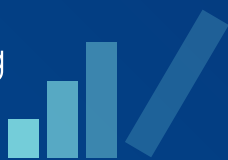


Breaking
Down
Barriers



Melbourne Institute research
into understanding and
overcoming disadvantage

Breaking Down Barriers Rapid Analysis:

Social Housing and Poverty in Australia

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Executive Summary

Stable housing is a critical component in addressing financial and social stresses that can lead to poverty or prevent exit from poverty. This analysis explores the correlation between community-level measures of poverty rates and social housing density to better understand how we might best structure future analyses to inform policy and practice on locations for new housing, structure and delivery of social housing, and rent assistance more broadly, for those facing housing stress.

Key findings observed at a community level include:

- Contemporary poverty rates and social housing density are positively correlated.
- High poverty is not always associated with high social housing density.
 - » There are many communities with high poverty rates (greater than 16 percent) and relatively low social housing density rates (less than 4 percent).
- High poverty in 2011 is associated with increased social housing units between 2011 and 2016.
- High social housing density in 2011 is positively correlated with decreases in poverty rates between 2011 and 2016.

These initial statistics suggest there is much more to be understood about the relationship between poverty and the role played by social housing in alleviating and preventing poverty. We highlight throughout this report that falling below standard poverty lines is relatively fluid: not all households will remain in poverty. In fact, over a five-year period we often observe households moving out of poverty. Housing, however, is a more static measure in that households do not quickly move into or out of social housing. Social housing and related programs can serve as a stabiliser that supports poverty reduction. But the lack of social housing and support as one is experiencing income shocks or declines in income can lead to a further exacerbation of circumstances which can result in observing more persistent episodes of living in poverty.

This is the first of three rapid analysis reports that explores the connection between social housing and poverty. This first report explores the relationship between social housing density and poverty rates at a community level. The second report examines demographics and employment measures for those living in social housing and how these measures compare for those not observed in social housing but with incomes that fall below the poverty rates. The third report examines moving into and out of social housing over a five-year period to understand better the extent to which households move in and out of social housing as well as the factors that might contribute to these movements.

Policy context

There is no doubt that housing plays a crucial role in the health and wellbeing of Australians. A lack of adequate housing puts individuals at an increased risk of housing stress, which can influence workforce participation, education attainment, food security, health and homelessness (Rowley and Ong, 2012). Providing adequate housing opportunities in Australia includes the provision of housing assistance ranging from rent assistance to government-provided housing. This report focuses on assistance referred to as ‘social housing’, housing that is provided by the government or via independent (community) organisations. Social housing, through the provision of long-term or shorter-term accommodation at rates that are less than the market rate, provides an important safety net (Groenhart, 2015).

The Australian Housing and Urban Research Institute (AHURI) (2020) report highlights severe public housing shortages that have persisted for some time. For example, there has been a marked decline in the share of housing stock that is classified as social housing, from 5.1 percent in 2000 to 4.2 percent in 2016. In many areas those seeking public housing are placed on long waiting lists (148,520 in June 2019). The AHURI report also highlights deficiencies in many social housing units, suggesting a need to modernise many units.

In Australia, housing represents an important stress factor for those who face income poverty and, more broadly, disadvantage. As illustrated in Payne and Samarage (2020), despite modest declines in poverty rates between 2011 and 2016, current poverty rates measured at a community level range between 13 percent and 62 percent for 60 percent of communities. Few Australian-based studies consider the relationship between poverty rates and the density of social housing units at a community level. We explore this relationship to provide insights into the role that social housing plays in addressing income poverty. If one is facing financial challenges, social housing can be an important contributor behind entry to or exit from poverty.

Our approach is to provide initial insights into the correlation between social housing density and income poverty rates. Linking these two measures is a starting point for better understanding the role that social housing plays in preventing ‘on-ramps’ into extreme disadvantage and/or supporting the ‘off-ramps’ out of disadvantage. Housing assistance may have a positive impact by freeing up resources for food and health care. It may allow for a better learning environment and, thus, contribute to improved educational outcomes. It may connect residents to social support networks, may reduce criminal activities and incarceration, and may protect people from homelessness. That said, housing assistance may contribute to reduce workforce participation or encourage continued reliance on social support.

Social housing comes in many forms—some are operated directly by the government and others are provided by non-profit organisations. Given needs to construct or renovate, it takes time to increase the number of housing units in each community. There are also many factors that will affect decisions to increase (or decrease) the number of units. Given buildings do not appear overnight, it is best to think of social housing as a structural stock that can take years to change.

In contrast, community poverty rates are more reflective of a measure we might call a flow. As illustrated in Payne and Samarage (2020), while some communities suffer from entrenched or stagnant poverty, there are many reasons why poverty rates can change over time. Ananyev et al. (2020) illustrate that, when examining a five-year period, often more than half of individuals observed in poverty in one year are not in poverty five years later. Moving into or out of poverty is correlated with factors such as education, employment and age. Having stable housing is also likely to be correlated with entering or exiting from poverty.

A second reason for a more fluid change in community poverty rates is that the residents in a community may migrate to another community. As migration increases, we might expect the income profile of the community to change. Reasons for migration out of or into a community can be tied to personal factors or changes in employment opportunities. The reasons for migration, however, can also be tied to increased housing costs and/or the availability of adequate housing.

This analysis explores the relationship between poverty and social housing across Australia. We rely on Census data for 2011 and 2016 to capture poverty rates and the rates of housing stock that can be attributable to social housing. For each community, we create two measures: the community poverty rate (share of households with an income that is less than 60 percent of the median household income in Australia) and a social housing density rate (share of households identified as living in social housing). The analysis compares and contrasts poverty and social density rates across communities and over time. We find:

- Not all areas with higher poverty rates are matched with higher social housing density.
- The positive correlation between social housing density and poverty in some areas may be an early indication that social housing is effectively targeting individuals facing housing stress.
- Both poverty rates and social housing density decreased in Australia between 2011 and 2016.
- Higher social housing density in 2011 is associated with a decrease in poverty rates between 2011 and 2016 if one excludes communities with very high poverty rates.

While there is a positive correlation between social housing and poverty rates at the community level, there is also substantial variation in levels of social housing by poverty level. This variation exists in urban and rural areas alike. We highlight here the importance of creating greater links between what we know about issues in the supply and quality of social housing in Australia and poverty rates. While this report does not provide specific policy suggestions for how to address social housing shortages or how to reduce poverty in Australia, it does highlight the importance of better understanding the role of social housing in supporting those living in poverty and/or in preventing entry into poverty.

The state of social housing in Australia and the construction of social housing density and poverty rates

In 2019–20, over 800,000 Australians lived in social housing in 436,000 dwellings across the country (AIHW, 2021). Access to these units will vary from state to state depending on state-prescribed eligibility requirements. For the most part, these requirements include residency requirements, income thresholds and other requirements relating to the ability to cover what is charged as rent. A key principle behind eligibility for social housing is not being able to find appropriate housing in the private marketplace (AIHW, 2021). Social housing is divided into public housing (PH, 69 percent of all social housing dwellings), community housing (CH, 24 percent), Indigenous community housing (ICH, 4 percent) and state-owned and managed Indigenous housing (SOMIH, 3 percent). In addition to opportunities for living in social housing, there is an option to rent through the private housing market. For individuals who live in community or private housing, rent assistance is provided by the Commonwealth government. In 2020, 1.7 million households (units) received Commonwealth rent assistance (AIHW, 2021).

Using Census data that rely on self-reports of housing type, Table 1 depicts the percentage change in the number of households from 2011 to 2016 by state, overall and for those in social housing units. Across all states, there is an increase in the number of households. Overall, the increase is 8.6 percent with the largest growth observed in the Australian Capital Territory (ACT) and Western Australia. In contrast, the share of households living in social housing has declined across all states. Across Australia there is an overall decline of 4.1 percent in the share of those living in social housing. The states with the largest declines are South Australia and the ACT. Note that the percentage change for social housing units is defined as the percentage change in the total stock of social housing, regardless of the total number of housing units. Thus, a decline in social housing units between 2011 and 2016 represents a decline in the number of units designated as social housing.

Table 1: Percentage change in number of housing units between 2011 and 2016

STATE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
All housing units	6.8%	10.6%	8.8%	5.2%	11.5%	4.0%	10.8%	12.4%	8.6%
Social housing units	-3.0%	-3.2%	-3.3%	-9.6%	-3.8%	-5.2%	-1.5%	-7.5%	-4.1%

Notes: A housing unit is defined in the Census as a physical unit that captures residential housing. Social housing captures units provided by a state or territory housing authority and community housing providers. It excludes housing that is subsidised through schemes such as the Commonwealth rent assistance scheme.

The percentage change is defined as (the number of units in 2016 minus the number of units in 2011) / (the number of units in 2011). A positive share represents growth and a negative share represents a decline.

Source: Melbourne Institute staff calculations using ABS DataPacks for the 2011 and 2016 Censuses.



A decline in the number of social housing units, however, may not be a negative outcome. If households are not in need of social housing and/or they can obtain suitable private housing with rent assistance, then a decline in the share of households living in social housing can be interpreted as a positive outcome. This likely is not the case. As of 2021, there were around 178,000 households waiting for social housing (AIHW, 2021). In earlier work, it was argued that widening gaps in income and wealth inequality would likely increase the demand for social housing (Groenhart and Burke, 2014). High population growth, high pressure on land prices in urban areas and real income growth are often the leading causes of the shortage of affordable housing in Australia (Yates, 2016).

Social housing residents in Australia are a particularly select and disadvantaged group. Populations at risk of homelessness, victims of domestic violence and people with special needs are prioritised to receive social housing assistance (AIHW, 2021). Entry into social housing depends on eligibility, and individuals with greater or special needs have priority. In general, available homes are offered to priority applicants, and then to waiting-list applicants who meet certain eligibility and location requirements (Powell et al., 2019).

To capture the state of social housing in Australia, we rely on the questions asked on the Australian Census form about the characteristics of the dwelling in which the respondent is living. For the purposes of this report, we focus on two questions that allow us to capture whether the dwelling is owned or rented and whether a rented dwelling is part of a government housing authority and/or a community-operated housing unit (including those operated by church groups). From this information we can compute the number of housing units and the share of these units that are identified as 'social housing'. While this measure excludes the counting of households receiving Commonwealth rent assistance and residing in privately owned dwellings, the reliance on Census data allows us to use measures that can be applied across all communities and over time.

For the purposes of this analysis, we define social housing density as the ratio of social housing to total housing in an area. We compute the social housing density for two geographies, known as Statistical Area 2 (SA2) and Statistical Area 3 (SA3). The smaller geography, SA2, is designed to represent communities that interact together socially and economically. The larger geography, SA3, is designed to capture a region that reflects a core commercial hub. In urban areas, SA3s align with what is known as a Local Government Area.

To capture community poverty, we rely on the statistics created by Payne and Samarage (2020). In their report, they explore several measures of poverty. We rely on the computation of poverty rates that represents the share of the population whose income falls below 60 percent of the median equivalised income. We compute an equivalised income to reflect household composition, acknowledging that the income needed to support a single person is different from the income needed to support a couple with children.

In Table 2, we report summary statistics of poverty rates and social housing density for the Australian communities under study. There is large variation between the minimum and maximum social housing density and poverty rates at both the SA2 and SA3 community levels. While some SA2 communities have no social housing units, others have a density of 88 percent, which means that most dwellings in that community are social housing. When it comes to poverty rates, we observe a similar disparity. While some communities enjoy close to zero poverty rates, others experience close to 62 percent of poverty rates. This means that 62 percent of the families in that community report incomes (after accounting for family size) that reflect less than 60 percent of the median national income. These findings highlight the importance of better understanding if mixed tenure is being achieved in Australia. A benefit to mixed tenure, as measured by income, is that we avoid the development of communities with a high proportion of families living in disadvantage.

Table 2: Social housing density and income poverty rates by SA2 and SA3

Geography and year	Number of communities	Social housing density			Income poverty rate		
		Minimum	Median	Maximum	Minimum	Median	Maximum
SA3: 2011	317	0 %	3.52 %	56.83 %	6.03 %	17.64 %	41.13 %
SA3: 2016		0.09 %	3.18 %	55.75 %	5.81 %	14.68 %	47.58 %
SA2: 2011	1,959	0 %	2.93 %	85.49 %	0 %	16.67 %	62.92 %
SA2: 2016		0 %	2.67 %	87.78 %	1.79 %	14.11 %	61.56 %

Notes: An SA3 community is considered a major transport and commercial hub if it is in a major city or a regional city. It generally has a population between 30,000 and 130,000 individuals. An SA2 is a community where households interact with each other socially and economically. We exclude SA2 and SA3 communities with limited or no population in our analysis.

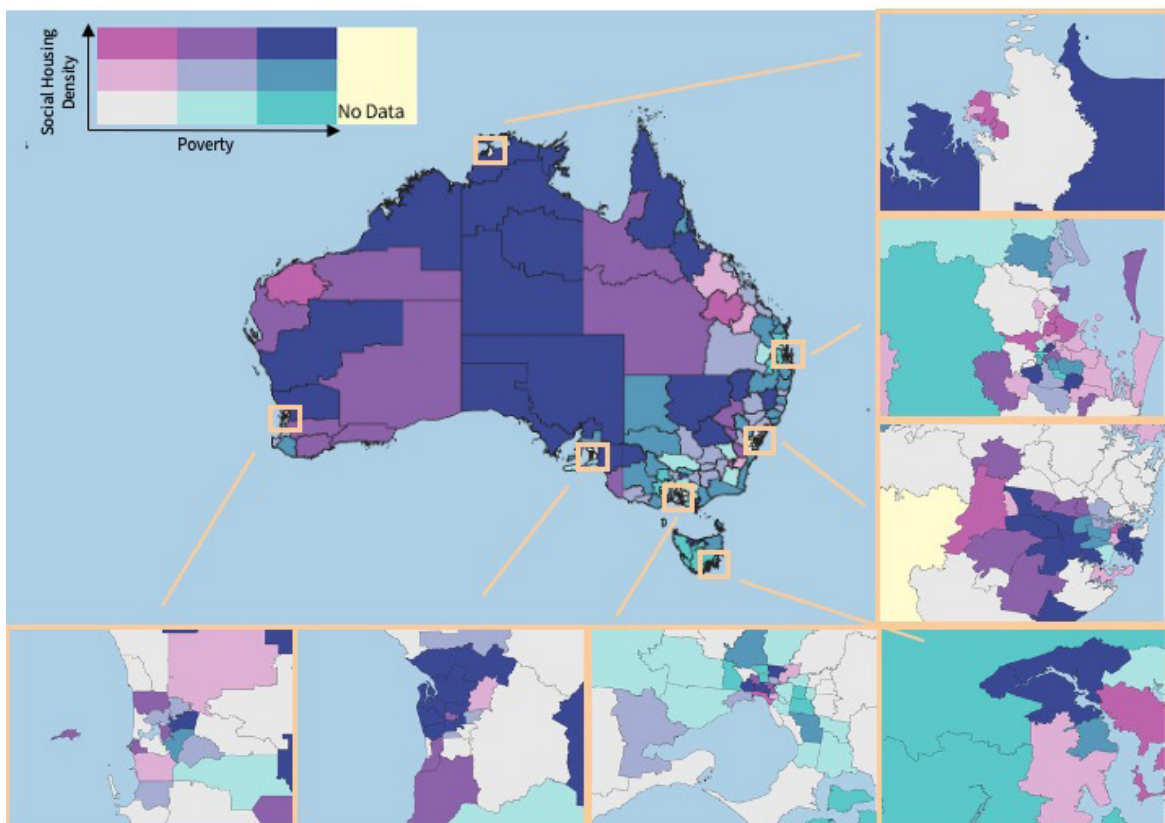
Source: Melbourne Institute staff calculations using ABS DataPacks for the 2011 and 2016 Censuses.

How closely do social housing density rates align with community poverty rates?

In this section, we explore the correlations between social housing density and income poverty rates across Australia. Figure 1 depicts social housing density and poverty rates from 2016 using the SA3 level of geography. Each community is colour-coded to depict the combined degree of social housing density and poverty. Communities shaded in blue have both high social housing density and poverty rates. Communities shaded in green represent low social housing density yet high poverty rates, and areas in magenta represent areas with high social housing density and low poverty rates.

Of the 317 SA3 communities, 17 percent exhibit both high social housing density and poverty rates. A further 6.9 percent exhibit high social housing density but low poverty rates. And 6.6 percent exhibit high poverty rates but low social housing density. Should we expect a positive correlation between social housing and poverty? A positive correlation can serve as an early indication that social housing is effectively targeting households in need. However, it can also signal an area that is experiencing deep disadvantage in which the community faces structural challenges to address poverty. For example, a community with limited opportunities for gainful employment could signal that households have a difficult time exiting from poverty.

Figure 1: Mapping social housing density and poverty, 2016



Notes: Communities are defined at a SA3 level. Social housing density is defined as the number of social housing units divided by the total number of private housing units in the community. Poverty rates are calculated based on household income adjusted for size of household (equivalised) being less than 60 percent of the median income in Australia.

Source: Melbourne Institute staff calculations using ABS DataPacks and TableBuilder 2016.

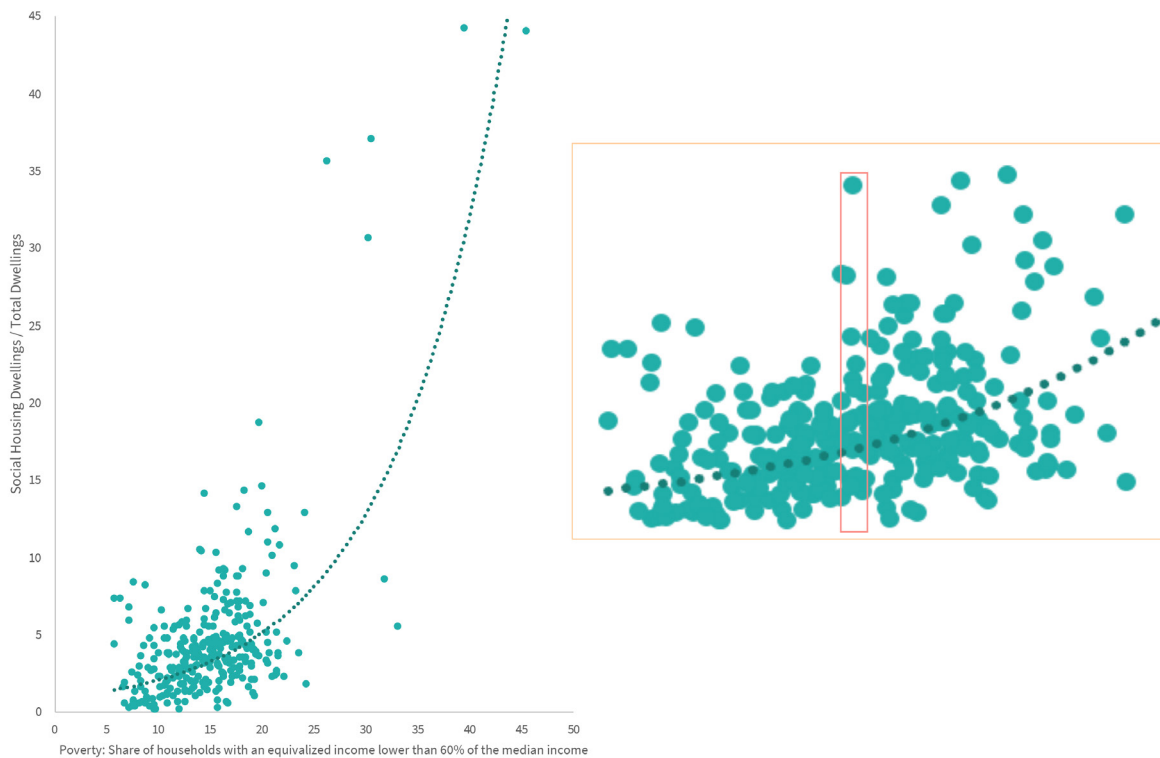
When we observe variation between social housing density and poverty rates, such as high social housing density and low poverty rates, or vice versa, we might infer a few different signals. A positive signal might be that the community has effectively targeted those in need of housing and that years later these households are thriving. A negative signal is one that suggests social housing is not targeting populations in need.

Across Australia, there is much variation between social housing density and poverty rates. The variation is not defined easily based on whether the area is urban or rural, or a capital city or not. In Darwin and Brisbane (and to some extent Adelaide and Hobart), for example, we observe high social

housing density and lower poverty rates. In Sydney, Melbourne and Perth, we observe communities with high levels of poverty and social housing density, but we also observe communities with high levels of poverty but low social housing density.

In Figure 2, we depict the relationship between social housing density (y-axis) and poverty rates (x-axis) for all communities. This figure demonstrates that, while there is a positive correlation between the two measures, conditioning on the same poverty rate, social housing density varies substantially across communities. For example, for a community with a poverty rate of 10 percent, the social housing density rate ranges between zero and around 7 percent.

Figure 2: Correlation between social housing density and poverty, 2016



Notes: Communities are defined at a SA2 level. See above figures for definitions of social housing density and poverty rates.
 Source: Melbourne Institute staff calculations using ABS TableBuilder 2016.

Assessing the appropriate relationship between poverty and social housing density rates requires more data. As noted above, in addition to social housing there are other programs in place such as Commonwealth rent assistance programs to permit household to live in private housing. As the qualifications for social housing (and the waiting lists) reflect those most in need, it is not surprising that not all households identified as falling below the poverty rate would reside in social housing. Given there are large differences between higher poverty rates and low social housing density rates, this raises the question of whether our policies for the provision of social housing and/or rent assistance reflect the needs of communities and those with incomes below the poverty rates.

To explore the correlation between social housing density and poverty rates further, we rely on a flow diagram, as depicted in Figure 3. For this figure we depict the statistics for SA2s, the smaller measure for communities. On the left axis, we group communities into three poverty rates by quantile: high, medium and low. A community that is classified as high poverty, has poverty rates that range from 16.4 to 61.6 percent. Communities with medium poverty range from 11.5 to 16.4 percent. Communities with low poverty range from 1.8 to 2.0 percent. Along the right axis, we group the communities based on social housing density. Communities with high social housing density range from 4.4 to 87.8 percent. Communities with medium social housing density range from 1.5 to 4.4 percent. And communities with low social housing density range from 0 to 1.5 percent.

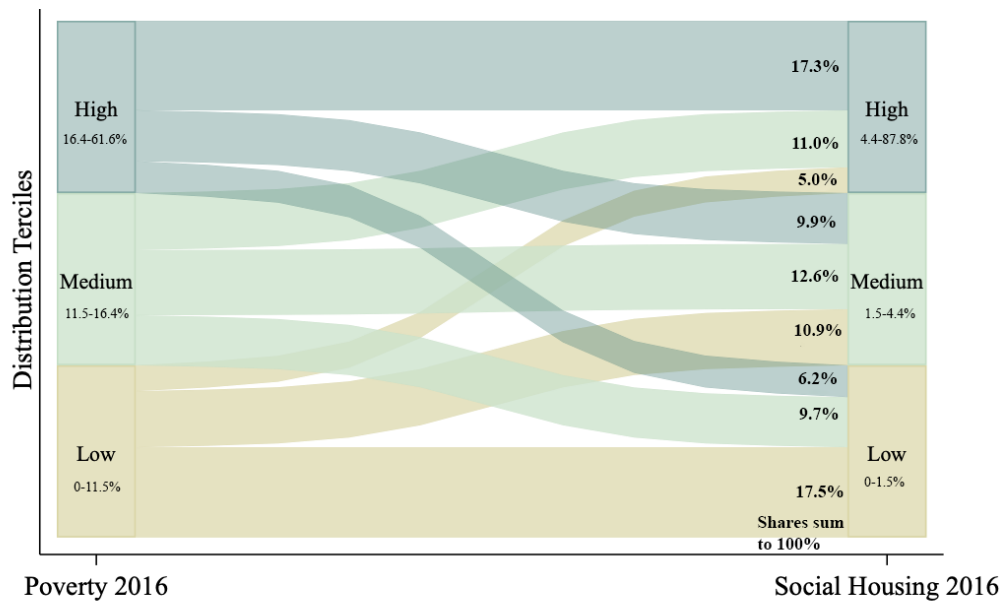
Figure 3 allows us to depict the correlations between income poverty and social housing density for nine pairings. On the left-hand side are the communities in three groups based on their 2016 poverty rates. The poverty rates range between 0 and 62 percent. The bottom tercile depicts communities with poverty rates up to 12 percent. The middle tercile captures communities with poverty rates that range between 12 and 16 percent and the top tercile captures communities with poverty rates that range between 16 and 62 percent. Similarly, on the right-hand side of the figure, we group the communities based on social housing density into the following ranges: 0 to 1.5 percent (low); 1.5 to 4.4 percent (medium) and 4.4 to 88 percent (high). As is evident, the communities in one tercile, for example, low poverty, are observed with low, medium and high social housing density rates.

Using the tercile groupings of communities for each measure, the communities are distributed into nine possible pairings. Starting first with communities identified with high poverty rates, 52 percent also fall into the top (high) social housing density tercile. Thus, communities with high poverty rates and social housing density represent approximately 17 percent of all communities. Of the remaining communities with high poverty rates, 30 percent fall into the middle tercile of social housing density and the remaining 20 percent fall into the lowest tercile of social housing. This latter group illustrates a potential disconnect that suggests a need for further investigation—communities with poverty rates that range from 16 to 62 percent with social housing density rates that range from 0 to 1.5 percent. It may be that these communities contain a high number of households that qualify for Commonwealth rent assistance.

Of the communities that fall into the middle tercile of poverty rates, 71 percent are communities with medium to high social housing density rates. Of the communities that fall into the bottom tercile of poverty rates, 85 percent are in the low and medium tercile of social housing density rates. Overall, Figure 3 further illustrates that for many communities there is a positive correlation between poverty rates and social housing density. However, it also illustrates that there are striking differences between poverty and social housing at a community level.

Our exploration of contemporaneous correlations between social housing density and poverty provides us with a partial picture of the relationship between poverty and social housing. In the following sections, we explore changes in social housing density over time and the extent to which we observe changes in social housing density or poverty rates between 2011 and 2016.

Figure 3: Poverty and social housing density, 2016



Notes: For each axis (left and right), SA2-level communities are grouped into terciles based on the reported measure (poverty rates in 2016 for the left axis and social housing density rates for the right axis). The numbers in the figure represent the share of communities exhibiting each of the nine combinations of poverty and social housing density rates.

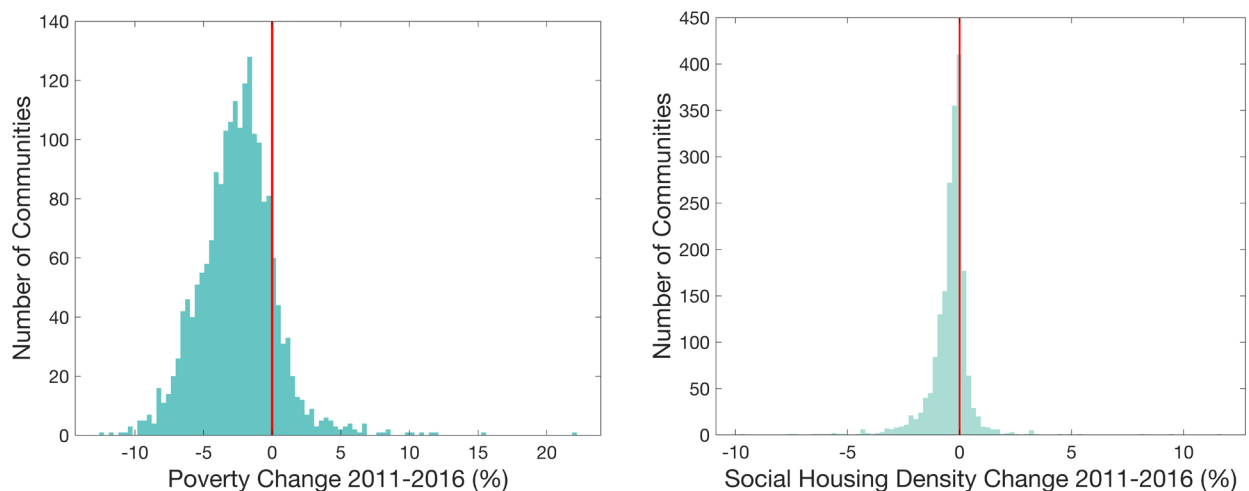
Source: Melbourne Institute staff calculations using ABS TableBuilder 2016.

How have poverty and social housing density changed over time?

Do high poverty rates result in an increase in social housing and/or do high social housing rates drive a reduction in poverty rates? With information at any given period, we might expect to observe changes that are driven by policy and/or household migration over time. In this next section, we explore the relationship between the variation over time in poverty rates and social housing density between 2011 and 2016, at the SA2 level.

We start first with changes in each measure between 2011 and 2016. Figure 4, Panel A depicts changes in income poverty rates. A negative change means that the poverty rate has decreased. Overall, the poverty rates have fallen for most communities. Panel B depicts changes in social housing density. A number that is negative also represents a decline in community social housing rates. Overall, social housing density has not changed much between 2011 and 2016. In some communities, however, the

Figure 4: Changes in poverty rates and social housing density between 2011 and 2016



Note: Communities are defined at the SA2 level. A poverty change is defined as the community poverty rate in 2016 less the community poverty rate in 2011. A Social Housing Density change is defined by the social housing density percentage in 2016 less the social housing density percentage in 2011.

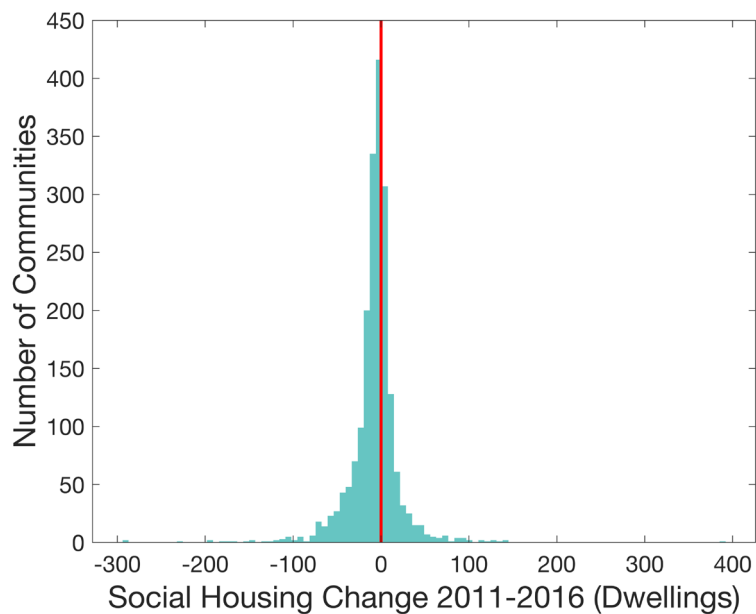
Source: Melbourne Institute staff calculations using ABS DataPacks and TableBuilder 2011-2016.

density has fallen. Given social housing density is derived using a denominator that captures the number of all housing in the community, if there is an increase in the number of private housing units, this will cause a decrease in social housing density if the number of social housing units does not keep pace with the increase in private housing units.

To explore whether the falling social housing density rate is more a function of new private housing, Figure 5 depicts the change in the

number of social housing units at an SA2 level between 2011 and 2016. Unfortunately, it appears that part of the decline in the social housing rates is a function of the number of social housing units falling. Across Australia, there were over 14,000 fewer social housing dwellings in 2016 compared to 2011. On average, the decrease amounted to a decline of 7.3 social housing dwellings per SA2. Figure 5 shows that some SA2 units experienced an increase in the stock of social housing dwellings but, overall, it was more likely for the total number of social housing units to decrease.

Figure 5: Change in social housing dwellings at the SA2 level



Note: Communities are defined at the SA2 level. A social housing change is defined by the social housing number of dwellings in 2016 less the social housing number of dwellings in 2011.

Source: Melbourne Institute staff calculations using ABS DataPacks and TableBuilder 2011-2016.

Do high poverty rates in 2011 lead to increased social housing in 2016?

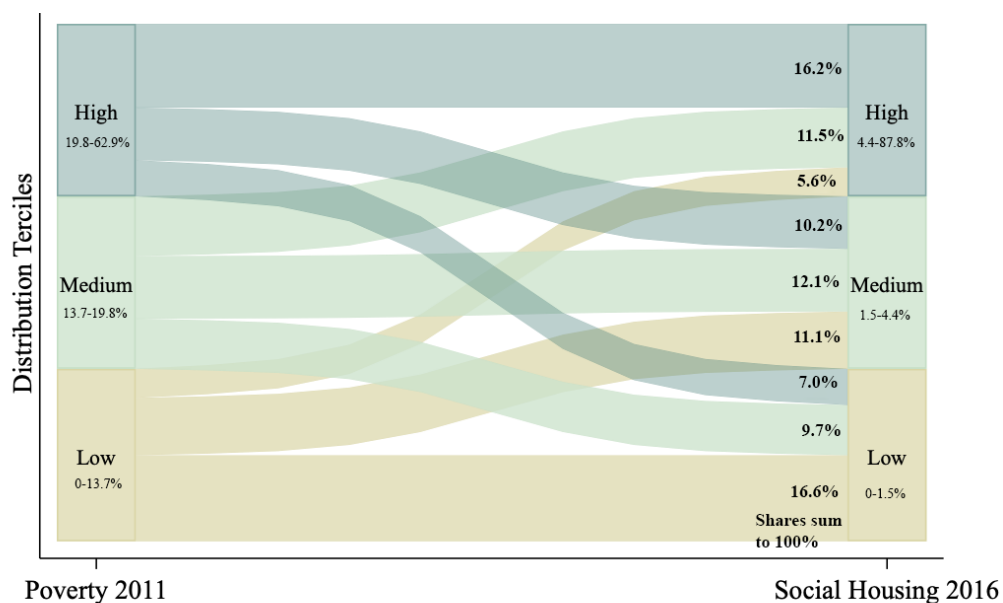
As we noted in the introduction, building new social housing units takes time and entering or exiting poverty can be more fluid. When we combine the concepts of social housing provision with poverty rates, several questions come to mind. One question is how obtaining social housing improves one's circumstances and whether this leads to improved economic circumstances, namely exiting from poverty. To explore this question further would involve using individual-level records for those observed living in social housing to explore their circumstances in future years. We leave such an analysis for a future report.

A second question we can explore, however, is whether observing high community poverty rates in 2011 leads to increased community social housing density in 2016. While social housing density has fallen between 2011 and 2016, Figure 5 demonstrates that the number of social housing units has increased for some communities.

We can explore whether the communities in which these units have increased reflect the communities with higher poverty rates.

In Figure 6 we depict 2011 poverty rates (left axis) and 2016 social housing density. Similar to Figure 3, we group the communities into three terciles. On the left they are grouped according to the 2011 poverty rate. On the right they are grouped according to the 2016 social housing density rates. For the communities in the top tercile of social housing density, the rates range between 4.4 to 87.8 percent in 2016. Approximately 49 percent of these communities exhibited high poverty rates (between 20 and 63 percent) in 2011. A further 33 percent of the communities exhibited poverty rates in the middle tercile (rates ranging between 14 and 20 percent).

Figure 6: Poverty 2011 and social housing density 2016



Notes: Communities are defined at the SA2 level. The numbers in the figure represent the share of communities exhibiting each of the nine combinations of poverty rates in 2011 and social housing density rates in 2016.

Source: Melbourne Institute staff calculations using ABS DataPacks and TableBuilder 2016.

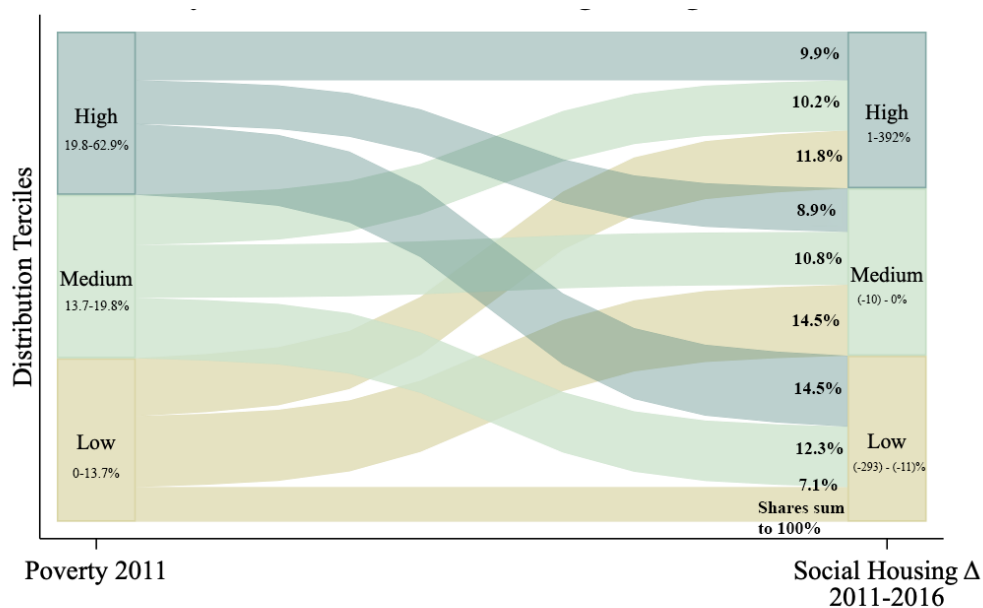
Of the communities in the middle tercile of 2011 poverty rates (between 14 and 20 percent), approximately 35 percent fall into the top tercile for social housing density in 2016 and another 35 percent fall into the middle tercile for social housing density.

Figure 7 digs a bit deeper to explore the relationship between 2011 community poverty rates and changes in the number of social housing units between 2011 and 2016. Based on the change in housing units, we group the communities on the right-hand side of the axis to reflect the change in social housing units for the community between 2011 and 2016. Those communities in the top tercile are the only communities with observed increases in social housing, from one up to as many as 392 units. Communities in the middle tercile experienced a decline from zero to -10 units. Communities in the bottom tercile experienced a decline from -11 to -293 units.

The communities that fall into the top tercile of communities based on an increase in social housing are not all from the communities that exhibited the highest poverty rates in 2011. Only 30 percent of the communities with the highest poverty rates (top tercile) fall into the top tercile of communities with the highest increase in social housing units. Notably, 44 percent of the top tercile poverty communities in 2011 are identified as falling in the bottom tercile of communities based on changes in social housing units. This finding begs an understanding of how a community with a high poverty rate in 2011 is observed with lower social housing units in 2016.

Taken together Figures 6 and 7 illustrate that linking decisions on the building or transformation of units for social housing with information on income poverty could be a critical component in addressing the risk of entering poverty and/or supporting exit from poverty in Australia.

Figure 7: Poverty (2011) versus changes in social housing density—2016-2011



Notes: Communities are defined at the SA2 level. The numbers in the figure represent the share of communities exhibiting each of the nine combinations of poverty rates (2011) and change in social housing units (2016 less 2011).

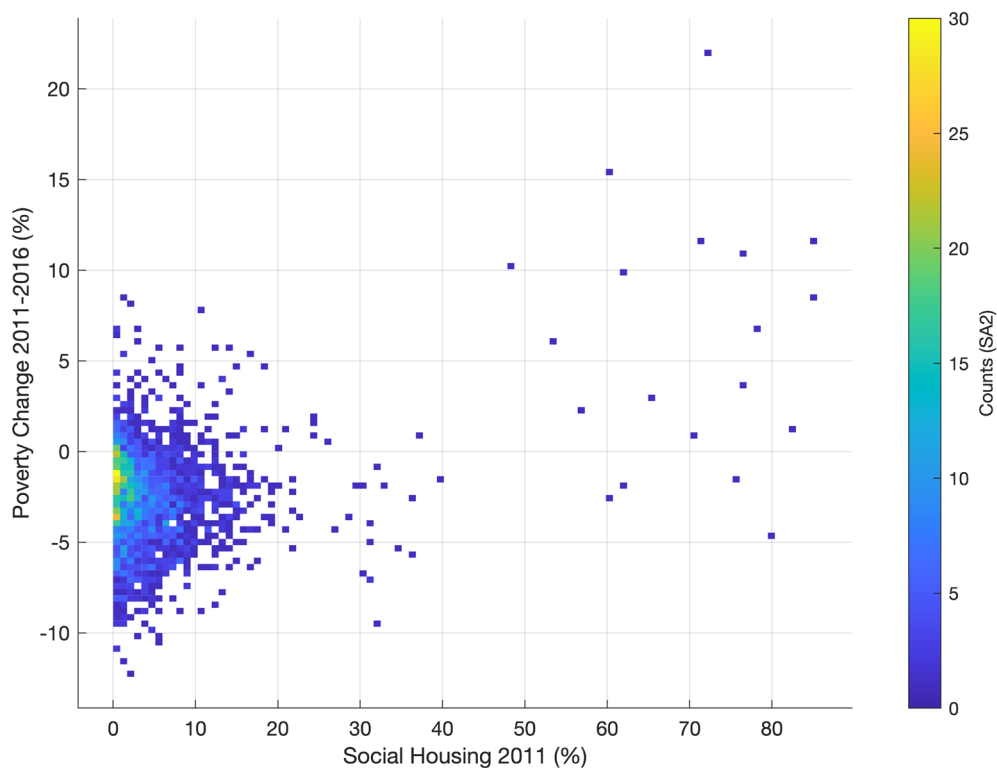
Source: Melbourne Institute staff calculations using ABS DataPacks and TableBuilder 2016.

Does high social housing density in 2011 lead to decreased poverty rates in 2016?

Finally, we explore the relationship between social housing density in 2011 and changes in poverty rates between 2011 and 2016. Recall that qualifying for social housing includes an assessment of income (and wealth). Thus, only the lowest-income households can live in social housing. Moreover, once a house has been built, while one family moves out a new family will move in. As such, not finding a decrease in poverty rates may not occur in areas with high social housing density. Social housing,

however, can take many forms. One is to provide temporary or transitory assistance. A second would be to provide medium- or longer-term assistance. In communities with social housing that offers this latter type of assistance, we might indeed observe a decrease in poverty rates over time. We explore the relationship between social housing density in 2011 and poverty rates in 2016 in Figure 8.

Figure 8: Change in poverty between 2011 and 2016 versus social housing density in 2011



Note: Communities are defined at the SA2 level. Poverty change is defined as the community poverty rate in 2016 less the community poverty rate in 2011.

Source: Melbourne Institute staff calculations using ABS DataPacks and TableBuilder 2016.

Higher social housing density in 2011 is associated with a decrease in poverty between 2011 and 2016 once we exclude extreme outlying communities. Figure 8 displays the joint distribution of the change in poverty rates and 2011 social housing density rates. A high proportion of communities saw a drop in poverty rates during this period. Focusing first on the communities with social housing density rates that range from 0 to 10 percent, there are a number where poverty rates increased even though overall poverty rates fell between 2011 and 2016. Moving to the communities with social housing density rates between 10 and 20 percent, it appears that only a handful of the communities experienced increasing poverty. For almost all communities with social housing rates between 20 and 40 percent, poverty fell. Unfortunately, most of the communities with the highest share of social housing density experienced an increase in poverty rates. The last finding highlights the importance of exploring at a community level the factors that contribute to high poverty rates given social housing represents only one of these factors.

Figure 8 illustrates the importance of looking at disaggregated data and whole distributions rather than a single statistic to draw conclusions. If we were to blindly compute the correlation between the poverty change between 2011 and 2016, and social housing density in 2011, we would find a positive correlation of 0.23 driven by the few outliers displaying both high levels of poverty increase and social housing density. By looking at the joint distribution we can see that higher social housing density is associated with a decrease in poverty.

Conclusion

This report offers initial evidence to address some questions relating to social housing as a policy tool to reduce or prevent poverty. We find that:

1) Not all areas with higher poverty rates are matched with higher social housing density. The positive geographical correlation between social housing density and poverty in some areas is an early indication that social housing is effectively targeting populations in need. However, the variation in social housing between areas with similar poverty rates is an indication that either social housing is not targeting populations in need, or that it did in the past, and those locations thrived.

2) Both poverty rates and social housing density decreased in Australia between 2011 and 2016. The decrease in social housing density, however, may be attributable to an increase in the number of private housing units built during this period. If we focus solely on the change in the number of social housing units, the stock fell in 61 percent of communities (SA2), remained the same in 7 percent, and increased in 32 percent. On average, social housing units decreased by more than 7 percent per SA2 community between 2011 and 2016.

3) Higher social housing density in 2011 is associated with a decrease in poverty between 2011 and 2016 once we exclude communities with high levels of poverty.

When we began this analysis, we expected to find a reasonably strong positive correlation between social housing density and poverty. We also expected to observe increases in the share of social housing units between 2011 and 2016 in communities with the highest poverty rates. While many communities reflect these expectations, many more do not fall far short. This analysis demonstrates the importance of undertaking an increased understanding of how the structure of social housing (and rent assistance, more broadly) is promoting a decrease in poverty rates and an off-ramp from poverty and disadvantage.

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About

Melbourne Institute: Applied Economic & Social Research

The Melbourne Institute: Applied Economic & Social Research is a research-only, academic department in the Faculty of Business and Economics at the University of Melbourne. With 60 years' experience as a distinguished economic and social policy research institution, the Melbourne Institute has a long-standing engagement with Australian economic and social policy, informing and shaping policy by using economic frameworks supported by its strength in building data and undertaking rigorous statistical analysis. The Melbourne Institute has expertise in data analysis, survey methodology, running field experiments and randomised control trials, and working with administrative and proprietary data. The Melbourne Institute is home to over 50 accomplished researchers with international reputations for publishing in top academic journals as well providing high-quality, independent and impartial applied research for government, business and community groups.

The Melbourne Institute works closely with Commonwealth and state departments to establish key economic and social policy questions to study, to design improved policies or interventions, and to evaluate the impact of these new policies and interventions. Over the last 60 years, the Melbourne Institute has undertaken many meaningful research projects with significant impact. Working with the Department of Social Services, the Household, Income and Labour Dynamics in Australia (HILDA) survey is Australia's world-renowned household survey that has been undertaken since the early 2000s. At the onset of the COVID-19 pandemic, researchers recognised the lack of information available on how Australia was coping with the pandemic from a social and economic perspective. This resulted in the commencement of the Taking the Pulse of the Nation (TTPN) survey, which has quickly become a key source of current insights into a wide range of issues faced by Australians.

The Melbourne Institute's work in tackling poverty and disadvantage harks back to its founding director, Ronald Henderson. We continue to seek to understand and find solutions for ending poverty in Australia on a number of fronts. This includes a partnership with the Paul Ramsay Foundation, serving as the Melbourne node of the ARC Centre of Excellence for Children and Families over the Life Course (The Life Course Centre), targeted projects such as involvement in the evaluation of Early Years Education Programs in Victoria and Queensland, and evaluations of social housing programs in New South Wales. In recent years, the Melbourne Institute's work has also expanded beyond Australia to include a range of studies to better understand disadvantage in the Asia-Pacific region.

As Australia has moved towards a consensus of wanting more evidence-based analysis and policy-making, the Melbourne Institute has evolved to include as part of its suite of data and analytics services the creation of the secure Melbourne Institute Data Laboratory for the purposes of creating, housing, curating and analysing data. Through this laboratory, the Melbourne Institute is paving the way for stronger collaboration with data custodians to ensure analysts from a range of organisations will have better and more timely access to data through the creation of shared data environments.

Breaking Down Barriers

The Breaking Down Barriers report series provides in-depth analyses of questions that will help us to better understand the challenges faced by individuals, families, communities and governments that affect the existence and persistence of deep and entrenched poverty and disadvantage in Australia. The analyses have been undertaken by Melbourne Institute researchers and utilise economic and statistical techniques, which involves developing shared data environments to study disadvantage and developing data visualisations.

This report has been produced as part of an ongoing partnership between the Paul Ramsay Foundation and the Melbourne Institute with the goal of informing and shaping policy and practice to break cycles of disadvantage. This includes improving our understanding of the extent, nature and causes of socio-economic disadvantage in Australia and encouraging solutions that enable program development and policy innovation that foster opportunity and reduce poverty and disadvantage.

Paul Ramsay Foundation

The Paul Ramsay Foundation seeks to identify and partner with individuals, communities and organisations working to create an Australia where people can overcome disadvantage and realise their potential.

The late Paul Ramsay AO established the Foundation in 2006 and, after his death in 2014, left the majority of his estate to continue his philanthropy for generations to come.

His commitment to good works has allowed the Paul Ramsay Foundation to support the for-purpose sector with grants of more than \$350 million made since 2016 to more than 90 different partners, committed as the Paul Ramsay Foundation is to achieving lasting change.

About the Authors

Professor A. Abigail Payne

Professor A. Abigail Payne has been the Director and Ronald Henderson Professor at the Melbourne Institute: Applied Economic & Social Research since 2016. A driving force behind Dr Payne's work is the use of data and statistics to inform economic policy, especially in the area of public economics. Her research covers (a) the effects of policy on educational outcomes, transitions in schooling, gender differences in educational attainment, and student performance, (b) understanding donor and charity behaviour, and (c) exploring the determinants of poverty and disadvantage in Australia and identifying mechanisms and effective policies for reducing poverty. Her research has been published in top economic and public policy journals. She is currently (during 2022) a Visiting Fellow at Hoover Institution (Stanford University, USA).

Prior to moving to Melbourne, Dr Payne was a professor of economics at McMaster University (Canada) where she was the inaugural director of MacDATA, McMaster's Big Data Institute, and the creator and director of the Public Economics Data Analysis Laboratory ("PEDAL") a secure data facility to address key public sector issues. She also has held positions at the University of Illinois and the University of Toronto, and she practised law for five years at a private law firm in Washington, DC. Previously Dr Payne was a Tier II Canada Research Chair in Public Economics, and she received a National Academy of Education/Spencer Foundation Post-Doctoral Fellowship for her research on higher education issues. Dr. Payne received her PhD from Princeton University. She holds a JD from Cornell University and a B.A. with honours from Denison University.

Professor Payne has been a driver behind the building of the Melbourne Institute Data Lab and the creation of shared data environments. She serves on many committees in Australia and internationally. This includes serving as a member of the Australian Statistics Advisory Council, chair of the ifo Institute's Scientific Advisory Council, co-editor of *Economic Inquiry*, member of the Asian and Australasian Society of Labour Economics Board, panel member of the Department of Treasury's Macroeconomic Group Economic Advisory Panel, member of the Go8 Economics Experts Panel, and board member of Brotherhood of St Laurence and University of Melbourne Partnership Board. During the pandemic she also served on ad-hoc committees for the City of Melbourne Economic Strategy and the Department of Premier and Cabinet (Victoria) Vulnerable Indices.

Professor Payne's projects include being the project lead for the Paul Ramsay Foundation Breaking Down Barriers Shared Data Environment, being a chief investigator for the ARC-COE Life Course Centre, developer of a partnership with Roy Morgan Research, part of a team that leads the development of the *Taking the Pulse of the Nation* survey, and an investigator on projects funded by the Austral Data Research Commons. She also has projects through the Lord Mayor's Charitable Foundation, the Victorian Department of Premier and Cabinet and the Victorian Department of Education.

Dr Miguel Ruiz

Dr Miguel Ruiz has been a Research Fellow at the Melbourne Institute: Applied Economic & Social Research since 2022. He specialises in the use of data and econometric analysis to answer questions of academic and public policy interest. His policy research focuses on fields that tackle disadvantage in Australia, including social housing and criminal justice. Dr. Ruiz is also the chief investigator in a partnership between the University of Melbourne and the World Bank studying the expansion of compulsory education in Indonesia.

Dr Ruiz's academic research interests include the effect of policy on education outcomes, the impact of social housing on disadvantage, and the relationship between violent conflict and forced migration. In terms of methodology, Dr Ruiz is interested in applied econometrics, geographic analysis, networks, and policy evaluation.

Prior to moving to Melbourne, Dr Ruiz obtained his PhD in economics from CEMFI, with Professor Manuel Arellano and Professor Diego Puga as advisors. He has studied the impact of the Bilingual Education Program in Madrid on student outcomes in partnership with the local Department of Education. His academic research has also studied the impact of violent conflict on the displacement of people in the Middle East, and on future health outcomes in Africa.

Dr Ruiz has worked as an independent consultant for the World Bank since 2016 in the Global Practices (GP) of Education and Social, Urban, Rural & Resilience. Select projects within the Education GP include analysing the economic and financial viability of new education projects in Eastern Europe and Asia Pacific. Most recently, he has been working on projects related to early childhood education in Indonesia.

