Estimating Current and Future Demand for Housing Assistance

A DISCUSSION PAPER







SECTION 1

Executive Summary

The purpose of this paper is to establish the true extent of existing demand for social housing in Australia, and to model the potential future demand that could be created by shifts in the labour market as a result of automation and artificial intelligence (AI).

Measures of existing demand are calculated by estimating the number of households in Australia who meet current eligibility requirements in the state or territory in which they live. These calculations are based on household income data sourced from the 2016 census which has been indexed by the consumer price index (CPI). The findings demonstrate that current waiting lists are not an accurate record of the true level of social housing need, and that if every household which met the current eligibility requirements in their state or territory decided to apply, waiting lists across the country would increase by more than 300%.

The coming wave of automation and digital disruption is also likely to significantly add to social housing demand by eroding the wages of affected workers. Experts predict it will be low income workers who are most affected during the initial phase of this fourth industrial revolution. Structural dislocations in the economy often leave affected workers struggling to re-enter the workforce. As many as 20% remain out of work three years later. Those that do re-enter the workforce generally experience wage declines of between 10-20% compared to prior earnings.

Depending on the proportion of the low to moderate income workforce that is ultimately impacted by automation, we estimate there are currently between 21,387 to 44,378 low income households in Australia who are not currently eligible for social housing but would become eligible if they experienced a 10% decline in household income. If impacted households experienced a decline in household income equivalent to 20% of current household income, the number of extra households that would become eligible for social housing would be between 44,802 and 92,964.

These figures do not account for population growth which itself is expected to increase demand for various forms of housing assistance over the period in question.





SECTION 2

Measuring existing demand for social housing in Australia

2.1 CURRENT MEASURES OF DEMAND

Social housing in Australia as a proportion of all dwellings is amongst the lowest in the developed world. Apart from a short-lived period immediately following the Second World War, governments in Australia have consistently preferred policies that encourage home ownership as the ideal form of tenure. From the 1950s to the 1990s, home ownership was a realistic proposition for the working population (Adamson, 2015). During this period, house price to median income ratios were consistently in the three to four band, meaning a median priced house could be purchased for the equivalent of roughly three to four times median household income. The "median multiple" began to depart from this long-term trend following the deregulation of the financial system in the 1980s and decoupled completely following the introduction of tax reforms in the late 1990s which turned residential real estate into an extremely attractive asset class for investors. These days Australians don't just dream about owning their own home but their neighbour's home as well.

The heightened demand from investors, along with generous lending practices from the private banking sector, contributed to a multi-decade bidding war on residential property which drove median multiples in many Australian cities to amongst the highest in the world. Unsurprisingly, this inflation in prices caused home ownership rates among younger Australians to fall dramatically, concentrating property ownership in the hands of older Australians and leading to the emergence of what some commentators have labelled "Generation Rent".

The negative effects of this process however, are not confined to those who have been unable to enter the market. Because the bidding war on property continued even as wage growth stagnated, many of those who managed to buy, did so by taking on debts that it is difficult to imagine being repaid. At the peak of the boom more than 40% of all new mortgages were issued on interest only terms, suggesting many buyers had no capacity to repay the principal and were instead gambling on ever increasing prices to get them out of trouble when the interest only period expired. Unsurprisingly, Australian households are now among the most heavily indebted in the world with household debt to income ratios approaching 190%. In 2017 the Australian Bureau of Statistics (ABS) reported 47% of households with a mortgage were "over-indebted" meaning they had debts equivalent to three or more times their income, or 75% or more of the value of their assets.

Throughout this period, as buying a home became unrealistic for many young Australians, and saddled many more with large debts, government policies have nonetheless remained focused on incentivising home ownership. Caught between two incompatible constituencies, governments have simultaneously tried to appear concerned about declining housing affordability and yet determined not to do anything that would cause prices to fall. The result has been a series of "affordable housing" policies which appear specifically designed to ensure housing doesn't become more affordable. Almost without exception, when governments talk about making housing more affordable, what they are describing are policies designed to make it easier for people to buy things they can't afford, i.e. policies designed to drag potential buyers up to the current market price, rather than policies designed to bring the market to the buyer, or even policies that would involve removing existing distortions and letting the market find its own equilibrium.

While policies based on giveaways or concessions for first home buyers can improve affordability for some individual buyers, they do very little to improve affordability overall and may even have the opposite effect by increasing demand at existing prices and by enabling people to take out larger mortgages than would otherwise be the case. (Daley & Coates 2018)

As Compass noted in last year's *Affordable Housing Income Gap Report*, the housing system is a continuum, not a series of atomised components operating in isolation. What happens in one part of the market has cascading impacts throughout the system. For example, when purchase prices are at unaffordable multiples of median income, prospective first home buyers remain in the rental market for longer. This in turn places extra pressure on lower income households, or "traditional renters", who increasingly find themselves in competition with people who in previous generations would have been homeowners. Meanwhile, those on the lowest incomes are forced to turn to the already swamped social housing system for support, or in extreme cases, placed at risk of homelessness.

The Commonwealth has traditionally delegated responsibility for the provision of social housing to the states and territories. However, changes to the allocation model from turn-based to needs-based have produced a huge shift in the demographic and income profiles of social housing tenants. This shift has impacted the ability of states and territories to make their social housing systems financially sustainable. With social housing now almost exclusively reserved for people deemed to be in highest need – who also tend to be those with the lowest incomes – state and territory housing authorities struggle to collect enough rent to cover ongoing maintenance, let alone provide new dwellings. The gradual exclusion of low-income working households from social housing in favour of households dependent on government benefits, has also resulted in more low-income working households experiencing housing stress in the private rental market.

The financial pressures experienced by state and territory housing authorities have resulted in decades of underinvestment in new supply. According to the Productivity Commission presently there are approximately 144,800 households on social housing waiting lists across the country compared to a total of 434,766 social housing dwellings. Without the contribution of the not-for-profit community housing sector, the total number of social housing dwellings in Australia would have declined over the past five years as state housing authorities progressively sold down their portfolios to cover maintenance costs.

State/territory	Number of existing dwellings	Current Waiting List	Current waiting list as % of existing supply
NSW	154,659	48,612	31%
VIC	80,501	38,185	47 %
QLD	71,053	17 238	24%
SA	46,431	18,577	40%
WA	44,004	14,016	32%
ACT	12,076	1,759	15%
TAS	13,283	3,210	24%
NT	12,759	3,203	25%
TOTAL	434,766	144,800	33%

FIGURE 1: SOCIAL HOUSING DWELLINGS AND WAITING LISTS BY STATE

Source: Productivity Commission Report on Government Services 2019

Merely accommodating those households already on the waiting list would involve a 33% increase in supply, (or turning over 33% of existing tenancies). It is worth recognising the households on the waiting list have met the same eligibility criteria as those currently being housed. In other words they are in precisely the same level of need but are being denied access to the same level of support. Social housing is the only form of government benefit to which access is rationed in this way. It is instructive to consider the likely outcry if a similar approach was taken to other forms of government assistance.

2.2. ARE DEMAND MEASURES ACCURATE?

Eligibility for housing assistance is measured against a series of criteria, primarily related to household income and asset ownership. As you would expect, income limits vary by state and according to household composition. The following analysis is based on unpublished data supplied by the Australian Bureau of Statistics and aims to determine how many households of various compositions fall within the income and asset limits for social housing eligibility in their state.



For the purposes of this analysis we have elected to look at households of the following compositions in each state and territory.

- Lone person households
- Lone parent family with one dependent child
- Lone parent family with two dependent children
- Lone parent family with three dependent children
- Lone parent family with four or more dependent children
- Couple only
- Couple with one dependent child

- Couple with two dependent children
- Couple with three dependent childrenCouple with four or more dependent
- childrenOther family/household composition –
- two usual residents

 Other family/household composition –
- three usual residents
- Other family/household composition four usual residents.

Asset limits have been addressed by excluding from the dataset those households who own residential property with or without a mortgage. Households who already reside in social housing have also been excluded. The weekly income limits for each the various household compositions have been calculated based on eligibility criteria sourced from the relevant state and territory government housing authorities.

The following table sets out the number of households in each state and territory who meet the eligibility criteria for social housing but do not currently live in it. The data was supplied by the Australian Bureau of Statistics. Full data tables showing the household composition of these households are available in Annexure A of this report.

FIGURE 2: NUMBER OF HOUSEHOLDS MEETING ELIGIBILITY CRITERIA FOR SOCIAL HOUSING

	Greater Capital City Statistical Area	Balance of State/Territory	Total
NSW	83,961	91,943	175,904
VIC	117,019	59,903	176,922
QLD	44,582	69,526	114,108
SA	55,680	20,269	75,949
WA	19,073	6,177	25,250
TAS	8,738	13,677	22,415
NT	1,730	1,223	2,953
ACT	3,811	0	3,811
AUSTRALIA	334,594	262,718	597,312

Source: ABS

In determining whether current social housing waiting lists are an accurate reflection of the level of unmet need, the next step is to deduct from the above figures the number of households already listed on the state and territory social housing waiting lists. The current waiting list figures referenced below are sourced from the Productivity Commission's 2019 Report on Government Services.

FIGURE 5. POTEINTIAL INCREASE IN WAITING LISTS							
	Number of house- holds who meet eligibility criteria	Number of house- holds currently on waitlist	Potential increase in waitlist	Potential increase in waitlist (%)			
NSW	175,904	48,612	127,292	261.9%			
VIC	176,922	38,185	138,737	363.3%			
QLD	114,108	17 238	96,870	562.0%			
SA	75,949	18,577	57,372	308.8%			
WA	25,250	14,016	11,234	80.2%			
TAS	22,415	3,210	19,205	598.3%			
NT	2,953	3,203	-250 ¹	-7.8%			
ACT	3,811	1,759	2,052	116.7%			
AUSTRALIA	597,312	144,800	452,512	312.5%			

FIGURE 3: POTENTIAL INCREASE IN WAITING LISTS

Source: ABS

These figures suggest the current waiting lists for social housing substantially underestimate the true level of housing need across the country. In almost every jurisdiction there are tens of thousands of households who meet the eligibility criteria for social housing but have elected not to apply for it. There are many possible reasons for this. Some may simply be unaware that they are eligible. Others may have reservations about the potential stigma of living in subsidised housing. Others may look at the already substantial waiting lists and conclude there is simply no point in

If every household in Australia who met the eligibility criteria for social housing decided to apply, waiting lists across the country would increase by more than 310%

¹ The negative figure here would seem to imply there are more households listed on the waiting list than should be eligible. This anomaly is likely due to income limits for eligibility in the NT only being applied to applicants from urban areas. Due to the lack of alternative accommodation in remote areas, households can be placed on the register without having to meet normal income eligibility criteria.

applying. Regardless of their motivations, these findings suggest that the shortage of social housing in Australia, already acknowledged as being severe, is even more significant than previously thought. If every household in Australia who met the eligibility criteria for social housing decided to apply, waiting lists across the country would increase by more than 310%.

The various income limits for social housing eligibility are set based on the belief that households of that type, with incomes below that level, would be unable to secure appropriate accommodation in the private market without severely compromising their ability to pay for other necessities. It is disturbing to consider that the number of households in such circumstances may be more than four times higher than official waiting lists would suggest. It is also worth noting that the number of households eligible for social housing but not currently living in it, is equivalent to approximately 23% of all renting households in Australia.

At the present time, no state or territory government in the country has a plan to deliver anywhere near the number of dwellings required to address the shortfall. The following examples highlight the nature of the problem.

- The NSW Government's *Future Directions for Social Housing* initiative is the most ambitious of its kind in Australia but it still only proposes to deliver 23,000 dwellings over 10 years² – approximately 47% of the number required merely to house those households already on the waiting list.
- The Queensland Government has committed to building 4,522 social housing dwellings over 10 years³ enough to house approximately (25%) of the current waiting list.
- The 2019-20 Victorian State Budget included funding to deliver just 1000 dwellings over the next three years⁴ – enough to house approximately 2.6% of the current waiting list.

We have already touched on the financial pressures facing state and territory housing authorities. What these figures should make clear is that meeting current and future demand for social housing will require substantial federal investment.

² https://www.facs.nsw.gov.au/about/reforms/future-directions

³ http://www.hpw.qld.gov.au/housingstrategy/Documents/QldHousingStrategy.pdf

⁴ https://www.premier.vic.gov.au/delivering-more-public-housing-for-victorians/

The number of households eligible for social housing but not currently living in it, is equivalent to approximately 23% of all renting households in Australia.



SECTION 3

Estimating future demand for social housing

3.1. IMPLICATIONS OF THE FOURTH INDUSTRIAL REVOLUTION

The single greatest determinant of eligibility for social housing is household income. We are currently in the early stages of what some are describing as the fourth industrial revolution⁵. It is appropriate to consider what impact this revolution is likely to have on the incomes of low to moderate income households, and therefore on their housing security.

Over the next two decades, automation and digital disruption are expected to radically transform the labour market. These changes will result in significant improvements in productivity and earning power for some workers while leaving others worse off. The difference lies in whether the technology in question is intended to make workers more productive, or to replace them altogether. Pattern recognition software can help a doctor diagnose skin cancer, but it doesn't replace the doctor. Self-service kiosks at the supermarket on the other hand, or speech recognition software in a call centre, are specifically designed to replace human workers.

This process is nothing new. The use of machines to improve the productivity of some workers and to replace others has been a feature of the labour market for centuries. But it is important to remember that although previous waves of mechanisation and automation ultimately produced substantial improvements in living standards, those gains often took decades to appear and came at the expense of significant short-term consequences for affected workers. Many experts expect the consequences of the current wave of automation to follow a similar pattern. The question is not whether people in the future will have jobs. The question is whether the jobs of the future will be able to support the same standard of living.

The industrial revolution currently underway differs from its predecessors in two significant ways. The first is the pace of change which Bain and Company has estimated is likely to be three times faster than during previous periods of labour market transformation and will therefore severely test the ability of nations to re-train and redeploy affected workers.⁶ The second is the nature of the tasks being automated. No longer are we simply automating routine, repetitive actions. Instead, machine learning and artificial intelligence are enabling machines to replicate human thought processes and perform complex computational tasks that involve processing visual and aural stimuli, or analysing words and numbers and producing an appropriate response. This difference means the coming wave of automation has implications not only for what would traditionally have been considered "blue collar" jobs in industries like manufacturing or mining, (although they are likely to be among

⁵ The first and most famous being the original process of industrialisation in the early 19th century characterised by the introduction of the steam engine and rapid growth in industries like coal, iron, railroads and textiles, the second being the period between 1870 and 1914 which saw the expansion of electricity, steel and petroleum, and the third being the digital or computer revolution which occurred during the latter half of the 20th century and saw analogue technologies replaced by digital electronics.

⁶ https://www.bain.com/insights/labor-2030-the-collision-of-demographics-automation-andinequality/

the first to come under pressure), but also for "white collar" or professional jobs in sectors including banking, finance, law, and even journalism. National Australia Bank, for example, is currently in the process of laying off 6,000 staff, mainly from the head office in Melbourne, because their jobs can now be performed by an algorithm⁷. Likewise, many law firms are now deploying algorithms to scan legal documents - work that was previously performed by highly educated junior lawyers. Similarly, chatbots are increasingly being used to perform routine clerical or administrative tasks like scheduling appointments and responding to online queries.

Even sectors we might consider to be automation-proof, such as IT, will be disrupted to some extent. The rise of do-it-yourself website builders for instance is an example of automating a task that was previously performed by an IT professional. Ten years ago, if you needed a website, you had to pay someone to build one for you, often at considerable expense. Today, there is an array of online tools that will allow users to create a professional looking site themselves, at very little cost.

Not only are robots becoming smarter, they are becoming more dexterous. Until recently, human workers had a clear advantage over robots in terms of the fine motor skills required to perform precise tasks like installing the tiny components in a smartphone. Robots are catching up, fast. Today, high dexterity robots are already being experimentally deployed in settings ranging from food preparation to assisting in hospitals and nursing homes. (Bain and Company 2018)

In addition to direct replacement, jobs will also be impacted by the unpredictable effects of digital disruption. These effects radically transform consumption patterns and reduce barriers to entry in a range of industries, leaving firms that are slow to react competing in an unfamiliar marketplace, (frequently a global one), for which they are ill-prepared. The ways in which firms like Uber, Netflix, Spotify and AirBnB have been able to completely transform the landscapes of the taxi, pay TV, music and accommodation industries respectively, are merely the most obvious examples of this trend.

In the past, technological developments that destroyed certain jobs created higher levels of income, which ultimately resulted in the creation of more jobs overall. There are concerns among labour economists however that the new jobs created as a result of technological developments will be primarily of either the high-paid "knowledge" variety, or the low paid "gig" variety. This will result in a steady erosion of the kind of stable middle income jobs that have historically supported the existence of the middle class and leave a two-tier labour market characterised by high paying jobs for high skill workers, and low paying, low skill jobs that involve seeing to the care, comfort, feeding and security of the high paid workers.

Ford Professor of Economics at MIT David Autor is one who has noted the declining prospects of non-university educated workers, particularly in urban settings.

7 https://www.abc.net.au/news/2018-02-21/nab-robots-taking-over-white-collarjobs/9465524



The structure of work in industrialized countries has polarized, with employment increasingly concentrated in high-education, highwage occupations and low-education, low-wage occupations, at the expense of traditionally middle-skill career jobs...The differential polarization of urban labor markets...has shunted non-college workers from middle-skill career occupations that reward specialized and differentiated skills into traditionally low-education occupations that demand primarily generic skills.⁸ – David Autor 2019

It is easy to conceive of a future in which this polarisation of the labour market is intensified by automation. Such an outcome would be consistent with the short run consequences of previous waves of technological change. As Oxford Martin Citi Fellow Carl Benedikt Frey notes in The Technology Trap, "the immediate consequences of mechanization were devastating for large swaths of the population. Middle-income jobs withered, wages stagnated, the labour share of income fell, profits surged, and economic inequality skyrocketed." (Frey, 2019)

Modelling conducted by CEDA in 2015, suggested almost 40% of Australian jobs could be automated in the next two decades. The model used was based on a 2013 paper by Frey and fellow Oxford economist Michael Osborne which found 47% of occupations in the United States were likely to become automatable over the next two decades. Both sets of results are broadly consistent with research commissioned by Google in 2015 which estimated 33% of Australian workers could have their jobs automated over a similar period⁹, and with a 2018 report by Bain and Company which predicted 25% of US jobs could be impacted by 2030.

Historically, Australia's labour market has proven capable of responding and reconfiguring itself to accommodate changing economic conditions. However, key demographics, particularly mature or mid-career workers, have frequently failed to adjust. The consequences of this failure can have devastating and intergenerational consequences. Conventional economic theory tells us that when old jobs are lost, new jobs are created, those new jobs involve a more efficient allocation of capital, and the ensuing rise in overall productivity means everyone is now better off. But the textbooks don't say over what timeframe the old jobs are replaced by the new jobs. Nor do they promise that the new jobs will be located in the same area as the old jobs, or that the people who were doing the old jobs will be the same people who get hired to do the new jobs. In economic models, displaced workers just seamlessly transition into their next best opportunity. In the real world, that transition process is often anything but seamless, and the "next best opportunity" is often less secure, and lower paid (OECD, 2016). A substantial proportion of people who lose stable jobs as a result of automation never re-join the workforce.

0 Autor 2010

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9 Alphabeta, 2015

Those who are optimistic about the effects of AI and automation on the Australian economy tend to place a lot of faith in the ability of worker transition schemes to help displaced workers find new jobs. Research from McKinsey and Company suggests that confidence may be misplaced because the extent of the re-training likely to be required, particularly for mid-career workers, is substantial. Securing one of the well-paying jobs created by the fourth industrial revolution is likely to require a formal qualification in a completely new field, and a significant amount of training to develop the necessary skills. One would expect this to present a major obstacle for people who may have children and a mortgage and can't afford to spend years at university obtaining the necessary qualifications. In the short run, the outcome could easily be a glut of people competing over a finite supply of lower skilled work for which they are overqualified.

The experience of former employees at the Hazelwood Power Station and the nearby Carter Holt Harvey timber mill in Victoria provides a troubling insight into the outcomes of displaced workers in Australia. Both employers closed their doors in 2017, resulting in the loss of more than 900 jobs. At the time, the Victorian Government established a Worker Transition Scheme to help affected workers find alternative employment. 867 workers registered with the scheme. More than two years later, only 306 were in full time employment. A further 307 had found casual work and 35 were working part time while 219 were unemployed¹⁰. These results mirror those of autoworkers made redundant by the closure of Mitsubishi's operations in South Australia a decade earlier. Of the workers who lost their jobs at the time, one third never worked again¹¹.

These outcomes are not atypical and should give Australian policymakers pause for thought about the challenge that lies ahead. Although the pace of change is accelerating, the speed with which human beings are capable of adapting to change is not. Although economies do ultimately adjust to technological shocks, the transition period is often measured in decades, not years, and the rising prosperity may not be shared by all. (McKinsey and Company, 2017)

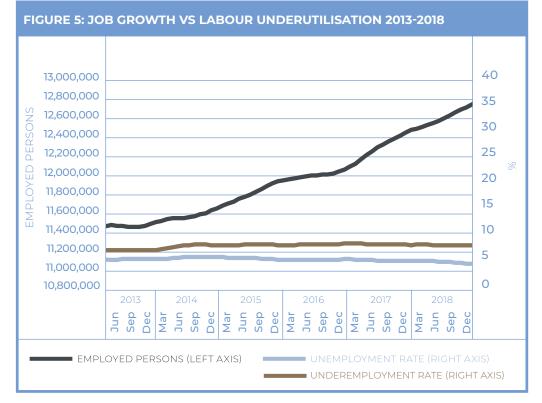
The tendency for displaced workers to transition to lower paid and less stable work is perhaps a contributing factor to the broader trend towards casual or part time work which itself has implications for the housing security of middle Australia. Governments are generally eager to point out the latest job figures showing an overall increase in the number of jobs. However, there are two hidden factors which should cast some doubt on the Panglossian interpretation normally adopted by governments in relation to this data.

¹¹ https://www.ceda.com.au/CEDA/media/ResearchCatalogueDocuments/Research%20and%20 Policy/PDF/26792-Futureworkforce_June2015.pdf

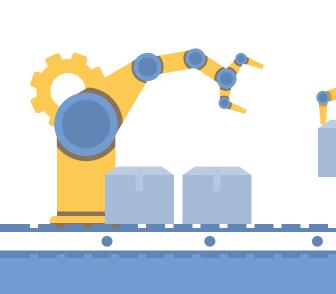


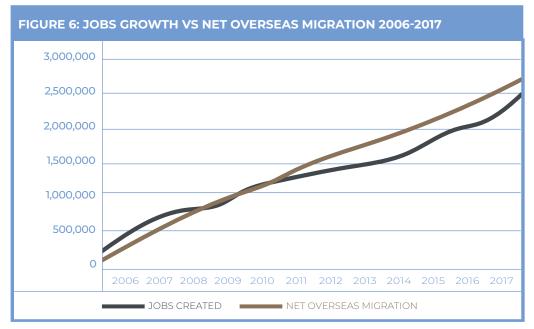
¹⁰ https://www.abc.net.au/news/2019-06-22/hazelwood-workers-in-unstable-work-two-yearson/11235112

The first is that headline job numbers do not control for population growth. Last year a great deal was made of the fact that Australia had added more than a million jobs over a five-year period. What was not mentioned was that most of those jobs were imported. Australia's job growth numbers are strongly correlated with the immigration rate. This insight explains why during the period in which more than a million jobs were created, the number of unemployed people in Australia declined by just 27,000 and both the unemployment rate, and the underemployment rate, remained almost unchanged.



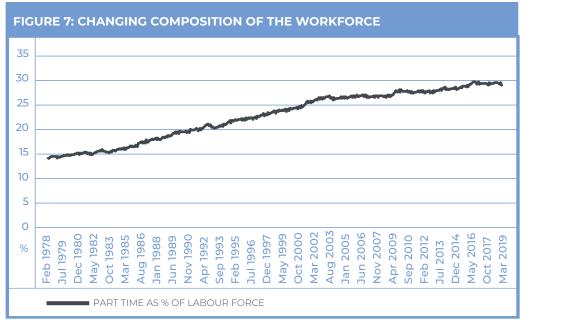






Source: ABS

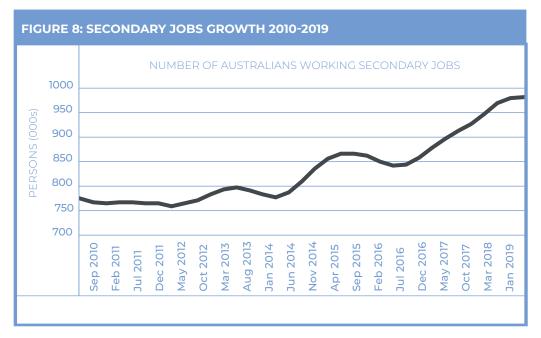
The second reason the official line on labour force data should be taken with a grain of salt relates to the way in which we define casual, part time, and full-time work. In nominal terms, it is true that the majority of new jobs created over the past five years are full-time. In percentage terms however, the increase in part-time employment has been far greater, contributing to a gradual rebalancing of the labour market towards part time work.



Source: ABS

Even more interesting is the question of what we mean by "full-time" work. For many people the definition of "full-time" work is not simply about the number of hours, but also about the security of the position and access to other benefits such as sick pay and annual leave. The ABS is not concerned with these factors when determining who is employed full time. Instead, the ABS' definition of full-time work is only concerned with the number of hours an individual has worked across all jobs. A closer examination of the data reveals that around 17% of the "full-time" positions created over the past five years do not provide paid leave entitlements, i.e. they are actually casual jobs with full time hours.

Part time employees, both casual and permanent, currently account for approximately 31% of the total workforce. If we include those in casual full-time employment, the proportion of the workforce that could be said to be in part-time or insecure employment rises to 40%. This trend may be behind the substantial growth in the number of Australians holding secondary jobs. Since 2010 the number of people working secondary jobs has increased by more than 25% compared to an increase of around 8.4% in the total population over the same period.



Source: ABS

17% of the "full-time" positions created over the past five years do not provide paid leave entitlements, i.e. they are actually casual jobs with full time hours. This casualisation of the workforce has implications for the economic security and housing security of Australia's workforce. While the ABS may not distinguish between permanent full-time jobs and casual full-time jobs, banks and insurance companies most certainly do. Among other things, the lack of certainty about future income means casual employees can face a number of obstacles when trying to enter into financial agreements, not least when trying to obtain a mortgage to buy a home.

This effect is particularly pernicious for workers in the gig economy because, more often than not, the firms in whose names they operate do not consider them to be employees. According to its advocates, the primary advantage of gig work is the freedom to set your own hours. But in exchange for this freedom, workers generally agree to be defined as independent contractors and are therefore ineligible for the benefits and protections normally associated with employment such as superannuation, a minimum wage, workers compensation, protection from unfair dismissal and paid leave. Moreover, because gig work tends to involve tasks that are menial or which require only generic skills, the supply of people who can perform the tasks is abundant and, as the Senate Education and Employment Committee noted in 2017:

"... because the workers are contractors, there is effectively no floor on wages; no minimum amount a person can be paid to perform a particular task, as long as they agree... the more desperate a person's financial circumstances, the less they might agree to work for."¹²

In addition to lower incomes arising from workers transitioning from middle income jobs to low income jobs, automation has the potential to cause a steady decline in real inflation adjusted wages, by limiting the ability of workers to negotiate pay rises. As Frey and Osborne (2013) noted, the fact that jobs can be automated, doesn't necessarily mean that they will be, at least not in the short term. Indeed, given the political ramifications of widespread joblessness, it is not unreasonable to think policymakers may expend considerable energy trying to resist automation where possible. It certainly wouldn't be the first time. The desire of leaders to protect populations from mechanised competition is as old as industrialisation itself. During the first industrial revolution worker riots against the introduction of automatic looms resulted in their use being banned in Germany for 40 years. Tsar Nicholas I of Russia went as far as prohibiting industrial exhibitions in order to prevent the spread of new technologies. One might reasonably expect the leaders of today to be similarly incentivised to try and postpone the inevitable, albeit with less dramatic means at their disposal.

12 https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Education_and_ Employment/AvoidanceofFairWork/Report In many sectors however, the negative impact on real wages is likely to occur regardless of whether the job is actually automated. The fact that a job can be automated is enough to undermine the bargaining power of the existing workforce. As improvements in technology shift the balance between the comparative advantage of humans and technology, it is logical to expect employers to be looking for the point at which it becomes more profitable to invest in the new capital rather than the existing labour. One would expect these dynamics to severely curtail workers' ability to negotiate wage increases.

The bargaining power of Australian workers is also experiencing additional pressure due to the high volume of skilled temporary visa and student visa holders in the Australian labour market, and the low minimum salary temporary skilled visa holders can be paid. There are currently 674 occupations on the Skilled Occupation list and, in all but a handful, the minimum income threshold workers must be paid is just \$53,900 per year – almost \$30,000 below the average weekly full- time earnings of Australian workers. Student visa holders are eligible to work up to 20 hours per week when the course for which they are registered is in session, and unlimited hours per week when the course is not in session. According to the Department of Home Affairs, as at 31 October 2018 there were 594,422 student visa holders in Australia¹³.

The ranks of those who have lost out from globalisation and automation are projected to swell rapidly over the coming two decades. It is naïve to expect members of this group to accept their declining prospects with much enthusiasm. Over the past five years, these tensions have proven to be a minefield for mainstream politicians who find themselves caught between an increasingly frustrated constituency on one side and, on the other side, the knowledge that giving that constituency what it wants would be damaging for the economy as a whole. Just as previous waves of automation have brought about great benefits for society, the fourth industrial revolution will more than likely do the same. Managing the short-run consequences of this change however, is likely to present a substantial economic and social challenge.

Let us now consider the most significant of those short run consequences; the diminished housing security of affected workers and the potential increase in demand for housing assistance.

3 https://www.homeaffairs.gov.au/research-and-stats/files/student-temporary-grad-programreport-dec-2018.pdf

3.2 HOUSING THE CASUALTIES OF THE FOURTH INDUSTRIAL REVOLUTION – A THOUGHT EXPERIMENT

In Section 2 of this paper we established that the number of households whose financial circumstances would render them eligible for social housing is likely to be much higher than official waiting lists suggest. This chapter is concerned with estimating the likely impact of automation on future demand for social housing.

While it is not possible to accurately predict the precise impact of displacement due to automation on future incomes, what we do know is that the impact is very likely to be negative. Many workers who are displaced by technology never re-enter the workforce. Those who do re-enter the workforce, tend to do so in lower paid and less stable jobs. This phenomenon is consistent with the well documented impact of periods of unemployment on future income. A 2013 report from the Urban Institute¹⁴ summarised the research into the declining earning power of displaced workers when they do re-enter the workforce. While there is some variation, most studies have found laid off workers experience declines in wages of between 5-20% once re-employed.

For the purposes of this analysis we will consider two possible scenarios.

SCENARIO 1: Workers impacted by automation experience modest declines in income, equivalent to 10% of existing household income.

SCENARIO 2: Workers impacted by automation experience higher reductions in income equivalent to 20% of household income.

We begin by establishing the total number of households who would become eligible for social housing if they experienced a decline in household income of 10%, and the total number who would become eligible if they experienced a decline in household income of 20%.

The data quoted below excludes households meeting any of the following criteria:

- Already live in social housing
- Own their own home (with or without a mortgage)¹⁵
- Derive their income from government benefits¹⁶
- Household reference person is aged 65+
- Household reference person is not an Australian citizen

15 Homeowners would fail to meet the asset test for social housing eligibility.

16 Households whose main form of income is government benefits would have incomes that fall beneath the lower bound of those in this dataset (and would therefore already be eligible for housing assistance.)



¹⁴ https://www.urban.org/sites/default/files/publication/23921/412887-Consequences-of-Long-Term-Unemployment.PDF

NUMBER OF AUSTRALIAN HOUSEHOLDS THAT WOULD BECOME ELIGIBLE FOR SOCIAL HOUSING IF HOUSEHOLD INCOME DECLINED BY 10%.

	Greater Capital City Statistical Area	Balance of State/ Territory	Total
NSW	13,286	11,295	24,581
VIC	22,837	9,603	32,440
QLD	5,766	7,643	13,409
SA	4,588	1,246	5,834
WA	5,692	2,090	7,782
TAS	1,566	1,990	3,556
NT	313	160	473
ACT	1,038	0	1,038
AUSTRALIA	55,086	34,027	89,113

Source: ABS

NUMBER OF AUSTRALIAN HOUSEHOLDS THAT WOULD BECOME ELIGIBLE FOR SOCIAL HOUSING IF HOUSEHOLD INCOME DECLINED BY 20%

	Greater Capital City Statistical Area	Balance of State/ Territory	Total
NSW	29,025	25,858	54,872
VIC	41,015	15,730	56,746
QLD	16,724	22,340	39,081
SA	11,711	3,161	14,878
WA	9,082	3,219	12,302
TAS	2,592	3,173	5,760
NT	947	563	1,508
ACT	1,535	0	1,535
AUSTRALIA	112,631	74,044	186,682

Source: ABS

We can now filter this cohort by the probability of their being impacted by automation. Clearly, not all of these households will be impacted, but it is probable that at least some of them will. As noted above, estimates for the proportion of workers likely to be impacted by automation vary considerably depending on where the workers in question fall within the overall income distribution. It is generally accepted that those working in low to moderately paid occupations face a higher risk of being impacted by automation than those with higher incomes. We have already noted CEDA's prediction that 40% of all occupations are likely to become automatable over the next two decades. The Brookings Institute on the other hand estimates those occupations in the bottom 20% of the income distribution face at least a 60% chance of automation.¹⁷ The US Council of Economic Advisers meanwhile, has taken an even bleaker view, projecting up to 83% of low paid jobs are likely to face pressure from automation.

Our target cohort for this analysis, i.e. households with incomes within 20% of the eligibility threshold for social housing are, by definition, low to moderate income earners and could therefore be considered to be at higher than average risk of being impacted by automation. The tables below set out the likely impact on future eligibility for social housing based on the possibilities of 40%, 60% or 83% of the cohort being impacted.

The final step is to estimate what proportion of the households impacted by automation experienced falls in income as a result. Historically, displaced workers who transition to new jobs in the same sector experience no discernible penalty in terms of earning power. Those who need to transition to completely new occupations however, tend to experience wage declines in their new jobs. Based on an analysis of data collected for the Household Income and Labour Dynamics Survey, the OECD reports¹⁸ that approximately 40% of displaced Australian workers who find a new job experience positive wage changes, although this may be, at least partially, due to the tendency for displaced workers to transition to casual employment which attracts a higher hourly rate to compensate for the loss of security and absence of paid leave. Less encouragingly, the OECD found that 20% of displaced Australian workers remained out of work three years after being displaced, and that one in three displaced Australian workers experienced wage losses in their new jobs¹⁹. It is reasonable to expect that proportion to increase in future due to the widely reported "hollowing out" effect of the current wave of technological advancement which is predicted to see stable middle income jobs eroded in favour of high income jobs for which the displaced workers are unqualified, and low income jobs for which there is now increased competition.

For the purposes of this analysis we have assumed that 20% of displaced workers do not re-enter the labour force and that 50% of those that do re-enter experience a decline in wages as defined in the scenarios above.

Because we are estimating future eligibility using present day incomes and income thresholds, these calculations also include the following simplifying assumptions.

- Wage growth over the period in question remains subdued but keeps pace with the CPI.
- Social housing income thresholds are indexed to CPI.

¹⁷ https://www.brookings.edu/research/automation-and-artificial-intelligence-how-machinesaffect-people-and-places/

¹⁸ https://read.oecd-ilibrary.org/employment/back-to-work-australia/job-displacement-inaustralia-and-its-consequences_9789264253476-5-en#page16

¹⁹ https://www.oecd.org/employment/emp/Back-to-Work-Australia-AR.pdf

		40%			60%			83%		
	Greater Capital City Statistical Area	Balance of State/ Territory	Total (d)	Greater Capital City Statistical Area	Balance of State/ Territory	Total (d)	Greater Capital City Statistical Area	Balance of State/ Territory	Total (d)	
NSW	3,189	2,711	5,899	4,783	4,066	8,849	6,616	5,625	12,241	
VIC	5,481	2,305	7,786	8,221	3,457	11,678	11,373	4,782	16,155	
QLD	1,384	1,834	3,218	2,076	2,751	4,827	2,871	3,806	6,678	
SA	1,101	299	1,400	1,652	449	2,100	2,285	621	2,905	
WA	1,366	502	1,868	2,049	752	2,802	2,835	1,041	3,875	
TAS	376	478	853	564	716	1,280	780	991	1,771	
NT	75	38	114	113	58	170	156	80	236	
ACT	249	0	249	374	0	374	517	0	517	
AUSTRALIA	13,221	8,166	21,387	19,831	12,250	32,081	27,433	16,945	44,378	

SCENARIO 1: AFFECTED WORKERS EXPERIENCE REDUCTIONS IN HOUSEHOLD INCOME OF 10%

Source: ABS

SCENARIO 2: AFFECTED WORKERS EXPERIENCE REDUCTIONS IN HOUSEHOLD INCOME OF 20%

	40% of households affected			60% of ho	60% of households affected			83% of households affected		
	Greater Capital City Statistical Area	Balance of State/ Territory	Total (d)	Greater Capital City Statistical Area	Balance of State/ Territory	Total (d)	Greater Capital City Statistical Area	Balance of State/ Territory	Total (d)	
NSW	6,966	6,206	13,172	10,449	9,309	19,758	14,455	12,877	27,332	
VIC	9,844	3,775	13,619	14,765	5,663	20,428	20,425	7,834	28,259	
QLD	4,014	5,362	9,376	6,020	8,042	14,063	8,329	11,125	19,454	
SA	2,810	758	3,569	4,216	1,138	5,354	5,832	1,574	7,406	
WA	2,180	773	2,953	3,269	1,159	4,428	4,523	1,603	6,126	
TAS	622	761	1,384	933	1,142	2,075	1,291	1,580	2,871	
NT	227	135	362	341	203	544	472	280	752	
ACT	368	0	368	553	0	553	764	0	764	
AUSTRALIA	27,032	17,770	44,802	40,547	26,656	67,203	56,090	36,874	92,964	

Source: ABS

The results suggest that, depending on the extent to which automation impacts the target cohort, Australia faces a potential additional social housing shortfall of between 21,387 to 44,378 dwellings under Scenario 1, in which the incomes of affected workers decline by 10%, or between 44,802 to 92,964 dwellings under scenario 2, in which the incomes of affected workers decline by 20%.

Of the affected workers who manage to re-enter the workforce, many will elect not to apply for social housing. Regardless, their diminished circumstances are likely to leave them in severe housing stress in the private rental market. Those who remain unemployed are likely to have little choice. We should reiterate that these results exclude homeowners, many of whom will be equally vulnerable to automation but whose assets mean they are unlikely to become dependent on housing assistance in the short term.

We should also note these results do not control for population growth over the period in question which is projected to be considerable. Australia is currently experiencing the fastest rate of population growth of any OECD country, due primarily to high levels of net overseas migration. That growth is projected to continue at the same rate for many years to come and there seems no reason to believe it will bypass the cohort with household incomes within 20% of being eligible for social housing. If anything, the opposite is likely to be true.²⁰

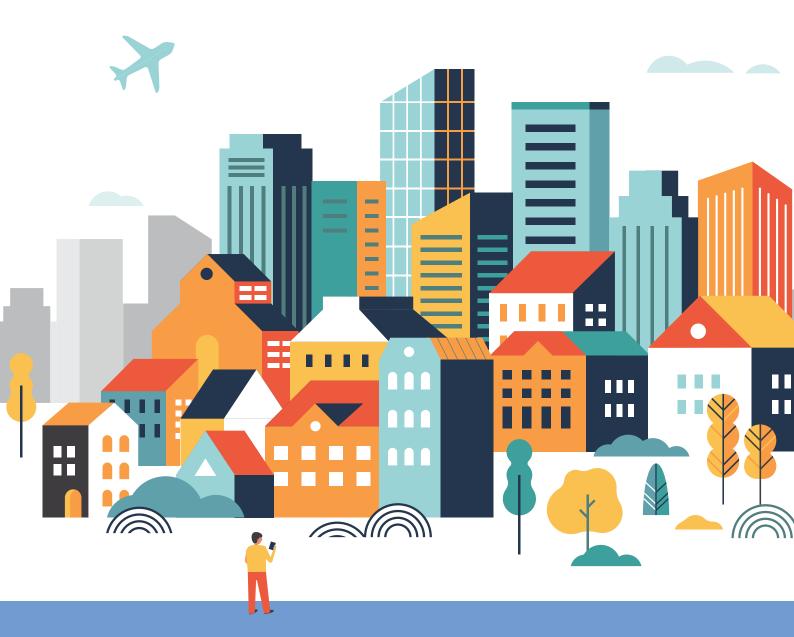
On that basis it is likely that Australia's true social housing shortfall over the next two decades is likely to be even larger than the figures contained in this paper. The cost of covering such an enormous shortfall is staggering. Even if one takes a highly conservative estimate of the likely cost-per-dwelling, the total cost of providing sufficient social housing to cover the existing shortfall, and to accommodate future demand as projected in this report, is potentially anywhere from \$150 billion to \$172 billion depending on the extent to which automation affects the economy over the period in question.²¹

Reducing the likelihood of this outcome, will involve a substantial investment in re-training schemes to enable impacted workers to transition to new jobs without experiencing a decline in job stability or earning power. The early signs are not promising. Australia currently offers comparatively little in the way of support to displaced workers and provides the lowest level of unemployment benefits to the newly unemployed of any country in the OECD. (CEDA, 2015) Moreover, as the experience of former Hazelwood Power Station workers attests, those transition schemes that do exist frequently produce subpar results. There is therefore reason to be concerned that automation will have more significant impact on Australian workers than their peers in comparable countries where a greater emphasis is placed on equipping workers in at-risk occupations with the skills necessary to succeed in the new economy. Although assessing the relative merits of such schemes is not the focus of this paper, the findings herein suggest policy makers would do well to turn their attention to investigating which schemes have worked in other jurisdictions, and how they could potentially be adapted to the Australian setting.

²⁰ A recently released ABS report found recent migrants tend to have worse labour market outcomes than the general population and the Australian Population Research Institute has reported that less than a third of 25-34 year olds with a bachelor degree or higher who arrived in Australia in the five years to 2016 had managed to find work as professionals, suggesting they were working in lower skilled occupations.

²¹ Calculations based on \$250k per dwelling.

The total cost of providing sufficient social housing to cover the existing shortfall, and to accommodate future demand as projected in this report, is potentially anywhere from \$150 billion to \$172 billion.





SECTION 4

Policy Proposals

The extent of the social housing shortfall in Australia highlights the existential nature of the crisis facing the system at the present time. Under the current "needs based" allocation model, social housing is almost exclusively reserved for people with disabilities, mental health issues, or who have children but no job. In its current configuration, the system is failing even to meet the level of demand from this relatively small fraction of the population. The exclusion of low-to moderate income working households has left many of these households in a difficult position. The rapid inflation in purchase prices has meant home ownership is not a realistic prospect. Rapid population growth, particularly in our capital cities, has increased demand for rental accommodation and the use of urban growth boundaries, has restricted the supply response in a way that ensures much of the new rental stock that does come onto the market consists of small apartments which are unsuited for families. These factors have combined to push rents in many parts of the country well beyond the affordability threshold for low-to-moderate income earners. In fact, median rents in many parts of the country are beyond the reach of even median income earners²².

The result is that housing stress is no longer something that only affects the poorest in our society. On the contrary, it is a daily reality for countless working families, many of whom are required to cut back on other essentials purely to keep a roof over their head. This effectively represents the emergence of what in America is referred to as the "working poor" and presents an enormous challenge to policy makers.

For too long, housing policy in Australia has been focused solely on the needs of the very poorest. But good housing policy is about more than servicing those who have fallen through the cracks. Good housing policy involves filling the cracks to prevent more people from falling through. Good housing policy sets up buffers to protect the middle class from being gutted in the event of an economic downturn or a labour market shock. Good housing policy recognises that adequate housing is a fundamental human right, and that the lack of adequate housing compromises outcomes against almost every imaginable indicator of human health and achievement. People who aren't adequately housed have worse outcomes across the board. Health, educational attainment, employment prospects, relationship stability, and financial security are all impacted by housing. Ignoring this simple fact is likely to produce an Australia that many of us won't recognise.

The sad truth is that our current policy settings are based on putting downward pressure on incomes, upward pressure on housing costs, and using as much debt as necessary to paper over the gaping hole in between. The result is likely to be a persistently unaffordable property market, and a heavily indebted and increasingly insecure workforce, neither of which are things you would expect to see in the fabled land of the fair go.

Addressing these issues will require a comprehensive suite of reforms at all levels of government. The list below is by no means exhaustive but could be considered a good start. Some recommendations, such as tougher macroprudential restrictions and reviewing the immigration rate, are unrealistic in the current climate given the clearly expressed desire of authorities to prevent declines in asset values. Others, such as a historic home building program and better tenancy laws, would at least mitigate some of the short-term human costs and may even help soften the blow if and when the music of continued economic growth finally stops.

22 Kennedy, 2018

RECOMMENDATION 1

Catalyse the construction of 500,000 social and affordable housing dwellings over the next 10 years.

Working in partnership with the states and territories through the NHHA process, the federal government should expand the scale of the National Housing Finance and Investment Corporation to help deliver:

- 300,000 new social housing dwellings over the next 10 years to return social housing's share of housing stock to 6%
- 200,000 new affordable housing dwellings over the next 10 years to reduce housing stress for low to moderate income working households.

In addition to providing stable accommodation to low-to-moderate income households, this initiative would have the added benefit of supporting employment in the construction industry which is currently under pressure.

RECOMMENDATION 2

Empower APRA to impose stricter lending practices in residential mortgage lending.

As dwelling prices became progressively more disconnected from household incomes, home ownership has come to mean taking on debt loads that leave households heavily exposed to cost of living pressures, interest rates and changes in earning power. Enacting practices that limit borrowings to manageable multiples of household income would go some way to reducing these risks.

RECOMMENDATION 3

Implement stronger protections for renters in the private market.

- Use the NHHA process to encourage states and territories to reform tenancy laws to provide increased security of tenure, thereby creating greater stability in the private rental market and potentially decreasing demand for social housing.
- Adopt a location loading for Commonwealth Rent Assistance payment rates to reflect variations in rental markets.

RECOMMENDATION 4

Adopt a sustainable population policy to reduce pressure on housing costs, infrastructure requirements and wage growth.

- Undertake a review of Australia's population growth rate to ensure growth reflects the ability of governments to deliver the housing and other infrastructure necessary to maintain current living standards and levels of amenity.
- Lift the Temporary Skilled Migration Income Threshold to the equivalent of the average weekly earnings for the relevant industry sector as reported by the Australian Bureau of Statistics.

RECOMMENDATION 5

Investigate successful re-skilling and transition programs to help affected workers secure new positions without reductions in job stability or earning power.

Policy makers may wish to consider:

- pilot programs based on proven international methods and which focus on mature age workers as a first step
- enforcing a longer notice period for collective dismissals to enable workers to prepare
- ensuring that relevant authorities are apprised ahead of time to enable transition schemes to be implemented before workers become unemployed.

RECOMMENDATION 6

Incentivise complementary state policies through the National Housing and Homelessness Agreement (NHHA) process.

- Set binding construction targets for additional social housing aimed at returning social housing to a 6% share of all dwellings over 10 years.
- Progressively transfer the title and/or management of up to 50% of existing social housing to the community housing sector with transfers contingent on community housing providers (CHPs) committing to an appropriate share of the state-wide construction target.
- Repeal stamp duty and replace it with a broad-based land tax.
- Relax urban growth boundaries which artificially ration the supply of land.
- Scrap counter-productive measures like first home buyer grants or stamp duty exemptions which inflate demand at existing prices.

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Households meeting current eligibility criteria for social housing Income limits referenced below were sourced from state and territory housing authorities and were correct at June 6 2019

New South Wales	NUMBER OF HOUSEHOLDS			
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	625	31,094	40,652	71,746
Lone parent family with one dependent child	930	6,125	8,268	14,393
Lone parent family with two dependent children	1,030	6,301	7,786	14,087
Lone parent family with three dependent children	1,130	2,776	3,310	6,086
Lone parent family with four or more dependent children	1,230	1,314	1,597	2,911
Couple only no children	860	8,867	9,950	18,817
Couple with one dependent child	1,165	5,528	3,237	8,765
Couple with two dependent children	1,265	6,827	4,302	11,129
Couple with three dependent children	1,365	3,707	2,437	6,144
Couple with four or more dependent children	1,465	2,250	1,339	3,589
Other family/household composition - two usual residents	860	4,266	4,828	9,094
Other family/household composition - three usual residents	1,095	2,243	2,102	4,345
Other family/household composition - four or more usual residents	1,330	2,663	2,135	4,798
All household types		83,961	91,943	175,904

Victoria	NUMBER OF HOUSEHOLDS			
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	567	27,398	18,234	45,632
Lone parent family with one dependent child	1,017	8,385	5,425	13,810
Lone parent family with two dependent children	1,053	6,674	3,935	10,609
Lone parent family with three dependent children	1,089	2,387	1,594	3,981
Lone parent family with four or more dependent children	1,125	892	638	1,530
Couple only no children	981	11,430	6,226	17,656
Couple with one dependent child	1,017	3,812	1,493	5,305
Couple with two dependent children	1,053	3,578	1,357	4,935
Couple with three dependent children	1,089	1,610	716	2,326
Couple with four or more dependent children	1,125	973	389	1,362
Other family/household composition - two usual residents	1,134	11,091	5,106	16,197
Other family/household composition - three usual residents	1,701	14,543	5,186	19,729
Other family/household composition - four or more usual residents	2,268	24,246	9,604	33,850
All household types		117,019	59,903	176,922

Queensland	NUMBER OF HOUSEHOLDS			
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	609	21,134	34,751	55,885
Lone parent family with one dependent child	755	3,310	5,620	8,930
Lone parent family with two dependent children	877	3,827	5,645	9,472
Lone parent family with three dependent children	999	1,987	2,882	4,869
Lone parent family with four or more dependent children	999	924	1,242	2,166
Couple only no children	755	4,763	8,003	12,766
Couple with one dependent child	877	1,312	1,839	3,151
Couple with two dependent children	999	1,659	2,359	4,018
Couple with three dependent children	1,121	1,026	1,515	2,541
Couple with four or more dependent children	1,121	620	769	1,389
Other family/household composition - two usual residents	755	2,596	3,244	5,840
Other family/household composition - three usual residents	877	948	1,111	2,059
Other family/household composition - four or more usual residents	999	476	546	1,022
All household types		44,582	69,526	114,108

South Australia	NUMBER OF HOUSEHOLDS			
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	984	23,336	9,170	32,506
Lone parent family with one dependent child	1,287	5,149	1,580	6,729
Lone parent family with two dependent children	1,438	4,170	1,269	5,439
Lone parent family with three dependent children	1,590	1,462	535	1,997
Lone parent family with four or more dependent children	1,817	541	212	753
Couple only no children	1,279	6,807	2,988	9,795
Couple with one dependent child	1,429	2,544	821	3,365
Couple with two dependent children	1,590	2,946	1,103	4,049
Couple with three dependent children	1,805	1,364	650	2,014
Couple with four or more dependent children	2,031	777	359	1,136
Other family/household composition - two usual residents	1,287	4,619	1,159	5,778
Other family/household composition - three usual residents	1,438	1,429	305	1,734
Other family/household composition - four or more usual residents	1,590	536	118	654
All household types		55,680	20,269	75,949

Western Australia	NUMBER OF HOUSEHOLDS			DS
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	430	6,390	2,168	8,558
Lone parent family with one dependent child	580	1,419	472	1,891
Lone parent family with two dependent children	695	1,876	644	2,520
Lone parent family with three dependent children	815	967	343	1,310
Lone parent family with four or more dependent children	930	376	128	504
Couple only no children	670	1,734	581	2,315
Couple with one dependent child	790	768	219	987
Couple with two dependent children	930	817	242	1,059
Couple with three dependent children	1,045	529	197	726
Couple with four or more dependent children	1,160	393	120	513
Other family/household composition - two usual residents	670	2,282	612	2,894
Other family/household composition - three usual residents	785	1,212	378	1,590
Other family/household composition - four or more usual residents	900	310	73	383
All household types		19,073	6,177	25,250

Tasmania	NUMBER OF HOUSEHOLDS			
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	561	2,345	4,244	6,589
Lone parent family with one dependent child	969	851	1,218	2,069
Lone parent family with two dependent children	1,003	661	964	1,625
Lone parent family with three dependent children	1,037	270	348	618
Lone parent family with four or more dependent children	1,071	93	122	215
Couple only no children	969	806	1,545	2,351
Couple with one dependent child	1,003	192	358	550
Couple with two dependent children	1,037	200	408	608
Couple with three dependent children	1,071	114	193	307
Couple with four or more dependent children	1,105	53	115	168
Other family/household composition - two usual residents	1,122	869	1,201	2,070
Other family/household composition - three usual residents	1,683	880	1,041	1,921
Other family/household composition - four or more usual residents	2,244	1,404	1,920	3,324
All household types		8,738	13,677	22,415

Northern Territory	NUMBER OF HOUSEHOLDS			
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	806	754	570	1,324
Lone parent family with one dependent child	1,047	136	74	210
Lone parent family with two dependent children	1,218	133	57	190
Lone parent family with three dependent children	1,399	49	26	75
Lone parent family with four or more dependent children	1,572	21	17	38
Couple only no children	1,047	164	140	304
Couple with one dependent child	1,218	111	78	189
Couple with two dependent children	1,399	92	63	155
Couple with three dependent children	1,572	53	51	104
Couple with four or more dependent children	1,748	48	33	81
Other family/household composition - two usual residents	1,047	111	52	163
Other family/household composition - three usual residents	1,218	37	27	64
Other family/household composition - four or more usual residents	1,399	21	35	56
All household types		1,730	1,223	2,953

ACT	NUMBER OF HOUSEHOLDS			
Household composition	Income limit	Greater Capital City Statistical Area	Balance of State/ Territory	Total
Lone person household	735	1,827	0	1,827
Lone parent family with one dependent child	919	249	0	249
Lone parent family with two dependent children	1,042	270	0	270
Lone parent family with three dependent children	1,165	116	0	116
Lone parent family with four or more dependent children	1,288	38	0	38
Couple only no children	919	384	0	384
Couple with one dependent child	1,042	160	0	160
Couple with two dependent children	1,165	202	0	202
Couple with three dependent children	1,288	98	0	98
Couple with four or more dependent children	1,411	53	0	53
Other family/household composition - two usual residents	919	275	0	275
Other family/household composition - three usual residents	1,042	101	0	101
Other family/household composition - four or more usual residents	1,165	38	0	38
All household types		3,811	0	3,811

Source: ABS



