiencing increased population growth and demand for housing in terms of public infrastructure and essential services is likely to be exceeded and impact the ability for residents to meet their basic, day-to-day needs.
 <p>Rapid uptake and ongoing utilisation of telehealth services that is likely to persist.</p>	<ul style="list-style-type: none"> Improved access to healthcare for those otherwise limited in ability to attend physical appointments (e.g., living in areas with limited services, individuals with limited mobility, etc.) Declines in access to and quality of healthcare for digitally excluded community members.
 <p>Avoidance/delays in accessing healthcare out of fear of catching/spreading COVID-19, however it is not clear if or to what extent this is continuing.</p>	<ul style="list-style-type: none"> Increased strain on primary health services as people seek to address their 'backlog' of health concerns and checks. The possibility of increased demand for acute care linked to reductions in early detection and delayed treatment / management. Worsening individual and population health outcomes.
 <p>Increased loneliness and social isolation especially among older people.</p>	<ul style="list-style-type: none"> Decreased individual wellbeing and sense of community. Increased need for COVID-safe means of connection (e.g. outdoor community events, outdoor public spaces) May contribute to increased burden of disease and place further pressure on health system.

Key trends

Impacts on liveability



New opportunities and ways for communities to connect that may have increased social cohesion.

- Emergence of smaller, place-based initiatives that increase community wellbeing. Some of these, such as community gardens, can fulfil multiple needs (e.g., food security, social interaction and meaningful occupation of time).
- Among those who are digitally included, online neighbourhood groups (e.g., Facebook groups, Nextdoor) may have enhanced sense of connection to community, increasing their wellbeing and desire to stay in and contribute to their neighbourhood.



Exacerbation of workforce shortages of GPs, aged care workers and childcare workers.

- Healthcare and childcare are major weaknesses for Tasmania, both in terms of liveability scores and (current and prospective) residents' perceptions. The pandemic further exacerbating these issues may lead to issues attracting and retaining residents.



Increased rates of studying from home and a decline in international University students.

- Flexible study options may increase accessibility of education for Tasmanians, and thus contribute to educational attainment.
- Studying from home and continued online education may change students' housing preferences towards larger dwellings. This may be partially mitigated by the provision of quality public places such as libraries.
- The decline in international students contributed to an increased rate of population ageing during the pandemic.



Acceleration of shift away from residential aged care.

- Increased demand for home-based care is likely to further exacerbate housing supply issues.
- Individual and community wellbeing may improve if the quality of the home-based care is high and the necessary services and infrastructure that support older people to 'age in place' is sufficient.



Sustained demand for childcare, but access and affordability an ongoing concern.

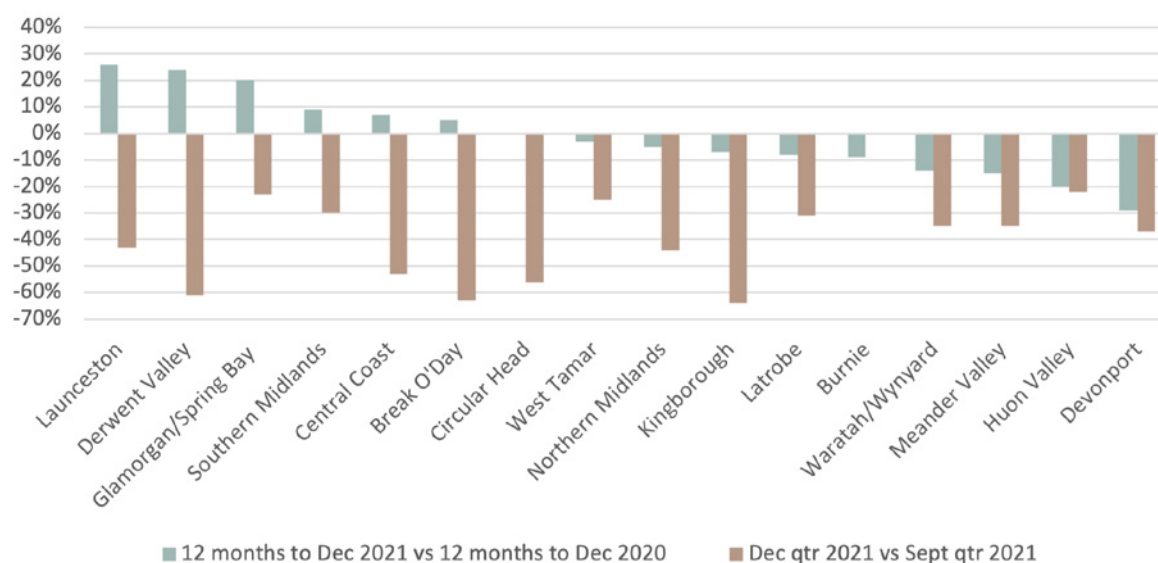
- Limited access to childcare can impact individual employment and income, particularly through decreases to female workforce participation, and can also impact educational outcomes for the child.
- In more remote areas, an inability to access childcare is likely to be a barrier for someone deciding to live or stay in that area, which would have far-reaching impacts on the liveability of the town.

3.3.1 Housing

One of the most pronounced social trends to emerge from COVID-19 has been the unprecedented exodus of people from capital cities to regional areas high in amenity and within commuting distance (200km) of metro areas (see Figure 34), leading to an increased demand for housing in these areas. Research from the Regional Australia Institute (2021b) has found areas located within a three-hour drive of the capital cities were the most popular for Australians moving during the pandemic.

Demand for areas in close proximity to major cities, such as Geelong and the Surf Coast, was evident prior to the pandemic, particularly for families and retirees seeking a change in lifestyle (e.g., a 'seachange'), however there is also evidence that the pandemic may have changed migration patterns, with inland towns showing higher rates of growth than before the pandemic (Regional Australia Institute, 2022).

Figure 34: Quarterly and Annual Growth by LGA* in Tasmania, 2020 and 2021



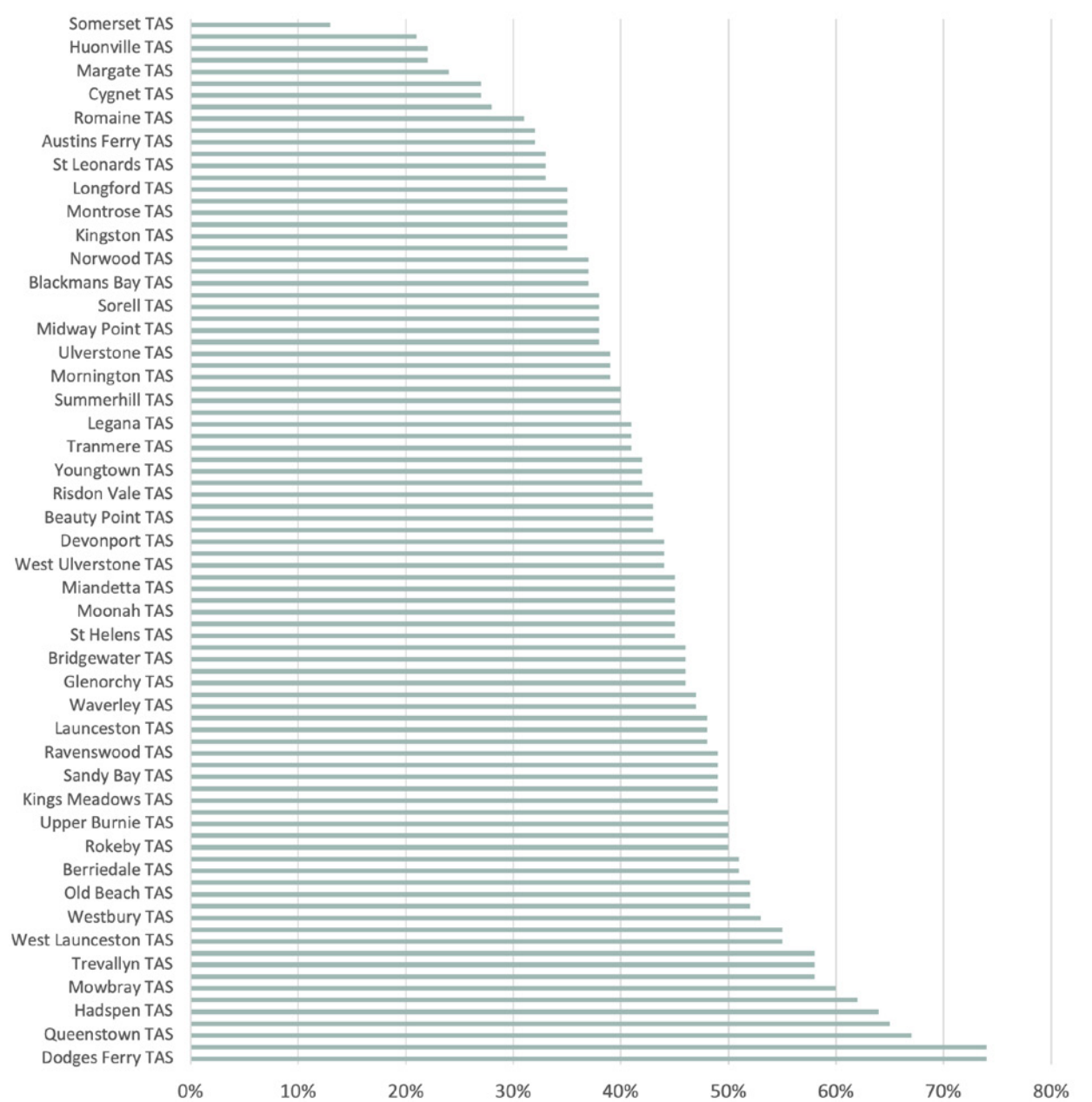
*Only those LGAs with at least 100 CBA personal customers moving during the year

Source: Regional Movers Index December 2021 Quarter Report, Regional Australia Institute and Commonwealth bank

The increased demand, coupled with the greater purchasing power of those moving from capital cities, has diminished supply and increased the price of homes in regional Australia at the fastest rate seen in the past 35 years, making it harder for local buyers and limiting the options available to those seeking to relocate. The private rental market has also been impacted, with vacancy rates at record lows across many regional areas. This is impacting local communities, with widespread reports that housing stress and homelessness has been exacerbated by the pandemic.

People are also using their houses in different ways. Key drivers of this shift include a desire to move away from high density urban centres which have been the epicentres of the pandemic and the perception that more regional areas are safer, cleaner and offer the chance to live a 'better' life, as well as increased flexibility of work giving people more choice about where they live. Regional areas often provide lifestyle benefits and the lower cost of housing in regional areas relative to capital cities also allows people to buy larger houses with space to work from home.

Figure 35: % change in median house price, March 2020 – March 2022, Tasmanian suburbs*



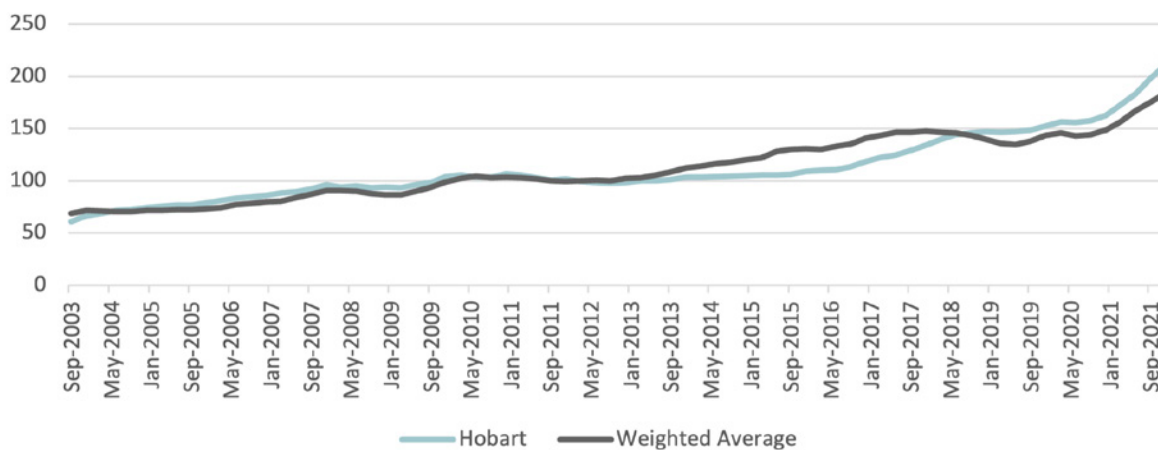
*Suburbs that recorded at least 30 sales per year

Source: [realestate.com.au](https://www.realestate.com.au), [themercury.com.au](https://www.themercury.com.au)

According to PropTrack, the research arm of Realestate.com.au, house prices in regional Tasmania rose 32.3% between October 2020 and October 2021 – the second highest of all regional areas (second only to regional NSW) and exceeding the national average of 28.5% (Creagh, 2021). There have also been significant increases in the median house price across Greater Hobart and Launceston (see Figure 35). Notably, the median house price in Dodges Ferry, 39km from Hobart, and Bridport, 77km from Launceston, both increased by 74% between March 2020 and March 2022. The increase in price is reflected in what people are searching for online, with less searches under \$500,000 for regional property (20.4% in February 2022 compared to 26.7% the previous year). The data also indicates that it is becoming more expensive to purchase a house in Tasmania's urban centres, with house prices in Hobart increasing 23.9% in the same period.

According to the Residential Property Index (RPI), which measures price change of the stock of residential dwellings over time, Greater Hobart is the least affordable metropolitan area in Australia due to high rents and low household incomes. Following a brief improvement in affordability at the beginning of 2020, the RPI rose 6.5% in the December 2021 quarter and 29.8% over the last 12 months (Figure 36). This represents the largest annual rise since the commencement of the series and places Hobart at its least affordable level across the period measured by the index. The mean dwelling price in Tasmania in December quarter 2021 was \$649,200. The pandemic has also changed the type of housing people want to buy. In February 2022, 72.7% of filtered searches on realestate.com.au for properties in regional areas were seeking a minimum of three bedrooms (Creagh, 2022). Data from the UK collected early in the pandemic after a lockdown found that people wanted to live in bigger houses and that access to gardens, high-speed wireless internet and a home workspace were also high priorities when buying a home (Rightmove, 2020).

Figure 36: Residential Property Price Index, Australian Capital Cities, Sep 2003 – Dec 2021



Source: Australian Bureau of Statistics (2021), 'Table 1. Residential Property Price Index, Index Numbers and Percentage Changes', *Residential Property Price Indexes: Eight Capital Cities*, accessed 17 May 2022.

The persistence of these trends remains to be seen as Australia transitions to a living-with-COVID state. Analysis of Realestate.com.au data by PropTrack (Creagh, 2022) has shown that since March 2020 the number of highly engaged buyers increased faster for regional properties than for those in capital cities. In February 2022, online searches for regional properties rose 7% month-on-month and views per listing were 40.3% higher than one year ago. Nationwide, sales volumes in early 2022 were 21% higher than the same period in 2020 and only slightly lower (1%) than the same period in 2021. Properties are also selling faster, spending 10 days less online in February 2022 compared to February 2021.

In Tasmania, sales volumes in first 10 weeks of 2022 were slightly lower than the same period last year (-8%). Despite indications of persistently high demand, the number of new loan commitments fell by 0.6% in Tasmania (compared to 8.3% at the national level (ABS, March 2022)). Figure 37 shows a sharp decline in the number of loans for the purchase of existing homes in Tasmania in late 2021 as well as a gradual decline in the number of loans for the purchase of residential land from its peak in August 2020. Loans for the construction of new homes has also declined after peaking in February 2021, which is likely related to widespread building material shortages and price increases, and workforce shortages in the construction industry.

Figure 37: Number of selected types of new loan commitments, seasonally adjusted, Tasmania, 2019-2022



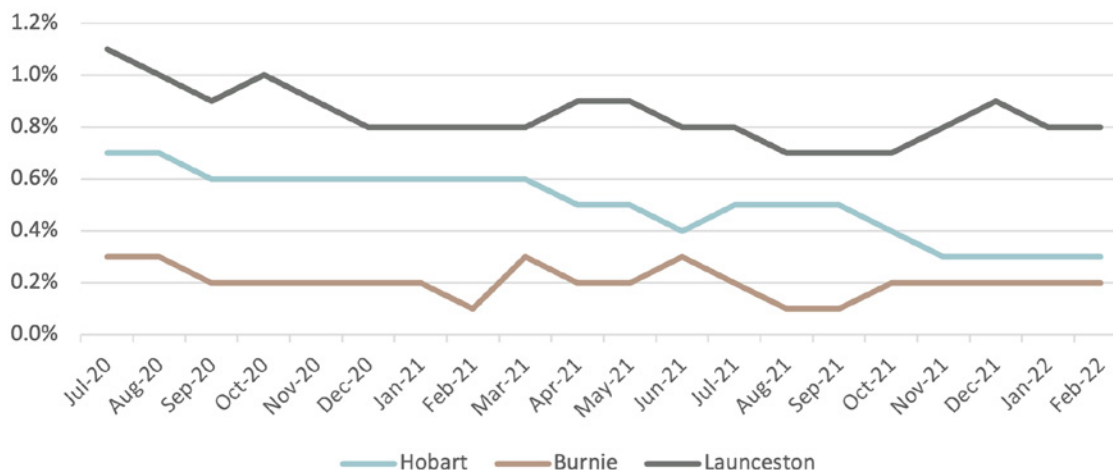
Source: Australia Bureau of Statistics (March 2022). 'Table 10. Households; Housing finance; Owner occupiers; By detailed purpose; New loan commitments; Tasmania; Numbers and values', *Lending indicators*, accessed 20 May 2022.

COVID has had a significant and disproportionate impact on the private rental market, particularly on lower income tenants (Verdouw et al., 2021). Renters, who compared to owner-occupiers tend to be younger, have lower incomes and spend a larger share of their disposable income on housing costs, were more vulnerable to the effects of the pandemic. They were also more likely to work casually or in industries most impacted by the pandemic such as arts and entertainment, hospitality, and tourism (Evans et al., 2020). Border closures at the onset of the pandemic temporarily reduced demand for rental properties and resulted in some improvements in affordability. Temporary changes to the Residential Tenancy Act including a freeze on rent increases and a moratorium on evictions may have also contributed to these improvements. A decline in Airbnb listings in Tasmania from March 2020 of between 15-25% (De Vries et al., 2021), coinciding with border closures and the associated reduction of tourism, may also suggest that properties previously used as short-stay accommodation were converted to long-term rentals, which would have increased supply and improved affordability.

However, 41 new listings were approved by the Hobart City Council between 1 July 2021 and 31 December 2021 (Sandy Bay (13), Hobart (14), West Hobart (4), New Town (3), South Hobart (3), Ridgeway (1), Lenah Valley (1), Mount Stuart (1), North Hobart (1)) (Anna Reynolds, 2022), suggesting that the decline in listings observed at the beginning of the pandemic has reversed along with any associated positive impacts on the housing market.

Vacancy rates for rental properties dropped considerably during the pandemic in all three centres (see Figure 38). In February 2022, availability in Burnie is the lowest, followed by Hobart and Launceston. According to research from the Regional Australia Institute, the median rental vacancy rate across regional LGAs in Tasmania in June 2021 was 1.2%, representing a decrease from 2.0% in June 2020 and far below the 3% threshold considered to be a steady-state vacancy rate (RAI, 2021c). It also reported that in June 2021 the vacancy rate was below 3% in 18 out of 21 LGAs in regional Tasmania, with the tightest rental markets in Meander Valley (0.52%) and Derwent Valley and Central Coast, both at 0.59%.

Figure 38: Vacancy rates, Hobart, Burnie & Launceston

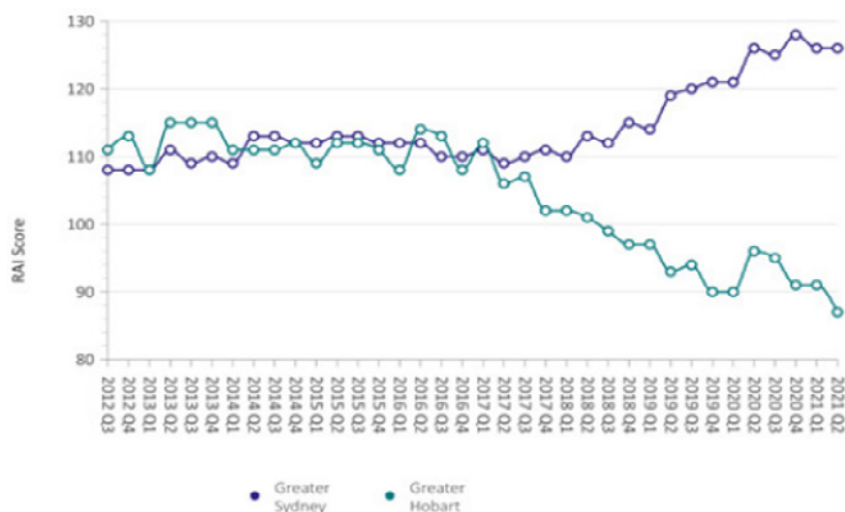


Source: Department of Communities Tasmania, Housing Dashboard June 2021, August 2021, February 2022, SQM Research

Although housing supply and affordability is an issue for most parts of the country, in June 2021 Greater Hobart had the lowest Rental Affordability Index (RAI) (a price index for rental markets indicating rental affordability relative to household incomes) of all capital cities and the lowest recorded score since the index was first calculated in 2012 (SGS Economics and Planning, 2021). A comparison of RAI scores in Greater Hobart and Greater Sydney over recent years (see Figure 39) shows that while the two cities have shared similar levels of rental affordability in the past, the gap between their RAI scores has widened considerably since 2017.

The RAI for regional Tasmania also decreased during the pandemic, making it the least affordable regional area of all states. The most significant declines in affordability were recorded in Launceston and King Meadows, Burnie, and towns on the east coast from Triabunna to Swansea.

Figure 39: RAI comparison – Sydney & Hobart, 2012-2021

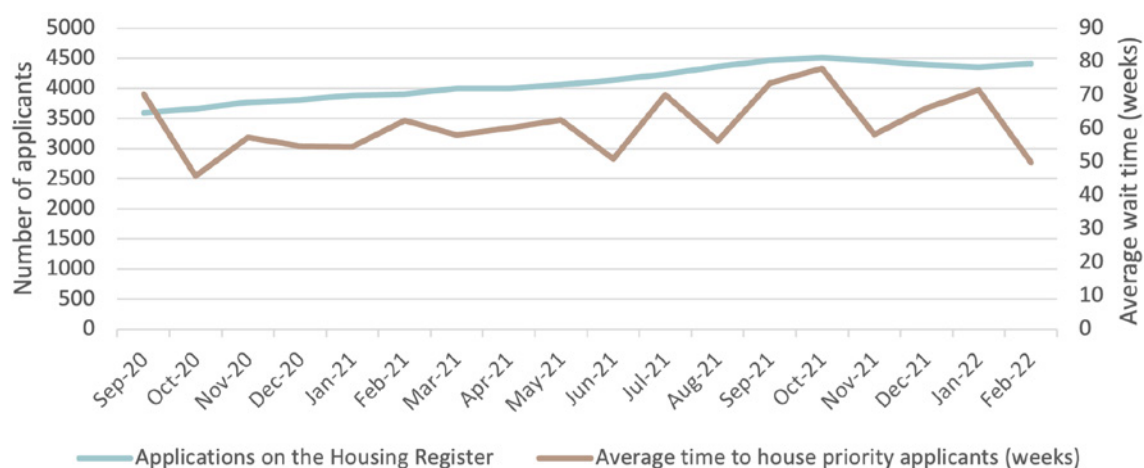


Source: SGS Economics and Planning - *Rental Affordability Index November 2021 Key Findings*

Recent research conducted by Anglicare Tasmania (Claxton, 2022) has found that rental supply and affordability in Tasmania remains an issue in 2022, with the number of rental properties across decreasing from 2021. The greatest decline was found in Southern Tasmania, with 25% less properties listed in 2022 than 2021 and 75% less than 2013. A small increase was observed in the North and North-West, however housing supply remains extremely tight. Notably, only 2 properties in Tasmania were affordable for a person on Jobseeker and the price of renting a 2- or 3-bedroom home in the North-West was roughly on par with Hobart and Launceston suggesting significant declines in affordability in more remote parts of the state.

Although there are some signs that supply is improving in some parts of Tasmania, the long-term trends remain unclear. Furthermore, the steadily increasing number of applicants for social housing and extended wait times (see Figure 40) may further decrease rental supply and affordability as many applicants are diverted to the private rental market (see Pawson & Lilley, 2022).

Figure 40: Social housing applications and average time to house applicants, Tasmania (monthly), 2020-22



Source: Department of Communities Tasmania, Housing Dashboard **August 2021** and **February 2022**

3.3.2 Health

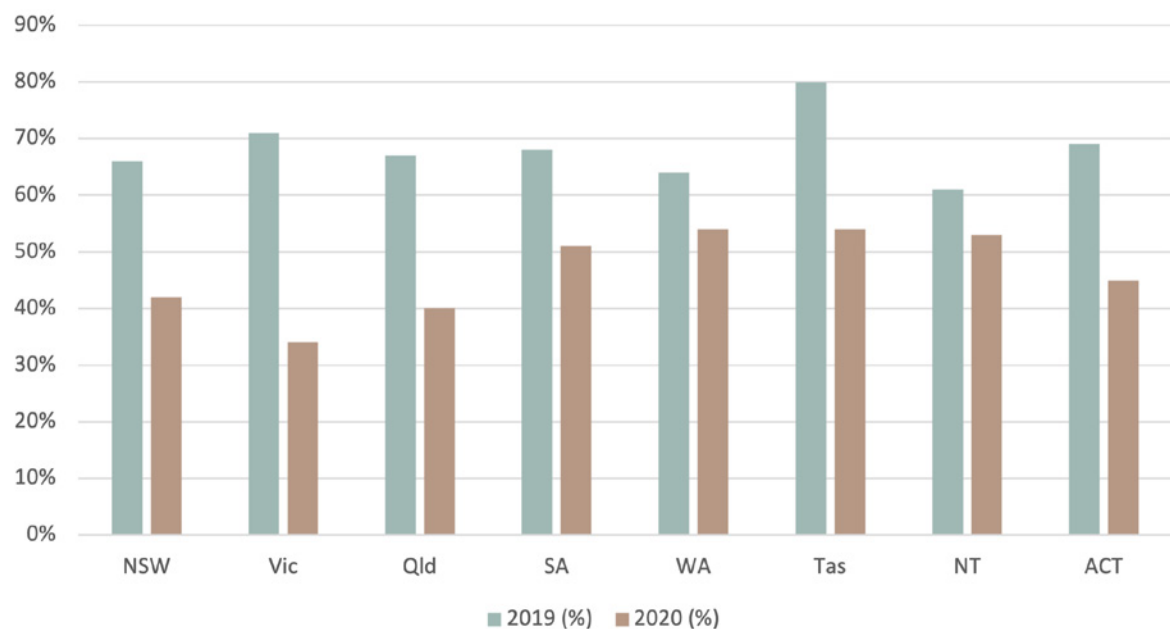
The pandemic has had and is likely to continue to have a range of negative impacts on health, including increased incidence of poor mental health (Ahmed & Shaw, 2020a; Botha et al., 2022), chronic disease (Ahmed & Shaw, 2020b) and disorders linked to increases in excessive drinking, smoking or substance abuse (Ahmed & Shaw, 2020c). Although Tasmania was relatively protected from the worst effects of the pandemic for most of 2020 and 2021, its ageing population and lower health status compared with other Australian states and territories (including higher rates of chronic disease and several other risk factors) is likely to place the population at increased risk of ill health. Interestingly, a study examining the impact of lockdowns on dementia risk factors (such as smoking, alcohol use, diet and physical exercise) in over-50s in Tasmania found no negative effects other than slightly reduced social engagement with friends. The lack of substantive community transmission of COVID-19 in Tasmania may also have played a role (Bartlett et al., 2021).

Research has generally shown a higher prevalence of social isolation and loneliness during the pandemic (Buecker & Horstmann, 2022), whereby the former is 'objectively being alone, having few relationships or infrequent social contacts' and the latter is subjectively feeling alone, or the discrepancy between one's desired level of connection and one's actual level' (Holt-Lunstad, 2021 p.55). It is too early to know what the long-term impacts of this will be, however emerging evidence suggests that social isolation during the pandemic is positively associated with psychological distress (Kim & Jung, 2021) and that older people have been the most negatively impacted (Dahlberg, 2021). This is an important consideration for Tasmania given its ageing population. In Australia at the beginning of the pandemic (April 2020), a survey of almost two and a half thousand Australian adults found that 46% had felt lonely one or more days per week. This dropped to 36% in May when restrictions were easing across Australia but increased to 41% in August when lockdowns were reintroduced in some parts of the country (Biddle et al, 2020).

Data on loneliness and social isolation is not available for Tasmania, however the relationship between restrictions and loneliness suggests that Tasmanians were less impacted than those in other states. Interestingly, the overall wellbeing of Tasmanians appeared to decline during the pandemic. Data from The Tasmania Project Wellbeing survey, which asked Tasmanians about their present and future wellbeing using eleven indicators adapted from the OECD Better Life Index, found that satisfaction declined for every measure across all regions and age groups between pre-COVID and October/November 2020. The areas for which satisfaction declined the most were jobs, income and civic engagement (Lester et al., 2020). It is possible that the reopening of the borders and subsequent spread of COVID-19 in the community has negatively impacted wellbeing and increased feelings of loneliness and social isolation, particularly amongst vulnerable members of the Tasmanian population who may be choosing to limit social interactions out of fear of contracting the virus.

On the other hand, the pandemic may have increased social cohesion through creating opportunities and demand for new kinds of social connection and interaction. For example, more Australians reported helping a neighbour or stranger in December 2021 (41%) than in May 2020 (31%) (Payne, 2021). Data from the ABS 2020 General Social Survey (collected from approximately 5,300 households for the period 15 June to 5 September 2020) suggests this was not the case earlier in the pandemic, with less Australians able to get support in times of crisis from persons living outside the household in 2020 (92.8%) compared to 2019 (94.4%) (see Figure 41). This may be because people were less able to help early in the pandemic due to more severe restrictions, but also that the need for assistance increased later in the pandemic. Conversely, data from The Tasmania Project suggests people were in contact with friends and family more in the beginning of the pandemic compared to later in the pandemic, with 30% of respondents reporting increased contact with family and friends in April/May 2020 compared to 12-14% in September/October 2021 (Seivwright, 2021). A study from the UK found substantial declines in social cohesion during the pandemic (June 2020) compared to before the pandemic (2014/15), with the greatest decline reported by residents of disadvantaged communities, those with lower education, and certain ethnic minorities (Borkowska & Laurence, 2021). More research is needed to establish the impact of the pandemic on social cohesion, loneliness and social isolation among the Tasmanian population related to different phases of the COVID-19 pandemic.

Figure 41: Proportion of people with face to face contact with family or friends living outside their household by State/Territory, 2019 and 2020

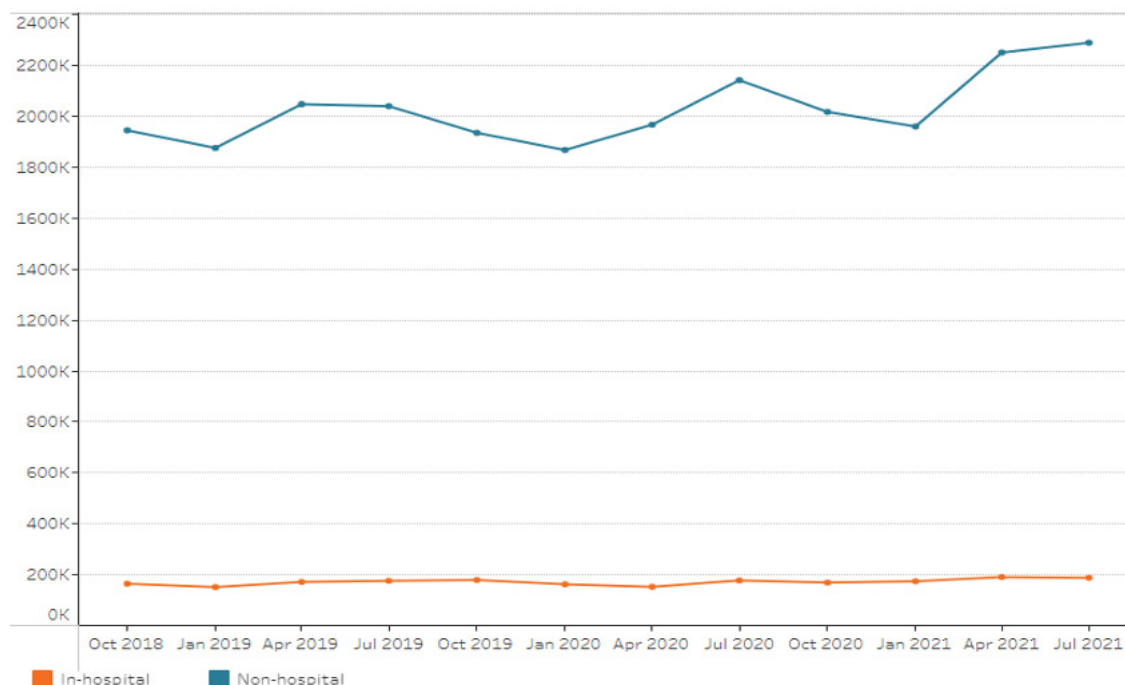


Source: Australian Bureau of Statistics (2020). 'Table 1.3 Persons aged 15 years and over, Social Experiences–By Sex, 2019 and 2020, proportion of persons', *General Social Survey: Summary Results*, Australia, accessed 17 May 2022.

The pandemic has changed the way health services are accessed and delivered. In the early stages of the pandemic there were considerable rates of avoidance and delay in accessing healthcare for non-COVID health issues due to lockdowns, physical distancing restrictions and fear of exposure, as well as initial confusion about what services could be accessed and perceptions of non-urgency (AHPA, 2020). It is not clear to what extent the Tasmanian population is avoiding or delaying access to healthcare due to the pandemic, however 10% of Australians reported delaying seeing a doctor when needed because of COVID-19 (Australian Bureau of Statistics, 2020-21). Further, declines in rates of access to healthcare have been demonstrated in regions with both minimal and substantial community transmission of COVID-19 (Czeisler et al., 2021), suggesting similar trends in access to healthcare in Tasmania throughout the initial stages of the pandemic (2020-2021). Increased household financial pressures due to the pandemic is also likely to have reduced the affordability of healthcare for Tasmanians and contributed to reductions in access.

With COVID-19 now in the community, it is unclear to what extent Tasmanians are delaying or avoiding access to healthcare for non-COVID-19 health issues. The number of Medicare services processed from July to September 2021 was substantially higher (16.8%) than the January-March 2021 quarter and higher than pre-pandemic levels (see Figure 42), however this may be due to the introduction of COVID-19 vaccine suitability assessments in early 2021 and the increase in COVID-19 testing rather than reflecting increased rates in access to healthcare overall (AIHW, 2022a). Interestingly, Medicare data suggests Tasmanians used Medicare-subsidised mental health services such as GPs and psychologists at a lower rate than the national average, which may reflect issues associated with people having difficulty getting in to see a psychologist and the out-of-pocket cost of seeing a psychologist.

Figure 42: Medicare services total, Tasmania

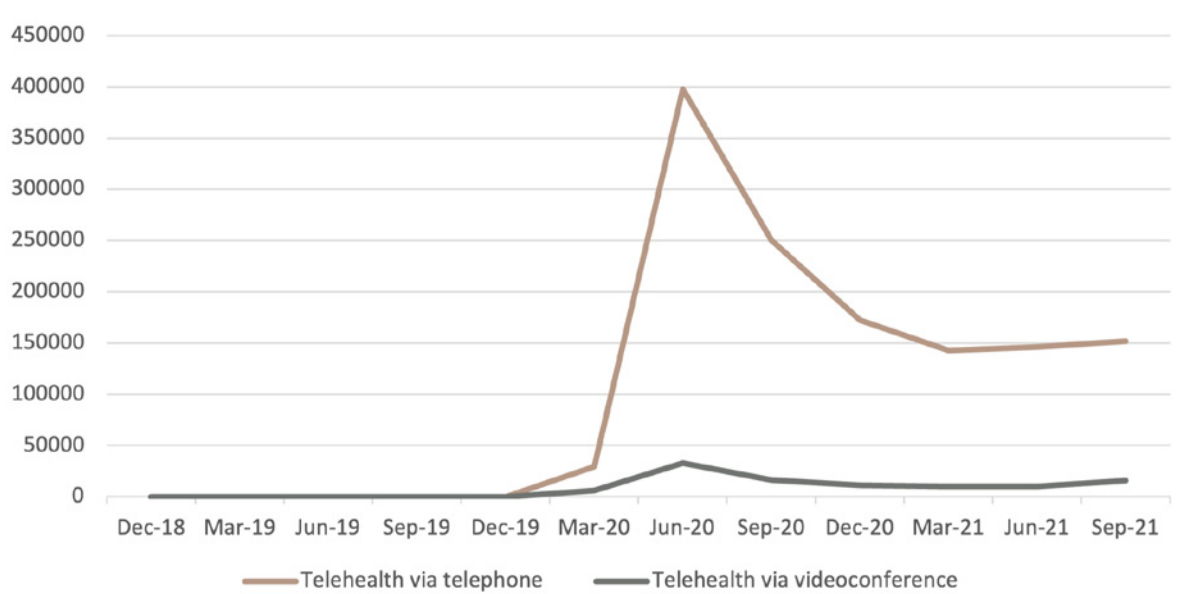


Source: AIHW analysis of MBS data maintained by the Australian Government Department of Health, accessed via the Impacts of COVID-19 on Medicare Benefits Scheme and Pharmaceutical Benefits Scheme: quarterly data **web report**, 18 February 2022

The pandemic has also fundamentally changed the way people access health services, including a rapid expansion in the use of telehealth across a wide range of healthcare activities to reduce the transmission of COVID-19 in the community. This was supported by the introduction of temporary MBS telehealth items, many of which were made permanent from 1 January 2022 (Department of Health, 2022a). Although telehealth rates have dropped since the peak early in the pandemic (see Figure 43), in late 2021 Tasmanians were accessing health services via telehealth at much higher rates than before the pandemic. There appears to be a gradual expansion in the types of services delivered via telehealth, with other medical practitioner (OMP) services (this category includes specialist medical practitioners and consultant physicians) delivered

via telehealth increasing by 53.8% for the Greater Hobart area for the quarter ending September 2021 compared with the quarter ending Sep 2020 (AIHW, 2022a). Previous research suggests the quality of telehealth consultations is no less than face-to-face consultations (Currell et al., 2000). Research conducted during the pandemic in Tasmania (Van Dam et al., 2022) found that vulnerable clients were satisfied with the quality of telehealth and adapted well to using it to access health services. Interestingly, many clients successfully used their phones to access telehealth services. Those who used a computer reported issues accessing the service due to poor internet connection. Benefits also included reduced time and costs relating to travel and feeling comfortable discussing their health in their home environment.

Figure 43: Total number of telehealth services processed by Medicare, Tasmania, 2018-2021

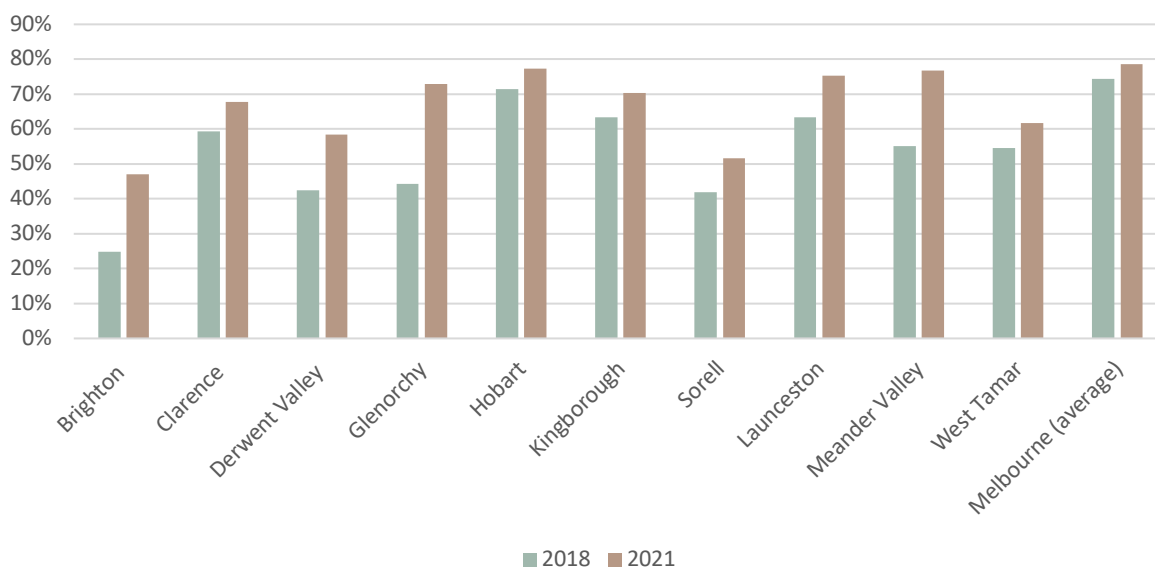


Source: AIHW analysis of MBS data maintained by the Australian Government Department of Health, accessed via the Impacts of COVID-19 on Medicare Benefits Scheme and Pharmaceutical Benefits Scheme: quarterly data **web report**, 18 February 2022

As frontline health professionals, General Practitioners (GPs) have been significantly impacted by the pandemic. Research found that Australian GPs have been negatively affected by increased workload, reduced income and major concerns about staff and patient safety in the beginning of the pandemic (Scott, 2020). A survey conducted in May 2021 found little improvement, with Australian GPs reporting concerns for their personal safety at work and that of their family and colleagues, and for the wellbeing of their patients especially related to delays in providing care for non-COVID-19 conditions (Copp et al., 2021). Within a Tasmanian context, the pandemic is likely to exacerbate longstanding GP workforce shortages especially in regional areas. In 2020, the rate of full-time equivalent GPs per 100,000 people in Tasmania was 106.4, representing a slight increase from 2019 but remaining lower than the national rate of 114.5 (see Figure 44).

Data is not yet available for 2021, however with increasing migration to regional areas further increasing demand, an ageing GP workforce and population, and a trend away from medical graduates choosing GP as a specialty, numbers are unlikely to increase to sufficient levels. Increasing rates of mental health problems will likely place further strain on GPs, who are the most common service provider for these people (Howes, et al., 2020). Despite issues attracting and retaining GPs in regional areas, a more pronounced deficit in GPs is predicted for urban areas (Deloitte, 2019). Policies designed to address this issue include the General Practice Incentive Fund Tasmania (GPIFT), which Primary Health Tasmania has used to develop an audit tool that GP practices can use to understand key issues affecting their ability to recruit and retain GPs.

Figure 44: Availability of GPs, Full time equivalent per 100 000 people, Tasmania & Australia, 2014-20

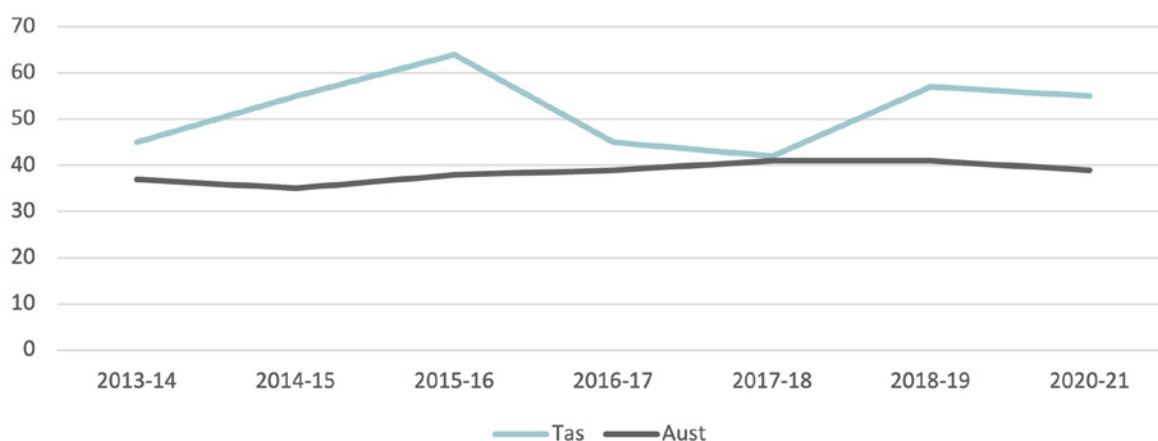


Source: Productivity Commission (2022) Table 10A.8, Primary and community health data, Report on Government Services 2022, Primary and community health

The pandemic has also had significant impacts on public hospitals. Early in the pandemic the government mandated widespread suspension and reorganisation of many hospital services to ensure the hospital system had the capacity to deal with COVID-19. For example, the suspension of many elective surgeries saw admissions in public hospitals in Australia decrease by 9.3% in 2019–20 compared to the previous year (AIHW, 2022b).

Although many of these restrictions have since been lifted and services are resuming, there appears to be an enduring impact on waiting times. For example, while the number of admissions for elective surgery have steadily increased nationally (up 9.6% in 2020–21), waiting times are increasing (AIHW, 2022b). This is of particular concern for Tasmania, where waiting times for elective surgery exceeds the national average (see Figure 45).

Figure 45: Median elective surgery waiting times (days) in public hospitals, Tasmania & Australia, 2013-21

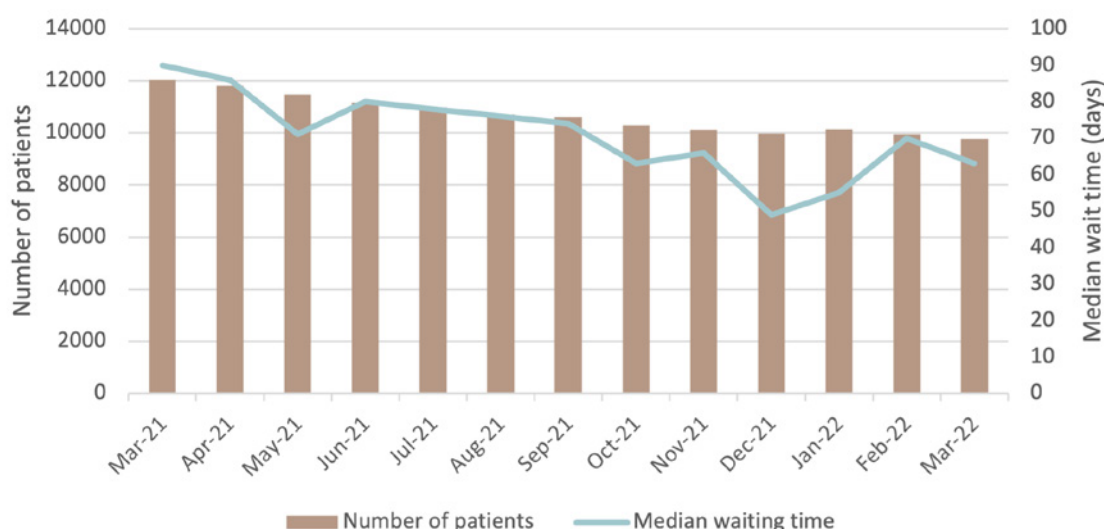


Source: AIHW (unpublished) National Elective Surgery Waiting Times Data Collection, Table 12A.19. Waiting times for elective surgery in public hospitals, by State and Territory, by procedure and hospital peer group (a), (b), (c)

Data from the Tasmanian Department of Health suggests that this trend may be reversing, with the number of people on the waitlist declining steadily since March 2021 (the earliest available data in

this dataset) and the median wait time across all categories also trending downwards (Department of Health, 2022b).

Figure 46: Elective surgery waitlist and median wait times, Tasmania, 2021-22



Source: Health system dashboard, <https://healthstats.dhhs.tas.gov.au/healthsystem>

3.3.3 Education

The impact of the pandemic on children's education and development has been a significant concern throughout the past two years. The role of educational institutions as providers of social and emotional development opportunities, as well as essential services such as mental health and food, raised significant concerns around school closures and their impact on child development (Dunn et al., 2020; Golberstein et al., 2020). In addition to the opportunity cost for child development, there were substantial concerns about parental stress and family functioning as parents tried to juggle the stress of the pandemic, delivering education to their children, and, often, working from home (Lee et al., 2021; Cameron et al., 2020). For school-aged children and their parents in Tasmania, learning from home presented a range of difficulties. Data collected by The Tasmania Project early in the pandemic (April/May 2020) found that learning from home was difficult for the majority of employed people with dependent children (73%).

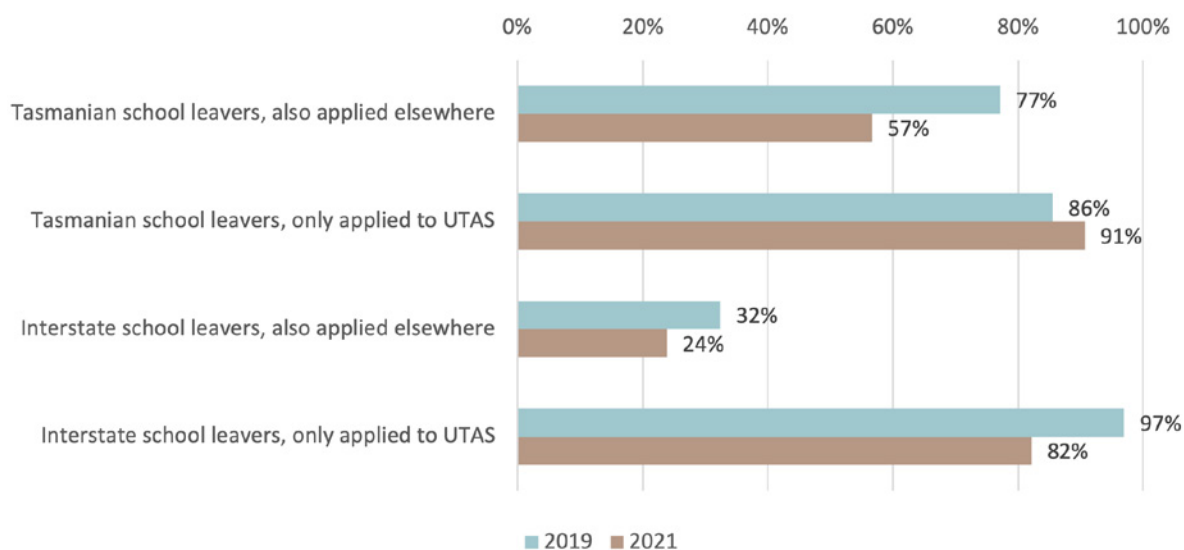
28% of respondents who were parents agreed they did not have skills to support child learning, and 22% indicated they were essential workers or were unable to work from home. 19% of parents indicated they lacked a dedicated space to support their children's learning (Lester, 2020a).

The full impacts of the pandemic on children's educational development (in Tasmania and abroad) remain to be seen. The resilience of children provides substantial hope that negative effects will be marginal, however monitoring for educational setbacks and social and emotional developmental challenges with a view to responding with support and services is indicated. In terms of educational attainment, it has been historically lower in Tasmania than the national average, however the proportion of young people aged 20-24 years with year 12 or Certificate III or above was 85% in 2020, the highest rate since 2011 (ABS, 2020). No data is available for 2021-2022, so the impact of the pandemic on educational attainment for this cohort is not clear.

Universities have experienced a sharp decline in international students (see Figure 48) and a rapid shift to online learning and studying from home (see Figure 49). In January-March 2022, there were 440,129 international students in Australia, representing a decline of 15% compared to the same period last year (Department of Education, Skills and Employment, 2022), a pattern reflected in Tasmania. There were 6929 student visa holders in Tasmania at the beginning of 2022 – a 16% drop compared to the same period last year (Department of Education, Skills and Employment, 2022). This not only reflects the closure of international borders, but a policy shift by the University of Tasmania (UTAS) away from international markets (see the *University of Tasmania Strategic Plan 2019-2024*). There is emerging evidence that the treatment of international students during the pandemic (for example, being excluded from government support schemes) has led to reputational damage that may further decrease numbers (Berg & Farbenblum, 2020).

The impact of the pandemic on domestic students both nationally and in Tasmania is less clear. Internal data from UTAS (collected as part of the 2019 and 2021 Commencing and Lost Student Survey) suggests that interest in studying in Tasmania from both Tasmanian and interstate school leavers has declined to some extent. Figure 47 shows that the proportion of school leavers who applied to both UTAS and other universities, and were then lost (i.e., did not commence at UTAS), increased over time. In 2019, 77% (96 of 124) of Tasmanian school leavers who also applied elsewhere, commenced at UTAS. In 2021, only 57% (87 of 154) of them commenced. In 2019, 32% (58 of 178) of interstate school leavers who also applied elsewhere commenced at UTAS. The proportion decreased to 24% in 2021 (83 of 347). Overall, only about 1 in 3 school leavers who also applied to a different university commenced at UTAS. The combined proportion of school leavers who commenced at UTAS after applying to UTAS only, remained relatively unchanged over time.

Figure 47: Proportion of Tasmanian and interstate school leavers who commenced at UTAS (out all of those who (also) applied to UTAS), 2019 and 2021, by where they applied



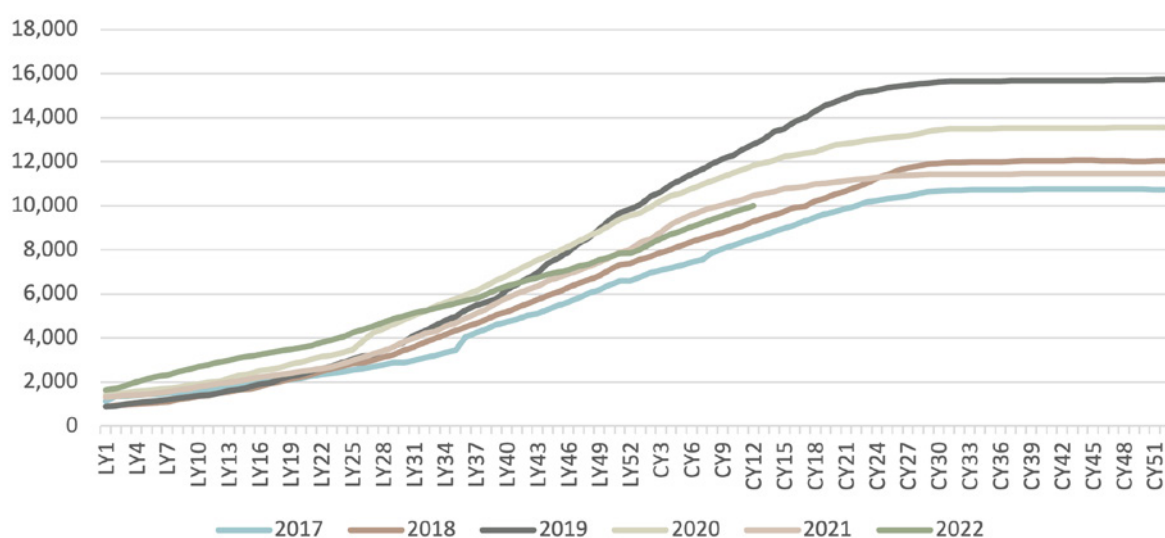
Source: 2021 Continuing and Lost Student Survey, June 2021, Market Research, University of Tasmania

*Sample sizes of school leavers, 2019: Tasmanian n=460, interstate n=200; 2021: Tasmanian n=594, interstate n=369

The main reasons that Tasmanian school leavers did not select UTAS as their first preference were a desire to leave the state and not having the course they wanted. Some Tasmanian school leavers reported choosing UTAS because they didn't want to leave the state during COVID, however it is unclear if this trend has continued in 2022.

Uncertainty about the location of UTAS and its distance from home was provided as the primary reason for interstate students not selecting UTAS as first preference. Interestingly, 17% of interstate students surveyed who were commencing at UTAS in 2021 agreed that COVID had impacted their decision to study at UTAS, with the main influencers being the availability of online options and the relative safety of Tasmania.

Figure 48: Cumulative international student applications, UTAS, 2017-2022, by week
(two-year reference period, LY = last year, CY = current year)

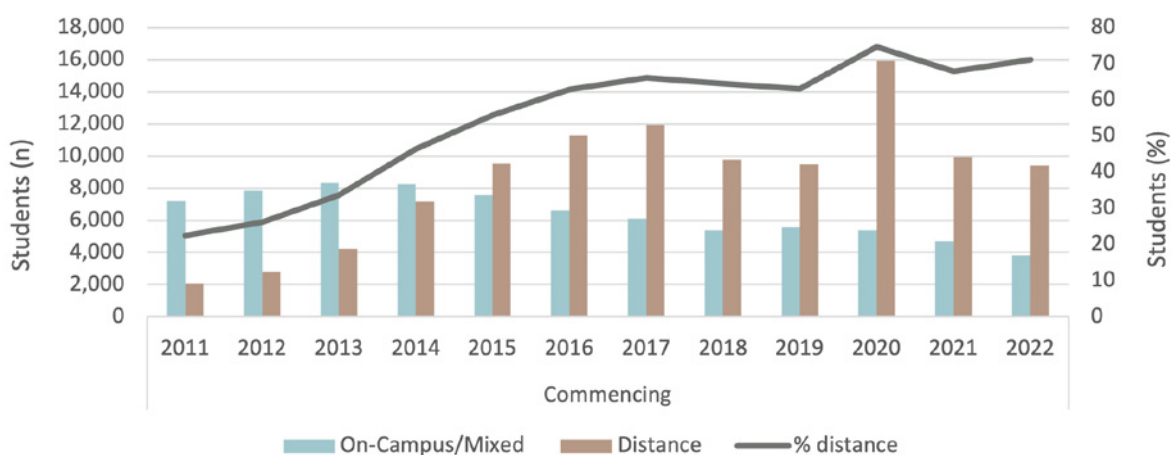


Source: University of Tasmania Admissions Data (internal)

Data from The Tasmania Project collected in September/October 2021 found high levels of studying from home, with the majority of respondents who were currently studying indicating they were studying from home to some extent (70%). When asked if they would like to continue studying from home in the future, just under half (45%) indicated they would and very few (9%) did not want to study from home at all. These findings are echoed by admissions data from the University of Tasmania, which shows a peak in the proportion of commencing students selecting an online mode of study in 2020 (see Figure 49).

Interestingly, there has been a trend towards an increased preference for online study since 2011 (the earliest available data) and a majority of commencing students have selected online over in-person study since 2015. Despite a brief dip in 2021, the trend towards online study appears to be continuing. At 5 June 2022, 66% (n=9,599) of commencing domestic students were studying by distance. Of these, 36% (n=5,152) were located in Tasmania (22% (n=2,871) in the South, 11% (n=1,406) in the North and 6% in the North-West (n=798)) and 56% (n=8,070) were interstate (25% (n=3,206) in NSW, 13% (n=1,633) in QLD, 12% (n=1,611) in VIC, 5% (n=606) in WA, 4% in SA (n=506), 2% (n=253) in the ACT and 1% in the NT (n=165)).

Figure 49: Mode of attendance of commencing domestic students, UTAS, 2012-2022



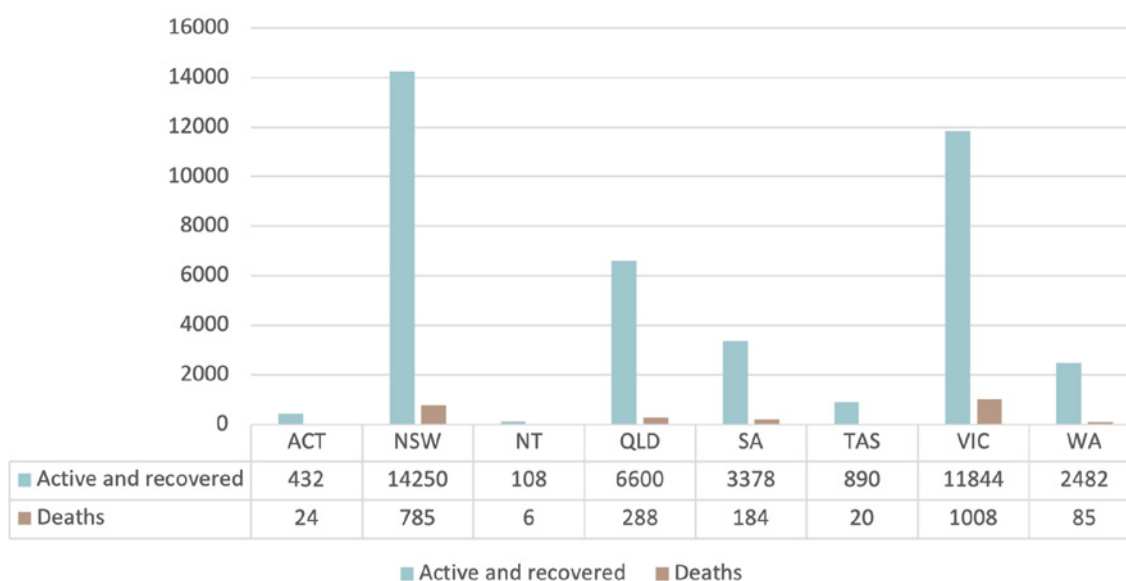
Source: University of Tasmania Admissions Data (internal)

3.3.4 Aged care

The pandemic has had significant impacts on aged care, with almost half of all Australian nursing homes experiencing an active COVID-19 outbreak by mid-January 2022 and approximately two-thirds of COVID-19-related deaths in Australia occurring in people living in residential aged care facilities.

Although Tasmania has recorded few cases in aged care services relative to the rest of Australia (see Figure 50), residents have still had to endure extended periods of social isolation and separation from family and friends that is likely to have ongoing impacts on their mental health and wellbeing (Brydon et al., 2022).

Figure 50: Total COVID-19 cases and deaths in aged care facilities, 19 May 2022

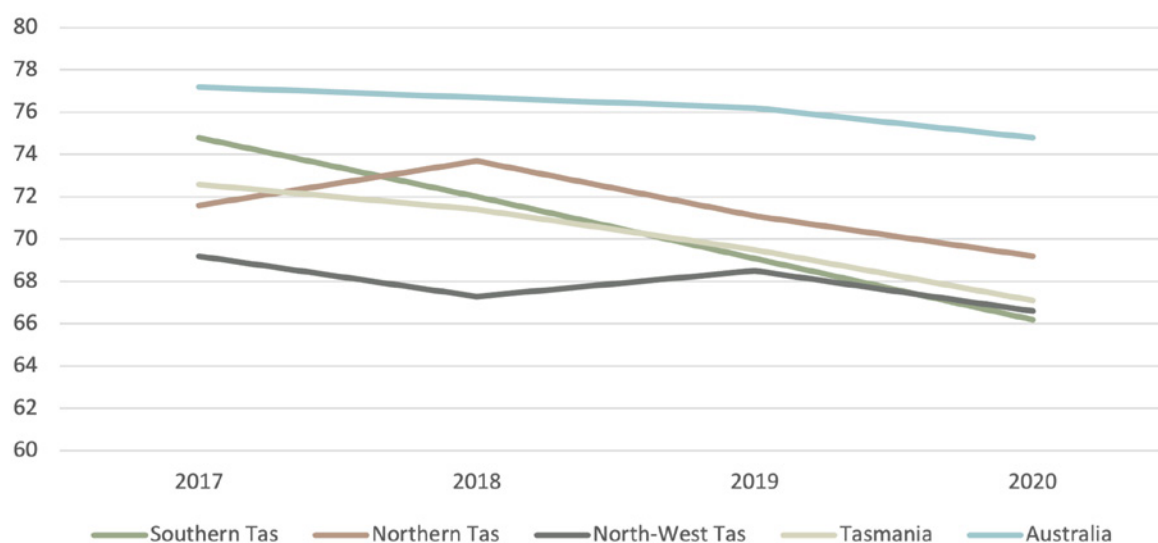


Source: Department of Health (2022, May 19). Coronavirus (COVID-19) case numbers and statistics. <https://www.health.gov.au/health-alerts/covid-19/case-numbers-and-statistics#cases-and-deaths-by-age-and-sex>

In Australia, government-funded aged care services include in-home care, residential care in aged care (nursing) homes, and short-term care such as respite care (Department of Health, 2022c). By 2056, it is estimated that around 8.7 million older Australians will require diverse forms of care and support (AIHW, 2021a). In Tasmania at 30 June 2021, a total of 6,121 people were using permanent residential care, 6,264 were using home care or transition care and 24,678 were assisted with in-home support (Productivity Commission, 2022). The proportion of the population aged 65 and over and Aboriginal and Torres Strait Islander people aged 50-64 years using residential care was below the national average (5.2% compared to 5.5%), roughly the same for home care ($\approx 4.8\%$) and higher for home support (21.0% compared to 18.7%). Tasmania has high occupancy rates for residential care.

At June 2021, the occupancy rate was 88.9%, higher than the national rate of 86.8%. There has also been a decline in the number of places available in residential care across the state which has been falling further and further below the national average since 2017 (see Figure 51). It is not clear if and how the pandemic has impacted the number of places available in aged care and to what extent these are occupied, however it seems likely that residential aged care will be less desirable for both individuals and their families. Counsel Assisting Peter Gray QC, in his opening statement to the Royal Commission into Aged Care Quality and Safety in 2019-2020, said: “COVID is likely to reinforce people’s preference to age in place at home, and do all they can to avoid admission to residential care”. This may lead to an increase in demand for in-home care (AIHW, 2021b) and intergenerational households.

Figure 51: Places in residential care per 1,000 people aged 70 years and over, Tasmanian regions, Tasmania, Australia, 30 June 2017–2020

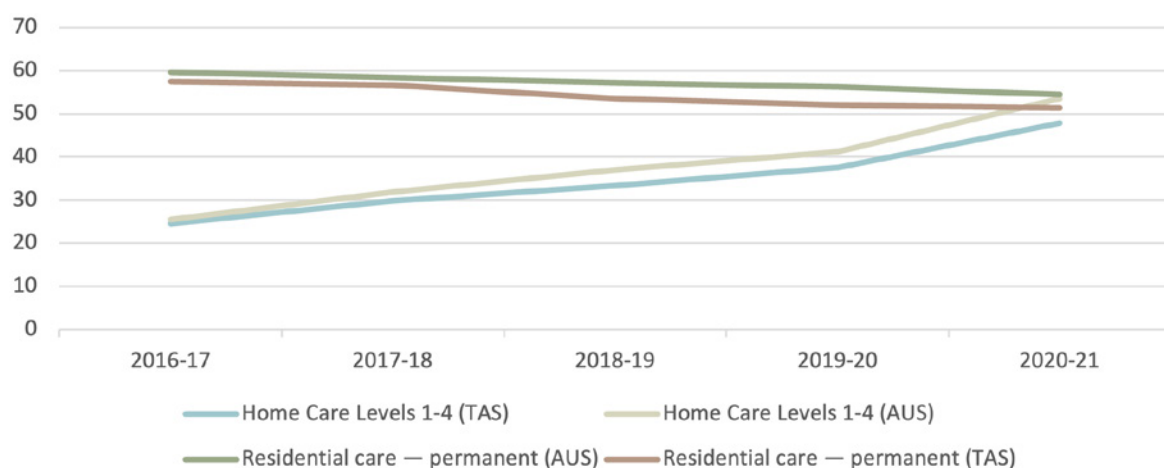


Source: Department of Health (2022, May 19). Coronavirus (COVID-19) case numbers and statistics. <https://www.health.gov.au/health-alerts/covid-19/case-numbers-and-statistics#cases-and-deaths-by-age-and-sex>

At a national level, there are signs of movement away from residential aged care and towards in home care (see Figure 52). In 2020-21, the occupancy rate for residential aged care was 86.8%— the lowest rate in a decade - and 61,562 more people were receiving a home care package in 2020-21 compared to the previous year (Productivity Commission, 2022). This likely reflects continued investment in home care (the government spent \$7.8 billion in 2020-21, compared with \$6.8 billion the previous year) and significant unmet demand before the pandemic, with 53,203 people waiting for home care on 30 June 2021.

In Tasmania, there was a similar trend in the number receiving home care packages (up 1,363 in 2020/21 from the previous year), but a slight decrease in those living in residential care (down 51 in the same period). This trend is likely to persist, given upcoming reforms to aged care in response to recommendations from the Royal Commission into Aged Care Quality and Safety for Australians to stay in their homes for longer.

Figure 52: Number of older clients per 1000 people aged 65 years and over and Aboriginal and Torres Strait Islander 50-64 years receiving aged care services, Tasmania and Australia, 2016 - 2021



Source: Productivity Commission (2022). 'Table 14A.2 People receiving aged care services', *Report on Government Services 2022*.

Issues relating to high staff turnover and staff shortages within the aged care system in Australia have also been exacerbated by the pandemic (Commonwealth of Australia, 2020). In a survey of Australian nurses and aged care workers conducted in January-February 2022, 37% reported that they plan to leave their job within one to five years (Peters & Marnie, 2022). The survey also found that 60% of aged care workers say that they are working more than they would like and 38% of employers were not providing leave with pay if workers were exposed to COVID-19.

There is also emerging evidence that the mental health of aged care staff has been severely affected by the COVID-19 pandemic (Brydon et al, 2022). This is an issue for Tasmania, considering its rapidly ageing population and workforce shortages, which in 2020 was the second lowest of all states and territories as measured by FTE per person aged 70 and above (see Figure 53).

Figure 53: Direct care FTE positions per individual aged 70+ by state, 2020



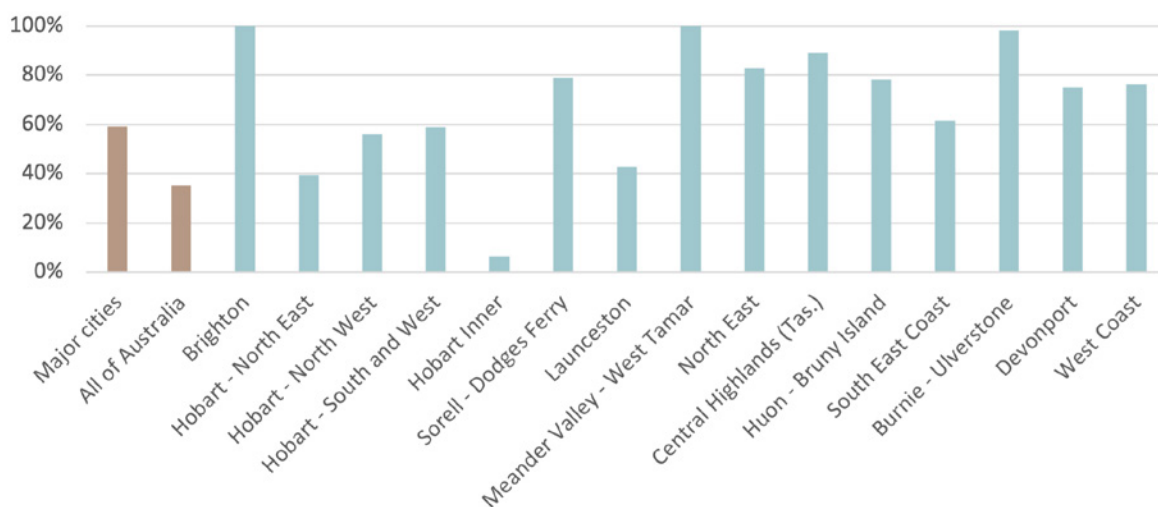
Source: Department of Health (2020 Aged Care Workforce Census, <https://www.health.gov.au/sites/default/files/documents/2021/09/2020-aged-care-workforce-census.pdf>)

3.3.5 Childcare

The pandemic has had a range of impacts on childcare, linked not only to restrictions and health concerns but also to changes in employment and finances. These have included ongoing closures of centres linked to outbreaks, increasing operating costs linked to increased health and hygiene requirements and exacerbation of existing staff shortages. Research conducted by the Mitchell Institute (Hurley et al., 2022) into the spatial accessibility of centre-based daycare (the most accessed type of childcare) across Australia has found that childcare is most scarce in regional areas with populations of less than 1500, which is of concern given patterns of migration away from urban centres during the pandemic. The research found that childcare accessibility in Tasmania was below the national median, meaning that it has a higher number of neighbourhoods with very low childcare places per child compared to other states and territories (see Figure 54).

Given the impact of the pandemic on household budgets, affordability of childcare in the future will likely be an issue. Research has found that childcare was unaffordable for 386,000 Australian families or 39% of families who use childcare in 2020 and that despite the introduction of temporary free childcare in June 2020 by the Australian Government in response to the pandemic and changes to subsidy rates that will come into effect 1 July 2022, childcare costs are likely to continue to rise steadily and be unaffordable for approximately 336,000 Australian families (34% of families who use childcare) (Noble & Hurley, 2021). Although the cost of childcare in Hobart in March 2021, as measured by the consumer price index, was lower than the national average (143.6 compared to 158.4) (ABS, 2021), the cost of childcare varies throughout the state and both cost and availability are a key issue (Baxter, 2021).

Figure 54: Proportion (%) of population living in areas with less than 0.33 childcare places per child

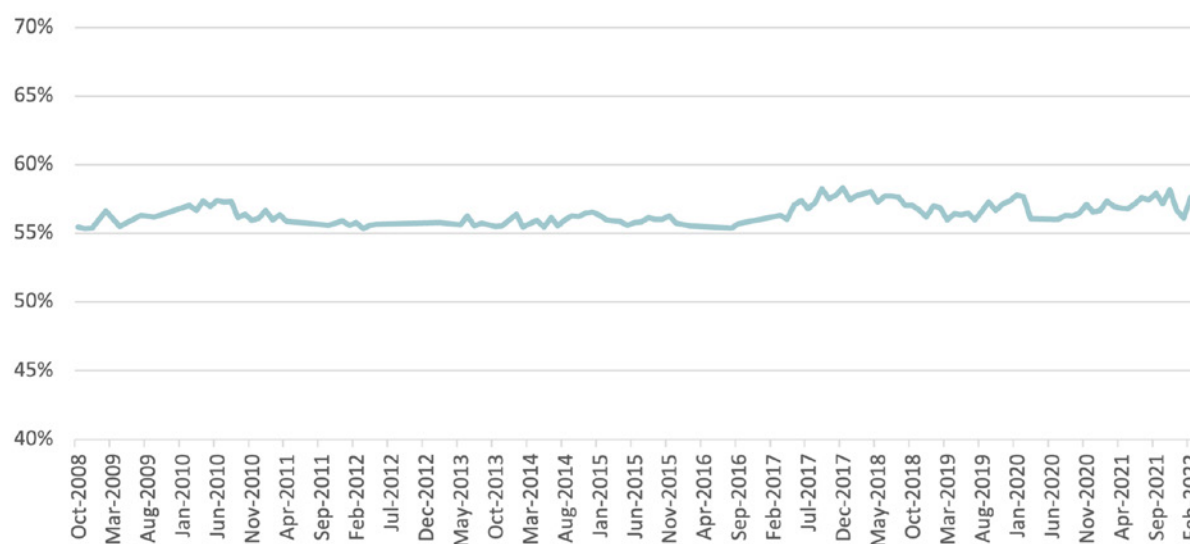


Source: Mitchell Institute for Education and Health Policy

Changes in employment at the beginning of the pandemic, including rapid declines in female labour force participation rates (observed in Tasmania, see Figure 55) and increased rates of working from home, had significant impacts on demand for childcare, with one survey suggesting 52% of families had stopped using formal care completely between May and June 2020 (Baxter, 2021). Many parents also chose to keep their children at home to minimise the health risks (Wood et al., 2021) however there is evidence that demand for childcare has mostly returned to pre COVID-19 rates (Baxter, 2021), however issues relating to workforce shortages that were exacerbated by the pandemic persist (CELA et al., 2021).

The seasonally adjusted participation rate for females in Tasmania also appears to be stabilising after dropping to a low of 52.9% in May 2020, the lowest recorded rate since March 2005. It is likely that women's employment and in turn, demand for childcare, will continue to increase as the economy recovers.

Figure 55: Participation rate (seasonally adjusted), Females, Tasmania, 2012-2022



Source: Australian Bureau of Statistics (March 2022) 'Table 9. Labour force status by Sex, Tasmania - Trend, Seasonally adjusted and Original', *Labour Force, Australia*, accessed 18 May 2022.

4. Perceptions and experiences of Tasmania

In Chapters 2 and 3, we examined more objective measures of liveability and pandemic impacts using government and administrative data on population, economic, labour market, and industry, sector, and service changes before and during the pandemic. However, there are core subjective elements to liveability, such that only the individual can decide what they like about where they live and, ultimately, whether to stay. Accordingly, this chapter examines people's opinions about the life in Tasmania and attitudes towards Tasmania (of both Tasmanian residents and residents from the mainland). We first introduce the data sources and then steer the focus to attitudinal data with indicators of perception and experiences of Tasmania.

4.1 Data

To find relevant information, about how Tasmanians felt or feel about Tasmania, the challenges they face in their daily lives, and how other Australians perceive Tasmania as a potential migration destination, we analysed four different data sources:

- a) The Household, Income and Labour Dynamics in Australia (HILDA) Survey, Release 20 (2020)
- b) Tasmanian Place Brand Research (from their report published in November 2021)
- c) The Tasmania Project General Survey 6 (TTP6) (n=2,043)
- d) The Tasmania Project qualitative interviews with young Tasmanians (n=23 participants)

4.2 Attitudes and opinions about Tasmania

In order to encourage residents of other parts of Australia and overseas migrants to move to Tasmania (attraction) and keep Tasmanians in Tasmania (retention), the state should create a liveable environment that supports wellbeing. In the next sections, we look at how satisfied Tasmanians (and in some cases Australians) are with different dimensions of their lives, their perceptions of Tasmania and concerns for the future, and what constitutes "a good life" from the perspective of young Tasmanians.

4.2.1 Satisfaction with life in Tasmania and other Australian states and territories

First, we use the most recent Household, Income and Labour Dynamics in Australia (HILDA) Survey data to examine how satisfied Tasmanian residents are with different aspects of their lives (from their financial situation to how much free time they have), and how their satisfaction compares with the residents of other states/territories. This facilitates better understanding of Tasmania's relative strengths and weaknesses in terms resident satisfaction, which can help to identify key strengths that can be used to communicate the benefits of living in Tasmania to prospective interstate and overseas migrants, as well as inform future liveability strategies.

Generally speaking, the results show little differences between Tasmania and Australia, between Tasmania and other states/territories, and between different mainland states. Small sample sizes from certain states and little differences in mean scores mean that any observed differences are more or less indicative.

The following findings are of the most relevance:

- Tasmania performs slightly better than Australia for financial situation, feelings of safety, and life satisfaction.
- Tasmania performs slightly worse than Australia for health.
- Out of all states/territories, Tasmania is the second best for safety (after the ACT) and life satisfaction (after the NT).
- However, Tasmania is the second worst for health (after SA).

Table 4: Satisfaction with life in Tasmania and other Australian states and territories, mean scores (scale: 0 – totally dissatisfied, 10 – totally satisfied)

State	The home in which you live	Your employment opportunities	Your financial situation	How safe you feel	Feeling part of your local community	Your health	The neighbourhood in which you live	The amount of free time you have	How satisfied are you with your life
TAS	8.25	7.09	7.25	8.54	6.98	7.28	8.03	7.16	8.08
AU	8.19	7.11	7.09	8.38	6.86	7.37	7.99	7.17	7.91
NSW	8.17	7.07	6.99	8.35	7.05	7.39	7.93	7.10	7.86
VIC	8.25	7.13	7.20	8.37	6.72	7.45	8.07	7.35	7.91
QLD	8.14	7.16	7.04	8.44	6.90	7.32	8.04	7.16	8.00
SA	8.18	6.98	7.16	8.37	6.75	7.12	7.96	7.15	7.87
WA	8.19	7.02	6.97	8.29	6.55	7.33	7.92	6.96	7.88
NT	8.00	7.60	7.30	8.22	7.03	7.89	7.87	6.86	8.27
ACT	8.38	7.66	7.71	8.64	6.98	7.57	8.15	7.16	8.05

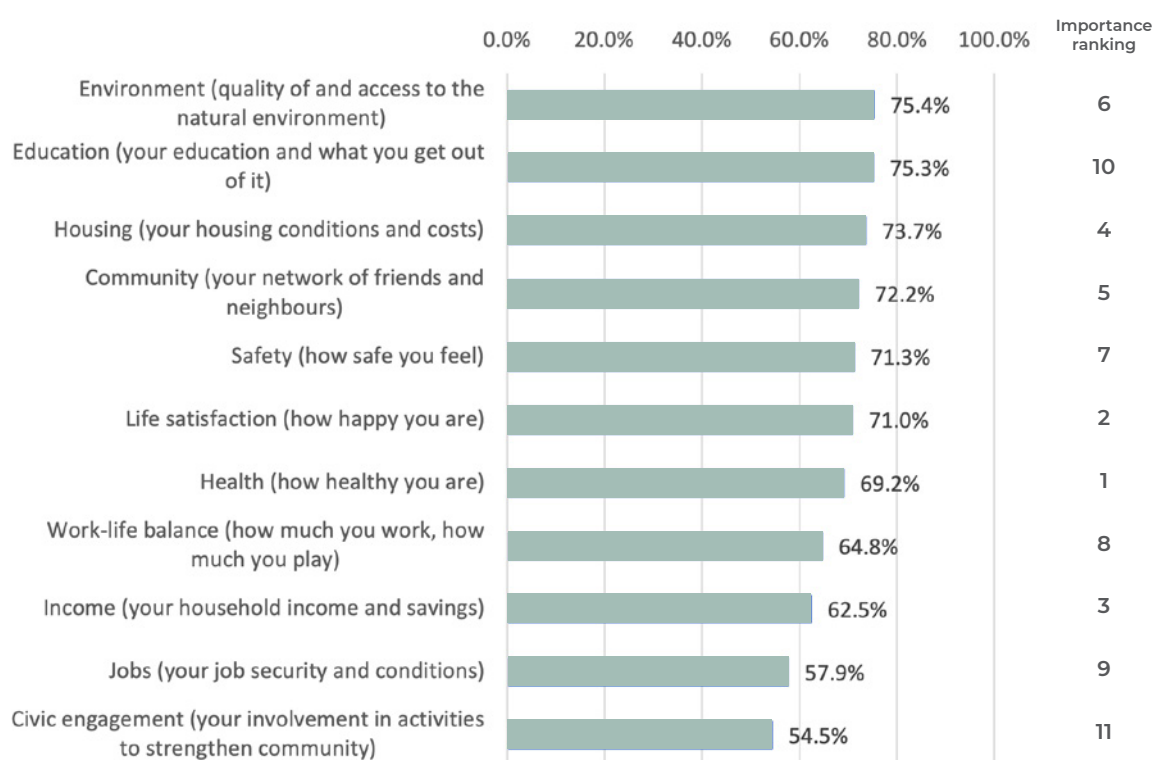
Source: HILDA Release 20 data, Wave 20 (2020) (Department of Social Services; Melbourne Institute of Applied Economic and Social Research, 2021)

4.2.2 Satisfaction with wellbeing dimensions in Tasmania during the pandemic

To extend the analysis from the previous section (HILDA data), we analyse the most recent survey data from The Tasmania Project (General Survey 6, TTP6) conducted in February/March 2022 and with Tasmanian residents only. This survey asked respondents to indicate, from a list of wellbeing domains, which three are most important to their wellbeing and their level of satisfaction with each one (on a 5-point scale from 1 – very satisfied to 5 – very unsatisfied). Figure 56 presents the relative frequencies for combined “very satisfied” and “somewhat satisfied” categories and the importance ranking for each of the wellbeing domains.

The results show that respondents were the most satisfied with Tasmanian natural environment, education, and housing. Of these, housing was the only domain that was also identified as one of the most important for wellbeing. On the other hand, respondents were the least satisfied with civic engagement, jobs, and income. Of these, only income was identified as one of the most important wellbeing domains. Satisfaction with the two most important domains, health and life satisfaction, was quite average compared to the other domains. The results indicate that income/jobs (about 30% unsatisfied) and health (about 24% unsatisfied) are the domains that should be the focus for retention of the existing Tasmanian population. This is somewhat consistent with labour force indicators presented in section 2.5, as well as the results from HILDA.

Figure 56: Satisfaction with wellbeing domains after 2 years of the pandemic, weighted (% of very/somewhat satisfied)



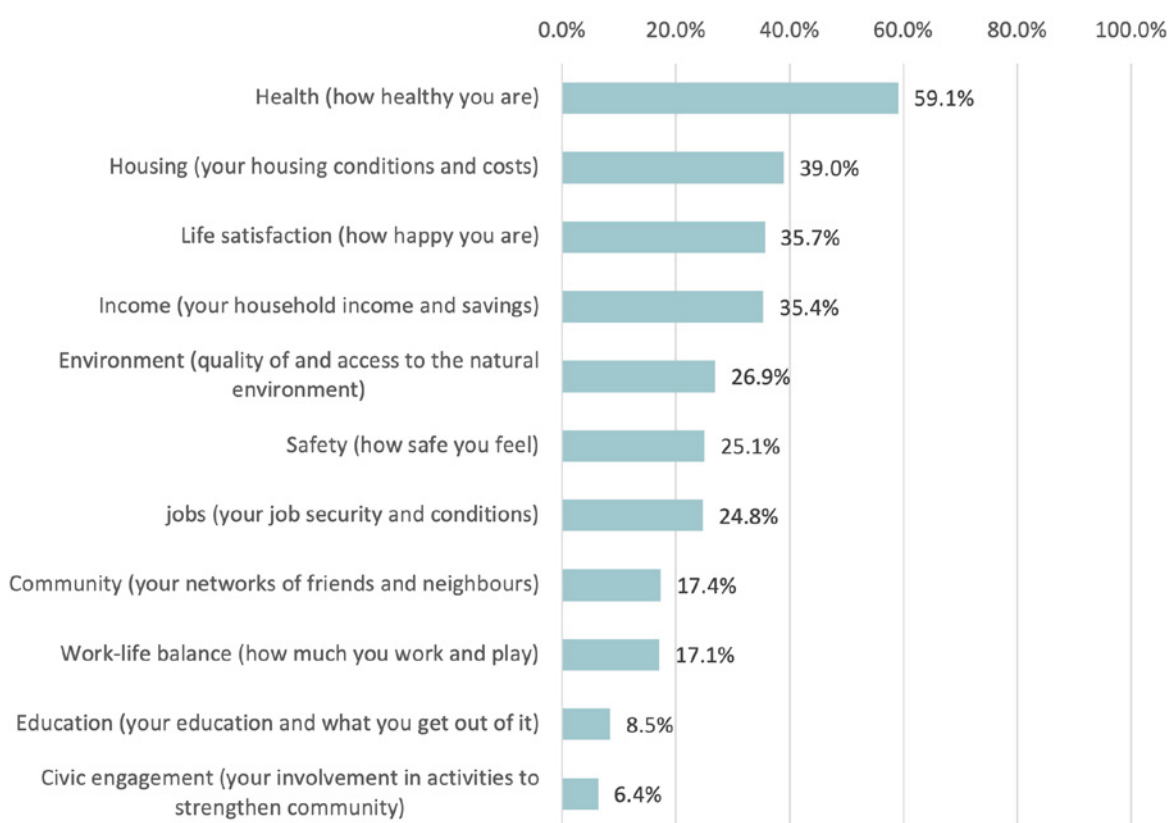
Source: The Tasmania Project Reopening Survey/General Survey 6 (February/March 2022) (Seiwright et al. 2022)

4.2.3 Top areas of concern in Tasmania emerging from the pandemic

In the same survey (TTP6), respondents were also asked to indicate their top three areas of concern as Tasmania emerges from the pandemic. The results show that health is, unsurprisingly, the most important area of concern for the future (59.1%). This is consistent with findings from previous The Tasmania Project surveys. It was also the most important domain for respondents' wellbeing, although satisfaction was quite average compared to the other domains (see Figure 57). Tasmania is also known for worse health outcomes relative to other parts of Australia (see Chapter 3).

Other important areas of concern (except for 'generic' life satisfaction) were housing and income. This is consistent with the results presented in sections 2.5 and Chapter 3. Interestingly, more respondents were concerned with income than jobs, which may be explained by persistence of the gap in weekly earnings between Tasmania and Australia despite the low unemployment rate in 2022 in Tasmania. With increasing housing and health expenses and high inflation, higher income would be required to maintain standards of living in the future.

Figure 57: Top areas of concern in Tasmania (three years ahead), weighted



Source: The Tasmania Project Reopening Survey/General Survey 6 (February/March 2022) (Seiwright et al. 2022)

4.2.4 Opinions about and attitudes towards Tasmania

To determine what factors might attract people living overseas and interstate to move to Tasmania, we also looked at the results of the Tasmanian Place Brand Research, which was conducted from June to August 2021 by Bastion Insights for Brand Tasmania. Survey respondents from the mainland (n=976) were asked about their perceptions of Tasmania by selecting from a list of “place associations”. Table 5 presents the strongest and weakest “place associations” selected for Tasmania. The results show that the most positive associations (selected by more than 70% of respondents) were related to the natural environment and lifestyle such as having nature on your doorstep and the ability to live a slower pace of life. The survey found that Tasmania (20%) is second only to Queensland (27%) as the state that Australians would consider migrating to.

On the other hand, the least positive associations were related to entertainment (such as vibrant nightlife), arts and culture (such as vibrant arts and culture scene), and the economy and labour market (such as diverse and good job prospects, strong local economy). Tasmania is also not perceived as a high-quality education and a high-quality healthcare state. While negative economy and labour market aspects are previously discussed (see Chapter 2 and sections 4.3.2-4.3.3), a lack of entertainment and a lack of arts and culture seems contrary to the well-documented “MONA effect” (Booth et al., 2021). The survey reported that 19% of Australians would never consider migrating to Tasmania (second only to the NT (39%) and tied with WA).

Table 5: Strongest and weakest “place associations” of Tasmania as reported by mainland Australians

Strongest associations	%	Weakest associations	%
Nature on your doorstep	75	A vibrant nightlife	8
Ability to live a slower pace of life	74	Is sophisticated and stylish	12
Clean, fresh air and pristine environment	73	A vibrant and thriving sports culture	13
Great bushwalking, mountain biking, other outdoor pursuits	72	Diverse and good job prospects	13
Diverse with lots to do and see	54	A strong local economy	24
A strong sense of community	48	A vibrant arts and culture scene	26
Focussed on sustainable living / environmentally friendly	46	Access to quality education	26
A good place to raise a family	46	Access to quality healthcare	33

Source: Tasmanian Place Brand Research report (November 2021), Brand Tasmania and Bastion Insights

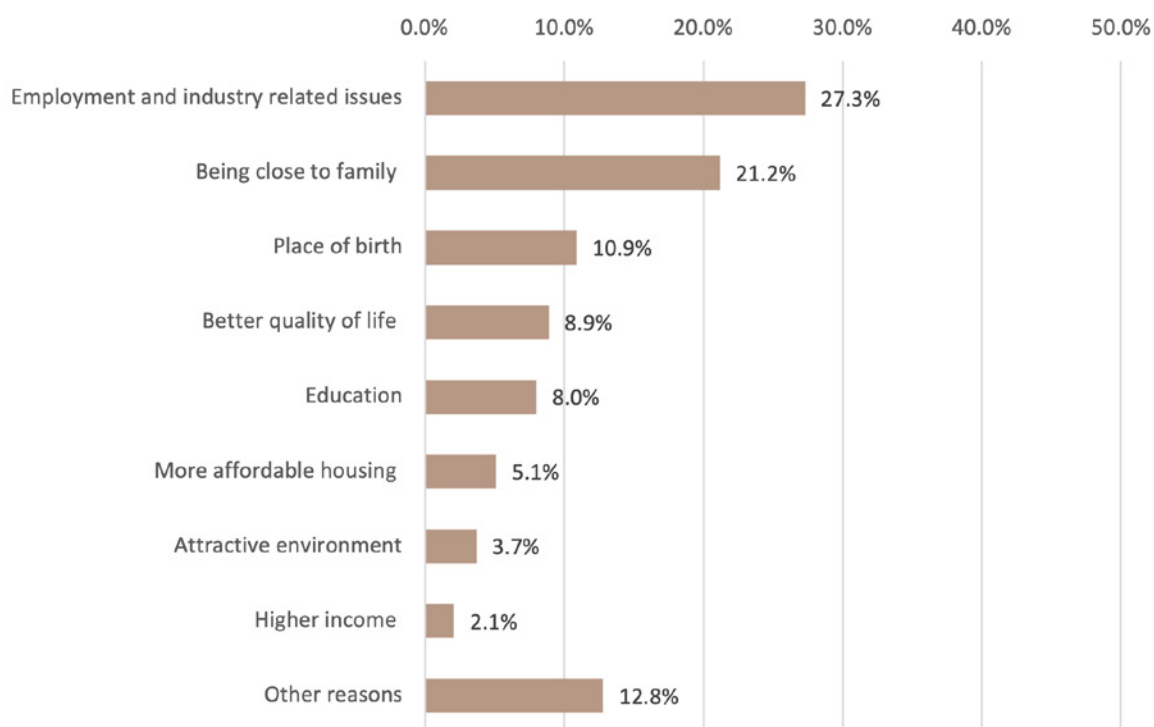
4.2.5 Why do people settle and why they move?

To understand the key factors behind people's decisions to move interstate, intrastate or between cities, we reviewed a recent report from the Australian Urban and Housing Research Institute (AHURI) titled "Understanding what attracts new residents to smaller cities". The report presents the findings of a survey of over 3,000 Australians. Here, we present a summary of the results for:

- Reasons for settlement in different cities
- Most important characteristics when deciding on a city to live in

The results presented in Figure 58 show a list of the main reasons for moving between different places. The statistics include both those respondents who currently live in a mid-sized city and those who currently reside in a large city. The data do not distinguish between interstate and intrastate migration.

Figure 58: Reasons for settlement in different cities (no matter their size)



Source: Tasmanian Place Brand Research report (November 2021), Brand Tasmania and Bastion Insights

⁵ <https://www.ahuri.edu.au/sites/default/files/documents/2022-03/AHURI-Final-Report-375-Understanding-what-attracts-new-residents-to-smaller-cities.pdf>

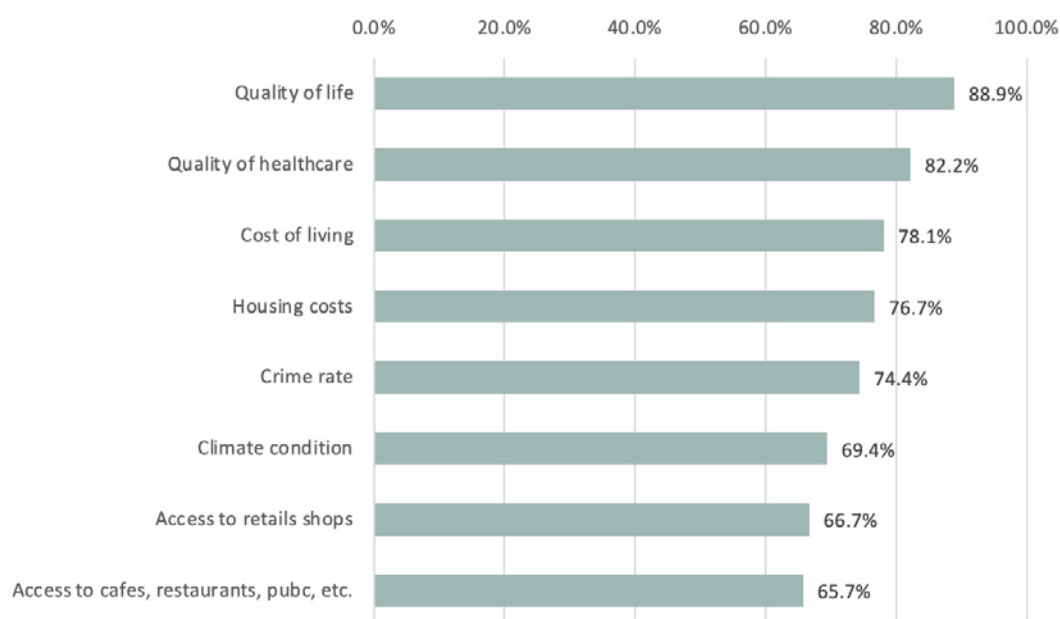
The two main reasons why respondents moved or settle in a particular city were *employment and industry related issues* (27.3%) and *being close to family* (21.2%). The other reasons for settlement, which were slightly less important, were *place of birth* (10.9%), *better quality of life* (8.9%), and *education* (8.0%). A decent proportion of respondents (almost 1 in 4 combined) reported other less common reasons such as *more affordable housing* (5.1%).

The survey also asked respondents about the importance of different characteristics which play a role in the decision to move to a different city. In Figure 59, we present eight of the most important characteristics identified in their report. The most important characteristics when deciding on a city to live in are those associated with the quality of life and services (88.9% answered (very) important for quality of life, 82.2% for quality of healthcare) and costs (78.1% answered (very) important for cost of living and 76.7% for housing costs).

Respondents would also like to live in safe cities (74.4% answered (very) important for crime rate) and with a favourable climate (69.4% answered (very) important for climate condition). The last two important characteristics are associated with access to shops and eating establishments.

Combining 22 characteristics into homogeneous groups, the authors of the report concluded that the most important characteristics of cities when deciding where to live relate to quality of life (including costs, crime rates, etc.) and culture and heritage (including iconic places and landmarks, multicultural cities, etc.) are the least important.

Figure 59: Most important characteristics when deciding on a city to live in
(% of those who selected very important and important)





4.2.6 What is a good life in the Tasmanian context?

Between October and December 2020, The Tasmania Project conducted a series of in-depth qualitative interviews with young Tasmanians aged 30 years and under (Lester et al., 2020). They were asked about the meaning of “a good life” and what they saw as the most important issues in Tasmania. The interviews provided rich insights into young Tasmanians’ experiences and perceptions of living in Tasmania and what issues might motivate them to leave Tasmania. This is important as recent research has shown that there was a significant increase in departures from Tasmania and a considerable decline in arrivals to Tasmania for those aged 25 to 34 years since the start of the pandemic (Denny, 2022).

Wellbeing

By answering the question “**What is a good life to you?**”, participants talked about what was important for their wellbeing. Relationships, housing, and health emerged as key themes.

Participant 1:

I guess for me it's - security is a big thing for me. I grew up in a bit of tumultuous household. And so for me, it's really important to have security in regards to [having] a safe place to live and I have reliable access to food and I can afford all my bills ... [having] spare time to enjoy myself and be able to do my hobbies ... [having work] where I feel like I'm doing something useful, even if it's in a small way, those are kind of what's important to me to have a good life.

Participant 2:

I think a good life is having work that you can be satisfied with ... [and the] safety and health of my family. That's a good life for me.

Participant 3:

I think a good life is definitely being socially connected with people ... I think the worst thing about COVID [is it has] kind of taken away people's ability to have a sense of community ... a good life is a good community and it's a place where you feel safe. And I think job and finances come second to that.

Participant 4:

Having a good life is feeling fulfilled in my job, in my community, with my relationships and my friends, being able to deal with challenges as they come along ... having a good life is about feeling fulfilled and happy. And also for me it's making a difference and trying to do things differently so that there is a difference.

Participant 5:

A good life composes of five basic things of my life. Food, shelter, finance, education and mental support. If I have these five basic elements in my life, then I consider myself as a good life because I don't want to rush after money. I'll be happy with a very moderate income of mine to support my family. The main thing I need is mental support from the people and good wishes from the people. That's it.



Housing

Housing was frequently mentioned as a key issue that many were currently facing or are likely to face in the future.

Participant 2:

At the moment there are some issues that I see, say with housing and things like that. A lot of my friends are still living at home because there's no affordable place to rent.

Participant 6:

We've made the decision to move out of Hobart so that we can afford cheaper rent. [I'm] paying a fraction of the rent that I used to pay in Sydney ... [but] housing security is something that I know [is] a big problem facing a lot of people that I know.

Participant 7:

When I first moved from Melbourne to Hobart the house price is [sic] very high in Hobart. It's hard for our international students to find a house. They prefer family and the local people. So we only find- like it's not kind of a decent house ... It's just a basement ... the government should create some rules [to help international students] because sometimes they don't have the stable jobs and they don't have family support and they don't have enough deposit [so] the agency [or landlords] won't choose them. So it's hard for them to share a house. They can only choose bad condition house [sic].

Participant 9:

We are sort of looking at buying a house. But it's sort of difficult with- it's entirely reliant on my partner's income to get a loan and prices keep going up. We'd love to continue sort of living in inner suburbs, but that's not actually realistic [laughs].

Participant 10:

I think the - potentially a combination of the price of housing relative to the wages that are available as well. So that kind of problem of not having as many good quality jobs, kinda lower average wage, as well as having quite high rental costs or house costs to buy as well, that can have a bit of a problem causing homelessness and kind of keeping people in lower socio economic situations.



Natural environment

Many participants expressed satisfaction and connection with the natural environment.

Participant 1:

I love the environment. It's a beautiful, beautiful place. I think one of the most beautiful in the world. We're so lucky to have so much on our doorstep, that I can live - like, there's very few places in the world where I could live or grow up 20 minutes from a capital city in the middle of the bush in a place that didn't have cell reception. Like, that, that's - it's such an amazing place.

Participant 3:

I love Tasmania because of the nature that is here ... Tasmania is kind of world renowned for its hiking and I love hiking ... I think every Tasmanian has a bit of pride [in the reserved landscapes that are] saved for nature.

Participant 6:

I love being near the bush and being near the ocean. I love being able to just like zip up the coast and it only takes half an hour and you don't have to sit in traffic ... It's really special ... I love the proximity to nature and the people.

Participant 7:

And another thing is that the nature of the Tasmania is attractive, so people are more relaxed here. So in the metropolitan city, big city, people are busy doing their jobs, doing their study. But In Tasmania I have more time to just look around and see the crowd, see the stars. I really enjoy the view in Tasmania.

Participant 8:

I can see people are living here sustainably ... it's not really uncommon [in Tasmania] ... for me, because I like to take care of environment I found it easy to make friends with [similar people] and also to maintain [friendships] ... And also the nature here is well preserved.



Community and relationships

Participants were also positive about the sense of community in Tasmania and how easy it is to make friends and maintain friendships.

Participant 4:

Having a good life is feeling fulfilled in my job, in my community, with my relationships and my friends...

Participant 5:

Yes, I really feel... connected with my local community [including] having some cultural festivals are all arranged by my home country ... when I came to Tasmania I really wondered that if there [would be other people] from my community because [most of them] settled in Sydney or Melbourne.

Participant 6:

I just love the small community feel and knowing everybody and feeling appreciated in the community. It's really special ... I love the proximity to nature and the people.

Participant 8:

Because the community is a small community [I] get to know a lot of people who have mutual friends with each other and I get to know them from, like, through that. Whereas when I was living in Sydney it's just like a small circle of friends here and there, not as in Tasmania where I could meet many people just by walking along the street that I may know from someone else. And I like that kind of community. And that's the hardest thing, also a big influence in my decision making whether or not I should move back to Sydney.

Participant 9:

... it's a place that I know and feel comfortable with and feel connected. And so that if I was ever lost or didn't have my phone or money or those kind of normal resources [I would] feel safe to ask people for help ... I like living in the Hobart City Council area because I think they're quite an active council that is quite interested in its local community and fostering community and creating a nice place to leave an inviting community comment on that.

It is interesting to note that the elements of a good life expressed by the young Tasmanians interviewed are quite similar to those reported by the general community (as previously described). They value the natural environment and local communities, and seek meaningful work, affordable housing and stability and security both financially and in their relationships. As expected, younger people are more concerned about issues of greater relevance to their life stage, such as housing rather than health.

4.3 Key findings

We conclude this chapter with some key findings:

- Although there is little difference between Tasmania and Australia in terms of people's average satisfaction with different aspects of life, Tasmania performs slightly better on financial situation, feelings of safety, and life satisfaction, and slightly worse on health.
- In February/March 2022, respondents to a survey conducted by The Tasmania Project (TTP6) were most satisfied with the natural environment, education, and housing and least satisfied with civic engagement, jobs, and income. Of these, respondents ranked housing and income as the most important dimensions for wellbeing.
- Health, life satisfaction, housing, and income were identified as the top areas of concern for the future (defined as 3 years' time) by respondents to TTP6.
- The strongest "place associations" for Tasmania as identified by a sample of mainland Australians were related with the natural environment and lifestyle, and the weakest were related to entertainment, arts and culture, and the economy and labour market.
- In qualitative interviews, young Tasmanians reported being connected to and valuing the natural environment and their local communities and were generally quite concerned about housing.

5. Population retention and attraction

In Chapter 5 we review relevant changes to the population and liveability arising from the pandemic (Chapters 2 and 3) and perceptions and experiences of Tasmania (Chapter 4). We then identify several key opportunities and challenges for population retention and attraction.

5.1 Review of changes and attitudinal indicators

We first review key population, economic, and liveability changes and trends arising out of the pandemic in Tasmania. In Table 6, we present the results for three distinctive time periods:

- 1. Pre-COVID:** this generally refers to the period between 2012 and March 2020. We intend to summarize trends that could have continued had there not been COVID-19.
- 2. During-COVID:** April 2020–December 2021 (early 2022 for a limited number of indicators from Chapter 2). We aim to present changes that might have an impact on population trends from 2022 on.
- 3. Post-COVID:** 2022 and onwards⁶: for this time period, we use population projections (e.g., Australian Government Centre for Population 2020b) and our own projections based on historic data and trends.

The results show that Tasmanian population growth before the pandemic was relatively consistent, attributable to growth in interstate arrivals and overseas arrivals (all visa types), while NI remained fairly consistent with decreasing fertility and mortality rates. We argue that the positive growth trend would have continued had there been no pandemic (potentially slowing down) due to improving labour market conditions (i.e., declining gaps in unemployment and average weekly earnings). However, population growth trends only slowed down but did not stop (or reverse) ageing (both structural and numerical) of the Tasmanian population.

During the first two years of the pandemic, overseas arrivals ceased, and downward fertility and mortality trends continued. In the second year of COVID-19 interstate departures increased substantially, while interstate arrival numbers remained reasonably unchanged. This resulted in very little shift in population size and contributed to an increased rate of ageing. On the other hand, and generally speaking, economic conditions stopped improving from the perspective of residents – while the average weekly earnings gap continued to decrease and there was little difference in unemployment rates between Tasmania and Australia, life became more expensive, especially health and housing-related expenses.

According to projections, Tasmania's population size will be, in the long term, less affected by the pandemic than the largest Australian states. It is predicted that the population will grow in a similar fashion than it did before the pandemic – initially due to NIM and then overseas migration (reaching pre-COVID levels by 2025 (Charles-Edwards et al. 2021)). However, these projections do not consider relevant changes to policy, and certain projections have proven to be inaccurate (see section 2.4). If reductions in the gaps in GSP and average weekly earnings between Australia and Tasmania continue, and Tasmania recovers faster than many other Australian states/territories (and property prices/rents decrease), the economic environment is likely to support population retention and attraction.

⁶ At the time of writing, COVID-19 is still present in the community. Therefore, 'Post-COVID' could well be called 'COVID-normal' (i.e., COVID still circulates in the community but there are little to no restrictions at the state or national levels).

Table 6: Population, economic and liveability trends in Tasmania between 2012 and 2021 (selected indicators)

Indicator group	Indicators	Pre-COVID (2012-Q1 2020)	During-COVID (Q2 2020-2021)	Post-COVID (projected*)
Population indicators	Population size	↑	=	↑
	Ageing	↑	↑↑	↑
	Fertility	↓	↓	↓↓
	Mortality	↓	↓	↓
	Interstate arrivals	↑	=	↑
	Interstate departures	=	↑	=
	Intrastate migration to Greater Hobart	↓	=	↑
	Overseas permanent visa arrivals	↑	↓↓	↑
	Overseas temporary work visa arrivals	↑	↓↓	↑
	Overseas temporary student visa arrivals	↑	↓↓	↑
Economic indicators	GDP/GSP gap	=	↓	↓
	Unemployment rate gap	↓	=	=
	Average weekly earnings gap	↓	↓	↓
	CPI gap	=	↑	=
Liveability indicators	Adaptive lifestyles – working from home	=	↑↑	↓
	Adaptive lifestyles – household expenditure	=	↓	=
	Adaptive industries – payroll jobs	=	↓	↑
	Adaptive industries – skills shortages	=	↑	↓
	Housing – affordability	↓	↓↓	?
	Housing – vacancy rates	=	↓	?
	Health – Medicare services, non-hospital	=	↑	=
	Health – availability of general practitioners	↑	=	=
	Health – waiting time for elective surgery	↓	↑	↓
	Education – international applications at UTAS	↑↑	↓	↑
	Aged care – places in residential care	↓	↓	?
	Aged care – people receiving home care	↑	↑↑	↑
	Childcare – female participation rate	↑	↓	↑

Compared to the previous time period/years: ↑ - increase, ↓ - decrease, = no or insignificant change, ? - cannot be projected with acceptable level of certainty; *economic and liveability indicators are projected by the authors of this report (based on historical and COVID-affected trends)

Before the pandemic, there were some notable trends in liveability in Tasmania, some of which are consistent with particular financial changes reflected in the CPI results. Despite slight improvements in housing supply and affordability very early in the pandemic, the issues have generally been exacerbated by the pandemic. COVID-19 slowed down an increase of the number of GPs per capita, and temporarily increased waiting times for elective surgeries. Longstanding increases in the number of international students at the University of Tasmania decreased in the first two years of the pandemic. Demand for childcare fluctuated and pre-existing trends towards home-based aged care appear to have been accelerated during the pandemic due to the disproportionate impact of COVID on older people living in residential facilities.

Perceptions of Tasmanian residents about their home state and their personal wellbeing are generally mixed. Although the natural environment and sense of community were consistently identified as the most positive aspects of living in Tasmania, many have also expressed serious concern about factors such as healthcare, housing and income that have significant implications for liveability and quality of life. The way mainland Australians perceive Tasmania is somewhat consistent with how Tasmanians perceive their home state. However, positive “place associations” such as nature, fresh air, sustainable living are unlikely to outweigh the negative associations such as housing, education, and health when making a decision to relocate interstate.

5.2 Key challenges to future population growth emerging from the pandemic

It is clear from the analysis and discussion in previous chapters that the pandemic presents a range of challenges to future population growth in Tasmania.

5.2.1 Income and cost of living

It is concerning that Tasmania is behind the Australian average in both GDP/GSP and average weekly pay, given the relationship between employment opportunities and pay and population growth. While the trend is positive (such that the gap in both is decreasing over time), it remains a significant problem given the rising costs of living in Tasmania. In order to attract people of working age to Tasmania (to address skills shortages, service the ageing population, etc.), the mismatch in income and living expenses (i.e., lower income but comparable or higher cost of living to the mainland) must be addressed or overcome by a better value proposition (e.g., incentives). At the same time, income gaps do not concern prospective new residents who do not have to work (typically older, higher socioeconomic status retirees), which may further compound issues relating to the ageing population and the cost of living (particularly housing).

5.2.2 Employment

Although the unemployment rate in the 15-24 year age group is comparable in Australia and Tasmania, there may not be enough career opportunities for young Tasmanians, especially the most educated ones. This cohort is generally more mobile and therefore willing to pursue the best employment outcomes, regardless of location. A key challenge will be providing employment opportunities for young Tasmanian adults which are competitive against the other states/territories in terms of professional development opportunities and income to maximise retention. Better employment opportunities for early career professionals may also attract more young Australians to migrate to Tasmania.

5.2.3 Housing

Another major challenge is housing. Data from a range of sources has consistently shown that housing affordability and supply are key issues for Tasmania. COVID-19 has exacerbated these issues, particularly in regional areas where demand for housing has increased substantially. Labour shortages in the construction industry and disruptions to building material supply chains has also impacted the supply of housing. Housing is a key issue for both retention and attraction, as well as the wellbeing of certain population subgroups. Although issues relating to supply and affordability generally affects young Tasmanians and new arrivals more than older Tasmanians, who are more likely to be homeowners, high demand for housing stock of a particular kind (e.g., small houses for older people to downsize to) is also problematic and could motivate people to leave the state. In the long term, if young Tasmanians (those younger than 35 years) move interstate and decide not to return due to housing market issues, this could have an additional effect on structural ageing of the Tasmanian population.

Housing issues such as existing supply and affordability issues continue to be exacerbated by the pandemic. This presents challenges for attracting new residents, particularly as the strong media coverage of the national housing crisis regularly sees Tasmania (and particularly Hobart) touted as very unaffordable. It also presents challenges for retention, as existing residents are priced out of living in Tasmania due to rising housing costs, with housing costs generally being the largest and least flexible component of the household budget. Therefore, in order to attract and retain residents, housing accessibility and affordability will need to be tackled in Tasmania. Given the scale of the housing crisis, there is no quick fix, and both supply- and demand-side issues will need to be addressed.

In addition to the cost and availability of housing, the type of housing stock is important given shifts in the way the home is being used (e.g., larger houses). A 2020 survey found that 26% of Australians reported working with someone else in the room when working from home (Beck & Hensher, 2021), suggesting existing housing is not ideal. Many people will want larger houses to accommodate dedicated office or meeting spaces, and some may need the capacity to create, store and receive physical goods (Doling & Arundel, 2020). However, the overall housing market would benefit from a greater variety of dwelling types (e.g., apartments and townhouses in addition to freestanding houses) so that people can select housing options that best fit their needs.

5.2.4 Interstate departures

An additional challenge is how to decrease interstate departures. Until Q2 2021, NIM was a positive contributor to population growth. However, between April and September 2021, both interstate departures and arrivals increased substantially, but interstate departures increased more (resulting in negative NIM). The literature suggests that this might be attributable to delayed interstate migration (where people delay moves during health or economic crises), which might have continued after September 2021. A detailed analysis of the time series for 2021 and 2022, as well as an analysis of socio-demographic predictors of interstate migration, will provide a clearer indication of how serious this issue is in the long term.

5.2.5 Perceptions of Tasmania

The fourth challenge identified with an analysis of attitudes and opinions is existing perceptions of Tasmania among non-residents (i.e., mainland Australians) and whether these are likely/sufficient to inspire (or conversely, discourage) relocation to the state. Tasmania is generally seen as a great place to holiday but not somewhere to live (Bastion Insights, 2021). Although the natural environment and slower pace of life are regarded as positives, there are several negative associations in key areas relating to healthcare, economic opportunities, education, and entertainment. We also identify a disparity between how much Tasmanians appreciate certain lifestyle aspects in Tasmania and how Tasmania is perceived by the mainlanders – arts and culture is a good example. Consideration must also be given to meeting the expectations of new residents, who may base their relocation on believing Tasmania to be, for example, a pristine and relaxed place to live, and find instead that key issues are environmental degradation and traffic congestion. Managing the issue of “perception vs. reality” will be key for retaining new residents.

There are other issues, weaknesses, threats, and challenges to population growth in Tasmania which are discussed in this report. Additionally, there is another issue of note – the social licence to release a population growth strategy when so much of the existing population is finding it hard to meet basic needs. As previously noted, employment prospects (opportunities, pay), housing (access, affordability), and health (outcomes, accessibility, affordability) are the issues that already affect Tasmanian residents. A bigger population could exacerbate existing issues and place immense strain on the very things that keep people in Tasmania and motivate people to move to Tasmania.

Also, if the population is substantially increased, it could jeopardise Tasmania's unique selling proposition to residents and tourists alike, such as a relaxed pace, low congestion, and pristine nature. This could, in turn, have detrimental effects for key industries and population growth and composition. Recent research exploring attitudes to population growth amongst regional city residents in Australia (Crommelin et al., 2022) found that residents of five regional cities (Albury-Wodonga (Vic/NSW), Cairns (Qld), Mildura (Vic), Whyalla (SA) and Wollongong (NSW)) were concerned about growth diminishing the lifestyle appeal of their cities and impacting on the provision of essential services and the affordability of housing. In Cairns, concerns were also expressed regarding the impact on nearby World Heritage sites and the natural environment as an attractor for residents and tourists. Residents also acknowledged that service provision, investment attraction and increased retail and activities were benefits to increased population. Interestingly, the strongest support for population growth was in Whyalla due to its declining and ageing population which residents felt had deterred investment in the city. The research also found variation in concerns and experiences of population growth across the five regional cities studied, supporting arguments for ‘place-based policies for regional city growth that are able to respond to specific local circumstances and development goals’ (p.2).

5.3 Key opportunities for population growth emerging from the pandemic

One of the central questions that this report is attempting to answer is how Tasmania might best leverage the opportunities arising to retain residents and attract interstate and overseas migrants in order to support population growth. For that reason, we identify the following opportunities: (1) strategic interstate and overseas migration, (2) strengthen local food systems, (3) harness the creative industries, (4) protect the natural environment and people's access to it, (5) support new ways of working, (6) increase digital inclusion, and (7) support ageing in place in Tasmania and embrace the economic and social opportunities of an ageing population.

5.3.1 Strategic interstate and overseas migration

As Australia opened the borders in 2022, there are opportunities for Tasmania to focus on delayed overseas migration/arrivals – those who have an established desire or intent to move to Tasmania but were thwarted by the pandemic. This includes both permanent visa migrants and temporary visa overseas migrants, such as international students. We argue that this is an opportunity for population growth in Tasmania, but only if done using a strategic approach. There is evidence in the literature that overseas migrants with existing ties in the area or with existing international communities are more likely to stay in peripheral parts of high-income countries. Accordingly, as a peripheral part of Australia, overseas migrants are more likely to stay in Tasmania if they have personal ties and/or if there are strong cultural or expat communities that they can access (the latter of which can be fostered with cultural strategies and investments). Retention of international students is another opportunity for long-term population growth, but to keep them in Tasmania after graduation, employment opportunities and easier transitions to permanent visas should be provided (i.e., Tasmanian Skilled Migration State Nomination Program).

The strategic approach to overseas migration could partially be planned around adaptive industries (post-COVID-19) and consequent skills shortages. At the same time, the focus on skills shortages should not be limited to adaptive industries. One of the reasons why migrants leave peripheral parts of high-income countries is short-term employment which means that, at the end of their employment agreement, overseas migrants often find better opportunities in non-peripheral parts with larger international communities.

Offering long-term employment, preferably in industries and occupations that are experiencing skills shortages, would remove the need to look for jobs outside of Tasmania. Without the need to move, overseas migrants are more likely to stay in the state longer, to get involved in the existing international communities, to make Tasmania their home, and therefore want stay permanently.

The Tasmanian Place Brand Research results showed that about 20% of the mainlanders would consider moving to Tasmania. To encourage them to migrate to Tasmania, better strategic communication about what makes Tasmania a special place and a future home should be developed. However, since positive attitudes, opinions and perceptions are just one reason for interstate migration, a coordinated approach is required to improve labour market and liveability conditions as well.

5.3.2 Strengthen local food systems

A somewhat surprising finding of The Tasmania Project, given Tasmania's positioning (albeit to external markets) as a 'foodie destination' and strong producer of fresh and gourmet produce, was the prevalence of food insecurity – the inability to access sufficient quantity and quality food for an active, healthy life. Early in the pandemic (May/June 2020), 1 in 4 respondents reported running out of food and not being able to afford more (Kent et al., 2020a). This persisted, with 18% of respondents (roughly 1 in 5) experiencing food insecurity in September 2020 (Horton & Kent, 2020).

Food insecurity may have been exacerbated by the pandemic's impacts on employment and therefore income, as well as supply (driven by panic buying and global disruptions to supply chains). However, the ongoing disruptions to food availability and rapidly rising cost of living (including food costs) create a significant worry for people in trying to, quite literally, put food on the table. In Tasmania, during the pandemic, consumer responses to this included increased home vegetable gardening, fishing, and baking, and a high importance placed on local produce and local supermarkets (Kent et al., 2020b).

The weaknesses of the food supply chain exposed by the pandemic, strong consumer preferences for local produce, and continuing cost of living pressures present an opportunity to strengthen local food systems in Tasmania.

There are several practical arguments for this. Better utilisation of local supply reduces food wastage (Song et al., 2021), and reduced wastage can reduce the gap in potential income for food producers when looking to sell locally versus abroad (e.g., being able to sell 90% of a crop at local prices may be comparable to selling 70% at 'premium' export prices, particularly when transport costs are taken into account). Reduced food wastage also delivers the benefit of lower environmental impacts, which fits well with Tasmania's positioning as a nature-oriented place and with Tasmanians' higher level of environmental consciousness (relative to mainlanders).

Shortening and strengthening food supply chains should result in more affordable food for consumers due to the passing on of cost savings arising from lower wastage and lower transport costs. There is also a food justice argument, such that local stakeholders should have access to the food produced in their communities. Accordingly, strengthening food systems would make Tasmania a more attractive place to live by increasing affordability of food, reducing supply-side disruptions, building on Tasmania's environmentally conscious brand, and increasing residents' access to high quality, locally sourced food. There are several ways that food systems can be strengthened, including but not limited to negotiating with producers and major supermarkets, supporting smaller local producers and retailers, and fostering grassroots initiatives such as community gardens.

5.3.3 Harness the creative industries

The cultural and creative industries are an apt area for focus when seeking to grow Tasmania's population while also increasing liveability. The cultural and creative industries are prominent in Tasmania and are thus an important industry for the retention of existing residents, but a perceived lack of arts and culture among mainlanders is a drawback for potential interstate migrants. Additionally and more generally, cultural and creative industries contribute to liveability on a number of fronts: by increasing the wellbeing of residents through the provision of amenities and opportunities for engagement (Clark et al., 2018); by providing economic resources and opportunities for people working in the industries (Ashley, 2015); contributing to better places and spaces and better processes for developing them (Valjakka, 2018); and building identity and attachment to place for new and existing residents, increasing population retention (Small & Florida, 2016).

The potential benefits of cultural and creative industries for liveability are only enhanced in the context of COVID-19 recovery. The value of cultural and creative industries became apparent in a number of ways during COVID-19: through strong investments by governments around the world to support creative workers and industries, increased arts and culture consumption digitally during lockdowns, prominent performers raising money for COVID-19 related causes, and novel approaches to ensuring that performances continued (Jeannotte, 2021). A substantial proportion of The Tasmania Project (TTP) respondents reported increased engagement with cultural and creative industries, as well as their own creative activities. Additionally, respondents felt that cultural and creative industries should be prioritised for support from the State Government, behind only education and training, healthcare, and tourism and hospitality (Lester, 2020b). Despite this increased engagement and recognition of value, the cultural and creative industries and those who work in it bore the brunt of the pandemic with significant job and income losses. Indeed, research conducted by the Institute for Social Change with cultural and creative industries workers found that the majority of workers experienced decreased personal and household income, were less satisfied across all domains of their life (relative to a general sample of Tasmanian respondents), and often spent more time than they were compensated for on their creative pursuits (Williams et al., 2021).

Historically, cultural and creative industries have driven social and economic recovery by revitalising places and industries in communities affected by natural disasters and recessions (Noonan, 2021; National Assembly of State Arts Agencies, 2021). Australian analysis of ABS jobs data suggests that investment in the arts and entertainment can result in three times as many jobs as an equivalent investment in construction (Browne, 2021). Given the often precarious employment of cultural and creative workers, such investments may provide some of the security needed to live, work, and create. In addition, as large-scale infrastructure investments are made to drive economic recovery post-pandemic, there are clear opportunities to engage residents and cultural and creative workers to help shape the projects and increase the cultural amenity of their resulting infrastructure, thus increasing liveability.

In sum, cultural and creative industries have driven social economic recovery in the face of past disasters, deliver greater return on investment in terms of employment compared with other industries, and contribute to the making of better places that people want to move to and stay in. This is particularly relevant in Tasmania given the local prominence of the cultural and creative industries, the apparent perception among mainlanders of a lack of culture, and the challenges Tasmania faces in striking a balance between growth and liveability.

5.3.4 Protect the natural environment

The natural environment is essential for liveability as it provides a range of benefits for mental and physical health, places for recreation, social interaction and community-building, as well as environmental benefits (Biedenweg et al., 2017). Previous research suggests that Tasmanians have a strong sense of place, and deeply value their unique geography and access to natural environments (Banham & Pisanu, 2020). The pandemic has highlighted the importance of the natural environment for Tasmanian residents (see 3.1.2). Research from the Institute for Social Change found that access to natural places was a top priority and concern for Tasmanian residents in the future (Banham & Pisanu, 2020; Lester et al., 2020). There is also strong evidence that mainland Australians have strong and positive perceptions of the state's natural value and the kind of lifestyle it offers (see 4.2.4). The pandemic may have also increased interest in sustainability and adopting a sustainable lifestyle, however this is an emerging trend that requires further research.

These findings suggest that protection of the natural environment should be prioritised to support retention of Tasmanian residents and maintain the uniqueness of the State to attract (and meet the expectations of) new residents. There is an opportunity to strengthen and reframe existing endeavours based on trends emerging from the pandemic and so that population resilience is front and centre. For example, the 30-Year Infrastructure Strategy identifies 'preserving accessible wilderness' as a key objective but does not make any direct links to population. Given the importance of the natural environment to existing and prospective Tasmanians, existing and future efforts to preserve and support access to the natural environment will also serve to enhance Tasmania's unique selling point as a place to live.

5.3.5 Support new ways of working

A key challenge and opportunity for Tasmania in attracting and retaining a productive workforce that addresses skill shortages is to support new ways of working. Higher rates of working from home are likely to persist which offers opportunities for both attraction and retention of workers and economic development of Tasmania and its regions. There are opportunities to leverage working from home to support growth in regional areas and support wellbeing and work-life balance by avoiding or reducing the frequency of commuting. In 2020, COVID-19 related reductions in car and public transport commutes in the Greater Sydney Metropolitan Area saved an estimated \$5.6 billion in annual travel time costs, much of which can be attributed to decreases in congestion (Hensher et al., 2021) and moving to more affordable neighbourhoods (Delventhal et al., 2021).

Remote and flexible work is more likely to be available for knowledge workers, an important and growing section of Australia's workforce, who are more likely to have higher education levels and higher incomes (Eccleston et al., 2021). Thus, ensuring that flexible opportunities are available for workers is important for Tasmania in attracting these highly skilled workers and growing this part of the economy. In addition, flexible work can increase the size and utilisation of the workforce by opening up work opportunities for those who are often less able to work outside the home such as carers, parents of young children, some people with a disability (Schur et al., 2020) and those in remote areas not proximate to many job opportunities. Additionally, the emergence of fully remote work, although a minority of jobs, offers opportunities for both attraction and retention, such that people of working age may not move away from Tasmania if they can secure work elsewhere but continue to live in Tasmania, and a move to Tasmania may become viable for mainland workers if they do not have to secure a local job, at least initially.

Of course, the adaptation to new ways of working, in particular remote work, comes with challenges. There is a concern that the benefit arising productivity of workers residing in certain areas will primarily flow to other areas. In addition, it is not solely job opportunities that lead people to migrate, with factors such as community and schooling playing a significant role (Productivity Commission, 2021). Therefore, attraction and retention of workers will require the development of supporting infrastructure. At the individual level, ongoing support for working from home will require careful consideration to reduce potential negative physical and mental health impacts on employees and disadvantaging people who choose to work from home in terms of reduced access to training, career development and promotion opportunities when physical presence is preferred.

Therefore, in order to remain nationally competitive as a region for employment, Tasmania will need to offer flexible employment opportunities, including the adoption of hybrid or remote work options. There are several ways that work transformation can be supported, including but not limited to technology grants and supporting industry peak bodies and training providers to support workers and workplaces to transition to new ways of working. To result in sustained employment, these flexible work options need to be supported by investments in local infrastructure including schools and community facilities to increase the educational and cultural amenity of places, so that workers are inclined to stay.

5.3.6 Increase digital inclusion

The pandemic has brought about enduring changes to how we access healthcare, education, employment, social connection, and important goods and services. Accordingly, the importance of digital inclusion – the ability to afford and access digital technologies and the possession of the skills to use them, has increased. Tasmania is the least digitally included state in Australia according to the Australian Digital Inclusion Index, with regional areas of the state even more excluded than major cities. Accordingly, to ensure quality of life among residents and the viability of workplaces and other institutions in an increasingly digital world, digital inclusion needs to be a priority.

Barriers to digital inclusion are not evenly distributed, with cohorts who are more prone to general social exclusion such as older people and lower income people more likely to face affordability barriers, more likely to live in regional areas with lower digital infrastructure, and have less access to education and support services that build digital skills (TasCOSS, 2018).

Accordingly, The Tasmanian Policy Exchange analysis recommends that Tasmania should focus on improving access to digital infrastructure and technology and improving the digital literacy and technological skills of the Tasmanian workforce and young people (2021).

In addition to efforts to build individuals' digital skills and increase personal access to digital devices, there are key investments that can be made in the state's digital infrastructure. The state-wide internet outage in March 2022 arising from two coincidental incidents of critical cables between Victoria and Tasmania being cut only served to highlight the dependence of Tasmania on digital infrastructure, with businesses, airports, banks and individuals unable to function normally (Taylor, 2022). Given the digital divide between urban and rural areas, infrastructure investments should be targeted at increasing physical access (i.e., ensuring that there is reliable, fast internet available in rural and regional areas). However, efforts should also be made to maintain capacity in existing infrastructure and to ensure that investments are made in new technology to improve and diversify the sources of digital infrastructure in Tasmania.

5.3.7 Embrace the economic and social opportunities of an ageing population

The continued and rapid ageing of the Tasmanian population and acceleration of the trend away from residential aged care during the pandemic presents a key opportunity for Tasmania to embrace the economic and social opportunities of an ageing population to support population resilience, specifically the products, services and activities related to health and other care for particular cohorts including the dependent, disabled and elderly (commonly referred to as the 'White Economy'). Importantly, it also extends to transport and logistics, research and development, contemporary manufacturing, innovation and technological advancements, including the expansion of initiatives such as telemedicine, remote monitoring and rehabilitation as well as career upskilling.

Embracing these opportunities has previously been recommended as a strategic policy response to population decline by the Institute for Social Change (Denny & Pisanu, 2020). Given the accelerating rate of ageing and increasing demand for goods and services for an older population, it is now even more important and presents an opportunity for Tasmania to lead the way in responding to the challenges and opportunities of ageing populations.

With the pandemic and the Royal Commission into Aged Care likely to further increase preferences for home-based care, there is also an opportunity to undertake an in-depth examination of liveability in Tasmania for this particular cohort. The aim of this would be to understand what is important to age in place in Tasmania, as well as to identify long-term impacts of the pandemic. For example, feelings of safety in public spaces and adjusting to new ways of accessing goods, services and social connection (Monahan et al., 2020).

5.3.8 Consider opportunities for future research

By analysing available data and research, we have identified trends that are impacting liveability in Tasmania and are likely to have long-term implications for population retention and attraction. Drawing on these trends, widely reported pandemic impacts, and existing research and government strategic foci, we have then presented several opportunities to support population resilience. However, it must be noted that our knowledge of what makes Tasmania a good place to live, and the factors that will draw and keep people to live here, is constrained. Economic indicators, historical migration patterns and drivers examined in international literature no doubt have implications for Tasmania. However, local and place-based research is required to understand the needs and aspirations of current residents, which will, in turn, have implications for prospective and future residents.

In this context, it is important to note that the Tasmanian Government has articulated an intent to develop Tasmania's first Wellbeing Framework. Understanding and improving wellbeing and the conditions that facilitate will inherently affect liveability and population resilience. Accordingly, consideration of the overlap in objectives between a reviewed Population Strategy and a population Wellbeing Framework will build the rationale for each endeavour and reveal opportunities for multiple benefits for people and policy.

To this end, the Institute for Social Change is currently undertaking a review of extant approaches to population wellbeing frameworks in Tasmania, Australia and abroad, with a view to informing a Tasmanian Wellbeing Framework. The Institute has also established the Good Life Initiative (GLI), building on and continuing The Tasmania Project (along with a longitudinal panel on wellbeing, The Good Life panel, and a wellbeing index) to examine what makes a good life in Tasmania. In addition to theoretical and empirical development of the construct of wellbeing (i.e., what wellbeing means to people; what it means to have a 'good' life), the GLI will examine existing and emerging contextual factors that impact upon it. Accordingly, the research will have implications for our understanding of liveability in Tasmania. The connection to the state's population strategy would be enhanced by further research.

6. Tasmania's Population Growth Strategy 2015

In the last chapter of this report, we consider Tasmania's Population Growth Strategy 2015 and the three pillars of initiatives within the strategy in the context of the impact of the COVID-19 global pandemic on population change and the evidence presented in this report.

To appropriately consider the Population Growth Strategy 2015, it is important to understand the context in which it was initially developed. Prior to the 2014 Tasmanian State election, then Tasmanian Liberal Party leader, Will Hodgman, announced a population target of 650,000 people by the year 2050 as their party's response to the challenges associated with population ageing. The Tasmanian Population Growth Strategy 2015 was subsequently developed by the State Government following the Liberal Party successful election.

A population growth strategy focussed on achieving economic growth is a common response to the perceived and projected fiscal challenges associated with population ageing. Tasmania's Population Growth Strategy launched in 2015 subsequently included three key pillars, with 52 initiatives; (I) job creation and workforce development, (II) migration and (III) liveability with the overall aim to attract new residents and retain Tasmanians in the state. A brief review of these pillars is undertaken in the following section.

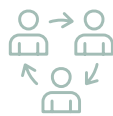
In the current context and the evidence provided in this report thus far, and given that:

1. The social, economic and technological impacts of COVID-19 raise the possibility of a longer-term shift in migration patterns between capital cities and regional areas across Australia (Australian Government Centre for Population 2020b).
2. It is difficult to predict future levels and patterns of migration within Australia because of a lack of local historical research into internal migration in response to economic cycles, a lack of current data, and the length of time since a crisis the scale of COVID-19 has been experienced (Australian Government Centre for Population 2020b).
3. Relative property prices in states and territories appear to have a greater influence than relative unemployment rates on interstate migration. A five per cent increase in property prices will increase the number of people migrating out of that state by 1.0 per cent (Australian Government Centre for Population 2021), while a 10 per cent increase in relative unemployment rates (compared to other states) will increase interstate departures by 0.8 per cent and decrease interstate arrivals by 0.73 per cent (Australian Government Centre for Population 2020b).
4. Most recent data suggests a dramatic shift in the age profile of migrants to and from Tasmania with significant increases in departures and a considerable decline in arrivals for those aged 25 to 34 years of age since the start of the pandemic (Denny 2022).
5. As younger population age groups have higher mobility, an ageing population is likely to place downward pressure on future interstate migration rates. Combined with (4) above, this could further exacerbate population ageing in Tasmania.
6. The top reported drivers behind interstate migration are family reasons (approximately 35 per cent) followed closely by employment reasons (approximately 30 per cent) (Australian Government Centre for Population 2021).
7. Tasmania's population is likely to age at a faster rate than prior to the pandemic, particularly in the regions.
8. The regions within Tasmania record considerably different experiences of population change.

We understand the Tasmanian Government is planning to update the Tasmanian Population Growth Strategy 2015 in light of the impacts of COVID-19. The release of the 2019 review findings will also assist this update. Within this review, the following should also be considered:

- a. Disparities between regions within Tasmania
- b. How to meet the needs of a structurally and numerically older population and the opportunities associated with an older population
- c. How to manage population change - growth and decline - through planning for change, for example, by developing a settlement plan⁷
- d. Update and review the May 2020 *Strategic policy responses to population decline* report for the Department of State Growth to capture the economic and social opportunities of an ageing population in the current context.
- e. Gaining a much greater understanding of the drivers of migration for specific sub-groups to ensure that Tasmania's offering matches both their need and Tasmania's needs.

In the next three sections, we directly address the initiatives proposed in the Tasmania's Population Growth Strategy. We discuss if the existing pillars, i.e., job creation and workforce development, migration and liveability, are still fit for purpose for Tasmania in 2022. We also propose new initiatives to address the most important issues related to the Tasmanian population growth coming out of the pandemic.



6.1 Pillar 1: job creation and workforce development

As of March 2022, Tasmania has the lowest average weekly ordinary time earnings (full time) out of all Australian states and territories, and the second highest unemployment rate (after South Australia), although the gap in economic figures between Australia and Tasmania have gradually decreased over the last decade. As explained in Tasmania's Population Growth Strategy 2015, population growth was strongly correlated with economic performance before 2015, and we found some evidence of that in the data for 2012-2021. At the same time, the literature explains that interstate migration and overseas migration are strongly associated with economic performance, including labour market conditions.

Accordingly, there is a strong argument that "Job creation and workforce development" should remain the key pillar of the existing and future population strategies in Tasmania. We agree that the following objectives should remain in place coming out of the pandemic: (1) actively pursue investment, business relocation and job creation, (2) identify and project current and future employment opportunities, and (3) invest in real skills for real jobs.

We also acknowledge that the 2015 strategy primarily focused on providing jobs to Tasmanians, interstate, and overseas arrivals. Based on the population growth figures between 2016 and before the pandemic, there is an argument that the strategy was fairly successful. However, providing jobs is just one dimension, while fair, competitive and equal pay are equally important. In this report we showed that Tasmanians are less satisfied with their jobs and income than their mainland counterparts. We argue that employers in other states and territories have been able to provide more competitive salaries than employers in Tasmania, which could be associated with retention in and attraction to Tasmania. Combining these with increasing health, housing, and general goods and services costs, Tasmania does not only feel less affordable than other states/territories (and Hobart less affordable than the other seven capitals), but also less affordable than when the strategy was prepared. Positive economic and labour market growth between 2015 and the start of the pandemic (March 2020) only slightly decreased the gap in earnings. Therefore, we suggest the future population growth strategies focus on decreasing these gaps in relative pay and standard of living.

⁷As previously recommended by the Institute for Social Change
https://www.utas.edu.au/_data/assets/pdf_file/0010/1178065/Insight-Six-Tasmanias-Changing-Population-Dynamics.pdf

Also, the existing strategy does not seem to be focused enough on young Tasmanian residents, including on international students. Young Tasmanians are more likely than older groups to move to the mainland, and international students are even more likely to return to their home countries, especially if not provided with (relevant) employment opportunities. Focus on that aspect, for example by encouraging more (competitive) graduate opportunities, could help keep more of the youngest adults in the state. This could be combined with efforts to address housing affordability and accessibility (in terms of both renting and ownership) and support for family planning, as discussed in the next paragraphs.



6.2 Pillar 2: Migration

The analysis of fertility and mortality data for Tasmania has shown that natural increase can only contribute about 25-35% to population growth to reach the Tasmanian population size of 650,000 by 2050 (if NI remains relatively unchanged). Clearly, net interstate and net overseas migration are required to achieve the population target. Therefore, we believe that all migration pillar objectives and goals are still relevant and should continue, including to retain our best and brightest, increase engagement with the Tasmanian diaspora and encourage them to return home, actively pursue overseas migration, increase the share of humanitarian entrants, increase numbers of international students, and actively pursue interstate migration.

Additionally, we identified the restart of overseas migration as an opportunity for Tasmania for targeted recruitment of the overseas workforce, and we would suggest more focus being placed on attracting those who will be more likely to stay (long-term employment, ties with Tasmania). The migration pillar should be updated together with the job creating pillar to achieve optimal outcomes. We previously discussed recruitment to adaptive industries and aligned with skills shortages, and these should not be limited to overseas migrants.

We also believe that the migration strategy in its current form is primarily based on attraction, but not on retention. The results have shown that in Q2 and Q3 of 2021, the numbers of interstate arrivals increased compared to Q2 2020 – Q1 2021. However, the main issue with a negative impact on net interstate migration was interstate departures. For those reasons, retention should be treated as equally important. This applies to overseas migrants as well, as they require both attraction and retention – to prevent them from moving to bigger cities with multicultural communities and higher salaries after their initial contracts with their Tasmanian employers end.

As discussed previously, departures of young Tasmanians might be an even bigger issue than not attracting interstate and overseas migrants. Departures of young Tasmanians who would otherwise start a family in Tasmania not only negatively affects population growth as it reduces the potential number of children being born in the state, but it also negatively affects population composition (structural ageing). We especially agree that more empirical research should be carried out to understand why certain population subgroups decide to leave Tasmania and why certain population subgroups move to Tasmania but do not stay permanently. High quality data is key to understanding their motivations to depart Tasmania and challenges of living in Tasmania, with an aim to design better policies to convince them against moving from Tasmania to the mainland or abroad.



6.3 Pillar 3: Liveability

Based on different trends, changes, and COVID-19 effects, the liveability pillar in its current form might be more outdated than the other two pillars. The liveability goals from the 2015 strategy touched on some important aspects of liveability in Tasmania for increased population retention. Nurturing vibrant communities, as well as creating inclusive and supporting communities is consistent with the perception of Tasmania. Assisting overseas migrants supports the migration pillar and work-life balance positively affects the wellbeing of Tasmanians. And while these are still relevant, there are many other priorities. Housing and health (as well as some other liveability components) have become well-known issues in the last few years. Unfortunately, they are largely absent in the 2015 strategy and its review.

We argue that much more focus should be placed on providing better housing, more affordable housing, more regulated housing, and better access to housing in general. The current strategy describes Tasmania as a state with better housing affordability than other states. Yet, the CPI figures for 2012-2021 have shown how housing prices in Hobart increased by about 30% in 9 years, while property prices increased by between 40% and 75% in most Hobart suburbs. Ideally, the Tasmanian Government would, through better policy and targeted investment, provide higher quality housing; encourage construction, including multi-residential buildings, new residential areas, more affordable housing; and solve the issue of empty dwellings with no tenants which has further contributed to the high prices of properties/rent. More focus on solving housing issues could also decrease the proportion of young Tasmanians leaving the island.

Lastly, the analysis identified health as another liveability or wellbeing component that is both a notable issue in Tasmania and not considered in the 2015 strategy. In this report we show how healthcare expenses increased even faster than housing expenses, while Tasmania remains a state with poorer health outcomes. While the pandemic has not contributed to excess deaths (as of March 2022), some indicators (such as GP per capita) plateaued after gradually increasing pre-COVID-19. Ideally, Tasmania would develop a targeted strategy to improve its healthcare system by attracting high quality medical workers to migrate to Tasmania, consistent with the migration pillar. At the same time, prices in healthcare should be regulated better, especially in a state with the lowest average weekly earnings.

7. Addendum to Final Report

“Building population resilience in Tasmania: The pandemic and beyond”

Prepared by Sebastian Kocar and Ella Horton, University of Tasmania (8 July 2022)

This addendum to the final report *Building population resilience in Tasmania: The pandemic and beyond*, prepared by the Institute for Social Change for the Department of State Growth, is issued to provide updates to key findings and recommendations based on an analysis of key variables published in the 28 June 2022 release of the 2021 Census data¹.

Key findings:

- There were 557,571 people in Tasmania on the night of the 2021 Census (10 August 2021) – 16,000 more than the ABS estimate for 30 June 2021 released in March 2022.
- The population increased more in Hobart and South East than in Launceston and North East and West and North West (Statistical Area Level 4 regions).
- Tasmania was more culturally diverse in 2021 compared to 2016. For example, the proportion of Tasmanians with both parents born in Australia decreased from 74.7% to 70.6%.
- The longstanding gap in personal, family and household income in Tasmania relative to Australia remains as, although income grew in Tasmania, that growth was comparable to the national rate.
- Household income increased more than mortgage repayments but less than rent in Tasmania between 2016 and 2021, which had a positive effect on homeowners with a mortgage and a negative effect on renters.
- Between 2016 and 2021, the proportion of tertiary students increased by about 2% in Tasmania, largely due to an increase of those attending vocational education institutions.
- Tasmania is the Australian state with the largest proportion of people with long term health conditions (36.4% in 2021).

Background

The Australian Bureau of Statistics (ABS) conducts the Census of Population and Housing every five years. The 2021 Census was held on Tuesday 10 August 2021 and 25,422,788 people were counted in Australia. The dwelling response rate was 96.1%, which represented a 1.0% increase from the 2016 Census. This report is based on the first release of the 2021 Census data (28 June 2022).

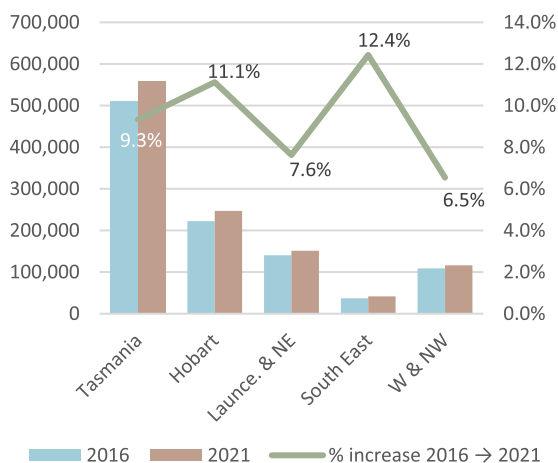
Population changes in Tasmania

Between 2016 and 2021, the Tasmanian population grew by 9.3%. The proportion of males increased from 48.9% to 49.1% and the median age remained at 42 years. The average number of children per family (for all families in Tasmania) decreased from 0.7 to 0.6, the average number of people per household increased from 2.3 to 2.4, and the average number of motor vehicles per dwelling increased from 1.8 to 1.9.

People and population

The 2021 Census counted 557,571 people in Tasmania on Census night. This was an increase of 47,606 (+9.3%) people compared to the 2016 Census. While we can report an increase in population sizes in all four Tasmanian Statistical Area Level 4 regions (SA4s), namely Hobart, Launceston and North East, South East, and West and North West, the population growth rates were notably different (see Figure 1).

Figure 1. Tasmanian population size, total, by SA4 (no.), and % increase in population size, 2016 Census and 2021 Census

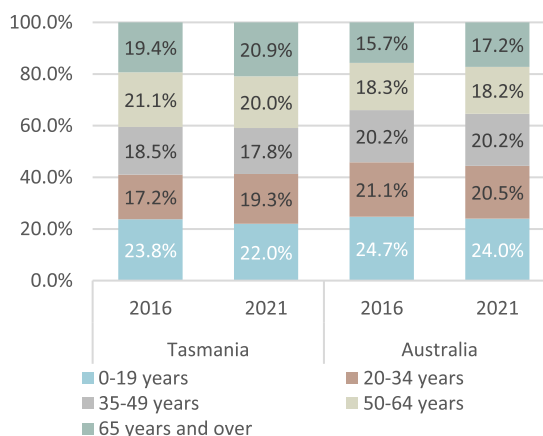


In Hobart (+11.1%) and South East (+12.4%), the population grew more than the state average (+9.3%). In Launceston and North East (+7.6%) and West and North West (+6.5%), there was a less substantial increase in population between 2016 and 2021.

In 2021, a larger proportion of the Tasmanian population lived in Greater Hobart (44.3%) than in 2016 (43.6%). The 2021 Census results also revealed some notable changes in the population structure (see Figure 2) over time.

Tasmania has traditionally been the Australian state with the highest median age (42 years in 2021) and the largest proportion of people 65 years and older. However, between 2016 and 2021, the proportion of residents 65 years and over increased by 1.5% in both Tasmania (2016: 19.4%, 2021: 20.9%) and Australia (2016: 15.7%, 2021: 17.2%). At the same time, the proportion of residents younger than 20 years decreased more in Tasmania (-1.8%) than Australia (-0.7%) during the same period. Although structural ageing is most apparent in Tasmania between 2016 and 2021, it is also a national issue.

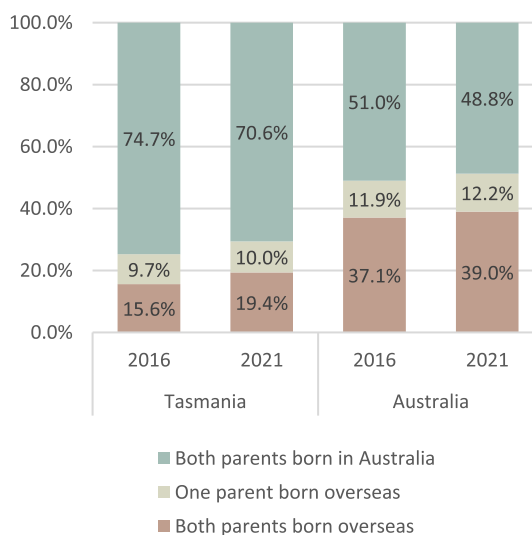
Figure 2. Population by age groups (%), Tasmania and Australia, 2016 Census and 2021 Census



Cultural diversity

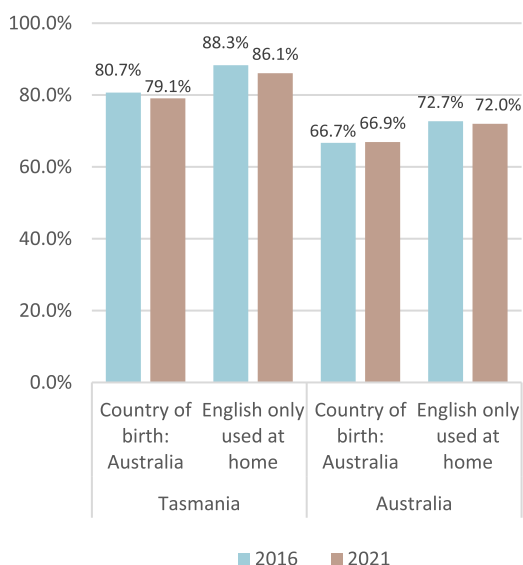
The proportion of Tasmanians with parents born abroad/in Australia as an indicator of ancestry (see Figure 3) shows higher levels of cultural diversity in 2021 compared to 2016. The proportion of Tasmanians with both parents born in Australia decreased from 74.7% in 2016 to 70.6% in 2021 (-4.1%), and the proportion of residents with both parents born overseas increased from 15.6% to 19.4% (+3.8%). This is likely to be a result of increasing net overseas migration rates after 2015 in Tasmania.

Figure 3. Country of birth of parents (%), Tasmania and Australia, 2016 Census and 2021 Census



There are similar changes for Australia as a whole, but they were less significant (-2.2% both parents born in Australia, +1.9% both parents born abroad). Increased cultural diversity in Tasmania is also shown in data collected for country of birth and language (English only spoken at home) (see Figure 4).

Figure 4. Country of birth of person and English only used at home, Tasmania and Australia, 2016 Census and 2021 Census



Between 2016 and 2021, the proportion of Tasmanians born in Australia decreased from 80.7% to 79.1% and the proportion of Tasmanians who only speak English at home decreased from 88.3% to 86.1%. On the other hand, the data shows a small increase in Australian residents born in Australia (2016: 66.7%, 2021: 66.9%) and a small decrease in Australian residents who only speak English at home (2016: 72.7%, 2021: 72.0%). Despite a notable increase in diversity in Tasmania, Australia remained far more culturally diverse.

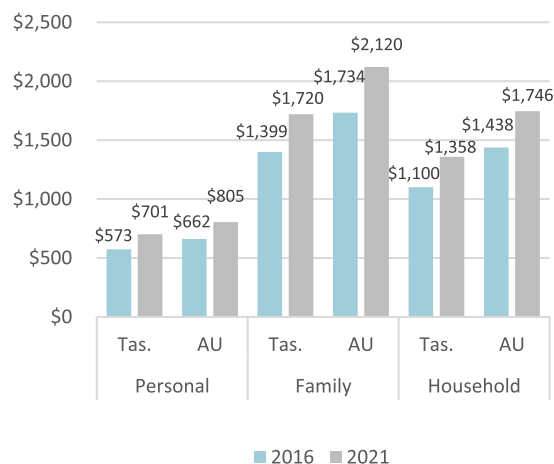
Standard of living

Three indicators (income, mortgage repayments, and rent) have been selected to present changes in the standard of living in between 2016 and 2021 in Tasmania and relative to Australia.

Income

The 2021 Census results revealed income growth in both Tasmania and Australia and at all levels (i.e., personal, family and household income) (see Figure 5).

Figure 5. Median weekly income (in AUD), Tasmania and Australia, 2016 Census and 2021 Census



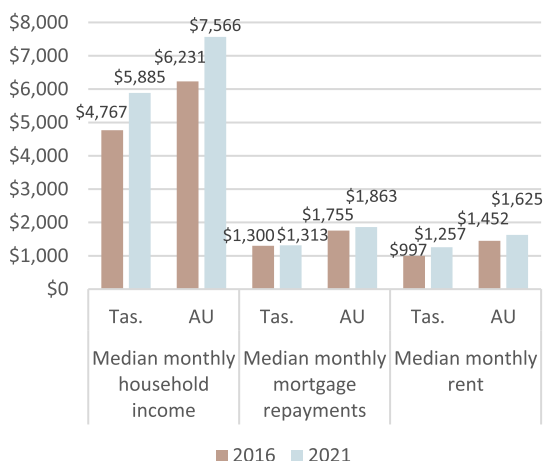
In Tasmania, the most substantial growth can be reported for household income (+23.5% between 2016 and 2021 or +4.3% annually on average), followed by family income (+22.9%) and personal income (+22.3%). In Australia, the income growth was between 0.6% (family) and 2.1% (household) lower compared to that in Tasmania. The average annual increase in income in Australia was about 4.0%.

In 2021, the gap in income between Tasmania and Australia was more substantial for households (28.6%) than families (23.3%) or persons (14.8%). A slightly higher income growth rate in Tasmania between 2016 and 2021 decreased very little of that gap.

Income and housing expenses

To directly compare household income and housing-related expenses, we recalculated weekly income and weekly rent into monthly values (see Figure 6). The results show that Tasmania remained the Australian state with the lowest median income, mortgage repayments, and rent.

Figure 6. Median household income, mortgage repayments, rent (monthly, in AUD), Tasmania and Australia, 2016 Census and 2021 Census



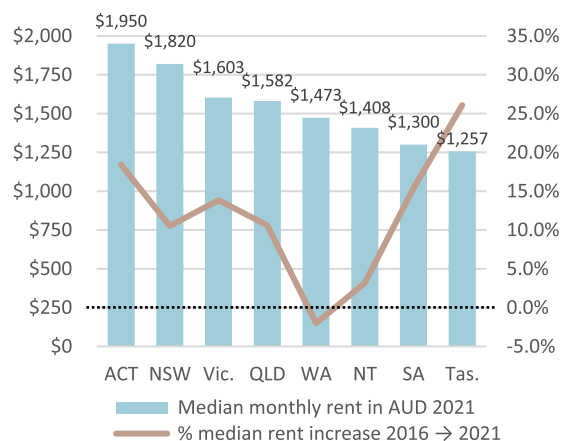
Census data shows that median household income, monthly mortgage repayments and monthly rent increased in both Tasmania and Australia between 2016 and 2021. As previously reported, household income increased at a similar average annual rate (i.e., 4.0% in Australia and 4.3% in Tasmania).

Moreover, we observe a smaller increase in median monthly mortgage repayments between 2016 and 2021 compared to household income – 1.0% in Tasmania (from \$1,300 to \$1,313) and 6.2% in Australia (from \$1,755 to \$1,863). A larger total increase in income compared to mortgage repayments resulted in a lower proportion of Tasmanian and Australian households in 2021 (compared to 2016) where mortgage repayments were less than or equal to 30% of household income.

On the other hand, median monthly rent increased in Tasmania by 26.1% between 2016 and 2021 (to \$1,257), which was a larger increase than median monthly household incomes (+23.5%). In fact, it was almost equal to median monthly mortgage repayments

(\$1,313) in 2021. The increase in median monthly rent was less substantial in Australia (from \$1,452 in 2016 to \$1,625 in 2021 or +11.9%). In Figure 7, we present the median monthly rent results for individual states/territories.

Figure 7. Median monthly rent (in AUD, 2021) and % increase between 2016 and 2021, Australian states/territories, 2016 Census and 2021 Census

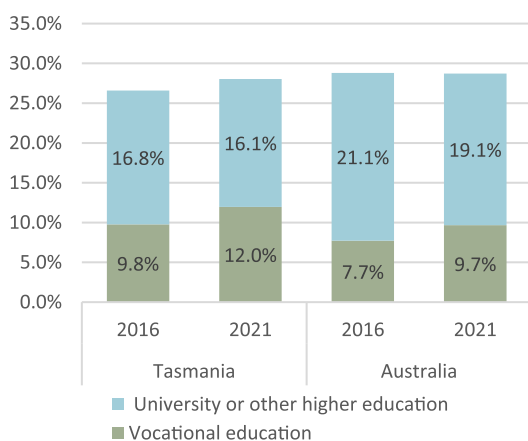


The highest median monthly rent was reported for Australian Capital Territory (\$1,950 in 2021) and the lowest for Tasmania (\$1,257). However, of all Australian states/territories, Tasmania experienced the most substantial increase in rent between 2016 and 2021. This change notably decreased the gap in median monthly rent between Tasmania (\$1,257 in 2021) and two other peripheral states, Northern Territory (\$1,408) and South Australia (\$1,300). Western Australia was the only state which experienced a decrease in median monthly rent between 2016 and 2021.

Education

There was a slight (+1.5%) increase in the proportion of tertiary students (among all students) in Tasmania, increasing from 26.6% in 2016 to 28.1% in 2021. This is largely due to the increase in the number of people attending a vocational education institution (+2.2%). At a national level the proportion of tertiary students did not change from 2016 to 2021 (28.8%), meaning Tasmania slightly decreased the gap. Both Tasmania and Australia experienced a decrease in the proportion of university students (-0.7% and -2.0% respectively) and an increase in the proportion of vocational education students (+2.2% and +2.0% respectively).

Figure 8. Attending a tertiary educational institution (% of all attending*) by type, Tasmania and Australia, 2016 Census and 2021 Census



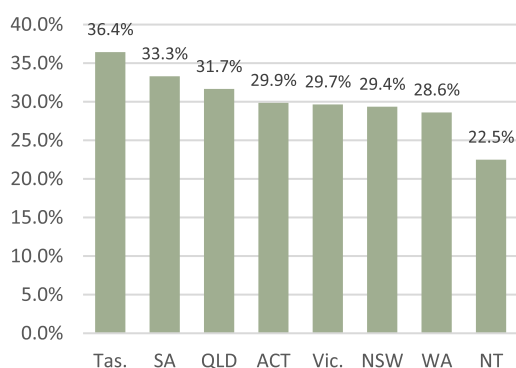
*the censuses recorded all full-time and part-time primary, secondary and tertiary students; 'not stated' category was excluded from the analysis due to different levels of item nonresponse (over time and/or between Tasmania and Australia)

Health

Tasmania has the highest proportion of people with long-term health conditions (36.4% in 2021) of all Australian states (see Figure 9), and NT has the smallest proportion (22.5%). Tasmania has the highest median age (42 years) and the largest % of people aged 65 years and above (20.9%) whereas NT has the lowest median age (33 years) and the smallest % of people aged 65 years and above (8.9%) of all states/territories. The association between age and long-term conditions for other states is less significant.

Tasmania also had higher rates of all ten selected long-term health conditions (see Figure 9 footnote) relative to national rates. Rates of arthritis, mental health conditions and asthma were all at least 1% higher in Tasmania compared to Australia (3.7%, 2.9% and 1.4% respectively).

Figure 9. People with one or more long-term health conditions*, Australian states/territories, 2021 Census**



*arthritis, asthma, cancer, dementia, diabetes, heart disease, kidney disease, lung condition, mental health condition and stroke; 'not stated' category was excluded from the analysis due to different levels of item nonresponse; **the question was not included in the 2016 Census questionnaire

Conclusions and implications for the report *Building population resilience in Tasmania: The pandemic and beyond*

Consistency between data

Population size differed substantially between ABS administrative data (released prior to 28 June 2022) and 2021 Census data. However, the latest release of population data from the ABS ('National, state and territory population') was released on the same day as the first release of 2021 Census data (28 June 2022) and appears to have been updated based on 2021 Census data. Population ageing calculated from 2021 Census data was slightly lower between 2016 and 2021 than suggested by ABS administrative data.

The income gap between Tasmania and Australia seems to be greater than ABS administrative data suggest (i.e., weekly earnings), and the gap increases if we compare differences in family and especially household income. In terms of health outcomes, 2021 Census data are consistent with other data that suggest Tasmania is the state with the poorest health outcomes. Findings regarding tertiary education are generally consistent between the 2021 Census and ABS data in terms of the proportion of people studying in Tasmania and Australia (less in Tasmania), however ABS administrative data suggests a decline in the proportion of people studying in Australia between 2016 and 2021 and little change in Tasmania (whereas 2021 Census data suggests there has been no change for Australia and an increase for Tasmania).

New findings

All selected indicators show that Tasmania has become more culturally diverse, which is consistent with the reported higher numbers of net overseas migration after 2015 (and until the beginning of the pandemic). The data also offers new and more nuanced insights into the financial situation of homeowners and renters. Increasing income and relatively stable mortgage repayments over time suggest lower levels of financial stress on homeowners in 2021 compared to 2016, whereas rental increases that far exceed income increases provide further evidence that renters are the most negatively affected by increasing housing costs in Tasmania, possibly even more in the last financial year.

Strengths and limitations

2021 Census data have enabled an update to the population size in Tasmania, however given the data are almost one year old and were collected in the middle of the pandemic, they are unlikely to capture several notable changes in Tasmania in the last 11 months such as increasing levels of interstate departures, increasing prices of properties and historically low unemployment rates.

Implications for report recommendations

Based on earlier population data released by the ABS (March 2022), Tasmania's population grew by about 24,000 people between the Censuses. However, the most recent population data (released on 28 June 2022 and likely adjusted based on 2021 Census data) revealed that it grew by more than 50,000. Hence, we could argue that less substantial changes to the Population Growth Strategy (2015) are required as it appears to have been more successful in population attraction and retention than what was reported in our final report '*Building population resilience in Tasmania: The pandemic and beyond*'. Population ageing is a key issue for Tasmania and Australia as a whole, and as such should remain a central consideration for the future strategy.

Recommendations related to health do not need to be revised as 2021 Census data provide further evidence of poorer health outcomes in Tasmania compared to other states and territories. This is despite the fact that some of the differences could be attributed to structural or numeric ageing.

In terms of housing, recommendations do not need to be revised (rather, strengthened) as 2021 Census data provides further evidence that housing is a key issue for liveability in Tasmania, especially for renters who are more affected by increasing property prices than owners with a mortgage (or owners without a mortgage). With new interstate/overseas arrivals more likely to be renters, these findings are particularly relevant for the future strategy.

Increasing levels of cultural diversity in Tasmania emphasise the importance of creating welcoming and inclusive communities for population attraction and retention. An additional recommendation would be for this to remain a key component of the future population strategy.

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📍 Students on a kelp field trip with
Cayne Layton at Tinderbox.

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