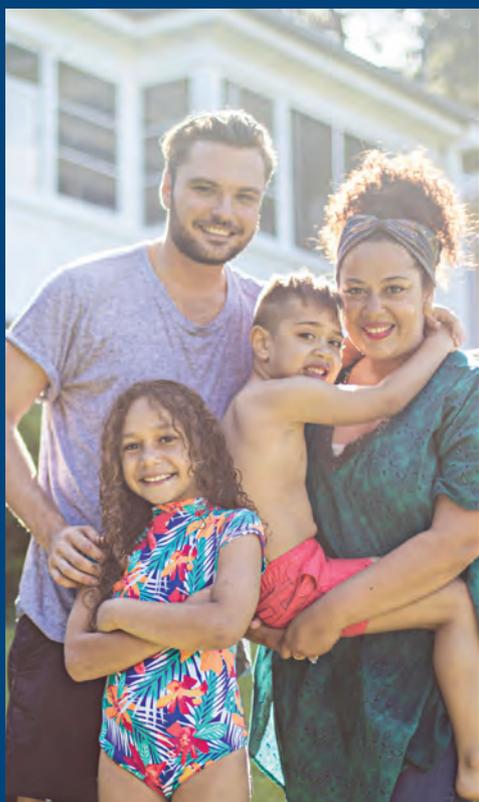


The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 18



2020



The Household, Income and Labour Dynamics in Australia (HILDA) Survey
is funded by the Australian Government Department of Social Services

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The 15th Annual Statistical Report of the HILDA Survey

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1

Introduction

Roger Wilkins

The HILDA Project

Commenced in 2001, the Household, Income and Labour Dynamics in Australia (HILDA) Survey is a nationally representative longitudinal study of Australian households. As of December 2019, 18 waves (years) are available to researchers, while this year sees the collection of the 20th wave.

The study is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne. Roy Morgan Research has conducted the fieldwork since Wave 9 (2009), prior to which The Nielsen Company was the fieldwork provider.

The HILDA Survey seeks to provide longitudinal data on the lives of Australian residents. It collects information annually on a wide range of aspects of life in Australia, including household and family relationships, child care, employment, education, income, expenditure, health and wellbeing, attitudes and values on a variety of subjects, and various life events and experiences. Information is also collected at less frequent intervals on various topics, including household wealth, fertility-related behaviour and plans, relationships with non-resident family members and non-resident partners, health-care utilisation, eating habits, cognitive functioning and retirement.

The important distinguishing feature of the HILDA Survey is that the same households and individuals are interviewed every year, allowing us to see how their lives are changing over time. By design, the study can be infinitely lived, following not only the initial sample members for the remainder of their lives, but also their children and all subsequent descendants.

Household longitudinal data, known as panel data, provide a much more complete picture than cross-sectional data because they document the life-course each person takes. Panel data tell us about *dynamics*—family, health, income and labour dynamics—rather than *statics*. They tell us about *persistence* and *recurrence*, for example, of poverty, unemployment or welfare reliance.

Perhaps most importantly, panel data can tell us about the antecedents and consequences of life outcomes, such as poverty, unemployment, marital breakdown and poor health, because we can see the paths that individuals' lives took prior to those outcomes and the paths they take subsequently. Indeed, one of the valuable attributes of the HILDA panel is the wealth of information on a variety of life domains that it brings together in one dataset. This allows us to understand the many linkages between these life domains; to give but one example, we can examine how the risk of poor economic outcomes depends on an individual's health.



Panel data are furthermore valuable because, in many cases, they allow causal inferences that are more credible than those permitted by other types of data. In particular, statistical methods known as ‘fixed-effects’ regression models can be employed to examine the effects of various factors on life outcomes such as earnings, unemployment, income and life satisfaction. These models can control for the effects of stable characteristics of individuals that are typically not observed, such as innate ability, motivation and optimism, that confound estimates of causal effects in cross-sectional settings.

With 18 waves of data now available (and the 20th wave being collected this year), the HILDA Survey is also now becoming a sufficiently long-running panel to enable very long-term analyses, including studies of intergenerational linkages. For example, as is examined in this year’s report, it is possible to examine whether children who have poor parents when growing up are themselves more likely to be poor as adults, and to investigate the drivers of any such linkage.

This report

This report presents brief statistical analyses of the first 18 waves of the study, which were conducted between 2001 and 2018. The report should, of course, be viewed as containing only ‘selected findings’, providing only a cursory indication of the rich potential of the HILDA Survey data. Indeed, a large number of studies on a diverse range of topics has been undertaken by researchers in Australia and internationally over the years since data from the first wave of the HILDA Survey was released in January 2003. Further details on

the publications resulting from these studies are available on the HILDA Survey web site at <<http://melbourneinstitute.unimelb.edu.au/hilda/publications/>> and at <<http://flosse.dss.gov.au/>>.

Most of the analysis presented in this report consists of graphs and tables of descriptive statistics that are reasonably easy to interpret. However, several tables in this report contain estimates from regression models. These are less easily interpreted than tables of descriptive statistics but are included because they are valuable for better understanding the various topics examined in the report. In particular, a regression model provides a clear description of the statistical relationship between two factors, *holding other factors constant*. For example, a regression model of the determinants of earnings can show the average difference in earnings between male and female employees, holding constant other factors such as age, education, hours of work and so on (that is, the average difference in earnings when men and women do not differ in other characteristics). Moreover, under certain conditions, this statistical association can be interpreted as a causal relationship, showing the effects of the ‘explanatory variable’ on the ‘dependent variable’. Various types of regression models have been estimated for this report and, while these models are not explained in depth, brief outlines of the intuition for these models and how to interpret the estimates are provided in the Technical Appendix.

The Technical Appendix also provides details on the HILDA Survey sample and the population weights supplied in the data to correct for non-response and attrition. These weights are used in all analysis presented in this

report, so that all statistics represent estimates for the Australian population. Note also that the estimates based on the HILDA Survey, like all sample survey estimates, are subject to sampling error. As explained in more detail in the Technical Appendix, for tabulated results of descriptive statistics, we have adopted an Australian Bureau of Statistics convention and marked with an asterisk (*) estimates that have a relative standard error—the standard error relative to the size of the estimate itself—of more than 25%. Note that a relative standard error that is less than 25% implies there is a greater than 95% probability the true quantity lies within 50% of the estimated value. For regression model parameter estimates presented in this report, estimates that are not statistically significantly different from 0 at the 10% level are not reported and instead ‘*ns*’ (not significant) appears in place of the estimate. Estimates that are statistically significant at the 10% level have a probability of *not* being 0 that is greater than 90%.

A further word

This year is a particularly unusual one, in which—as a result of the coronavirus pandemic—many of the findings from the HILDA Project presented in this report may seem to belong to a different world from the one we now inhabit. That is not an unreasonable lens to apply to the findings. However, it is important that, in documenting the ‘story of Australia’, we have a good understanding of that story prior to the arrival of this unprecedented event. Only then will we be able to interpret properly the impact of the virus and make informed decisions about the best way forward in our post-pandemic future.

2

Households and family life

Esperanza Vera-Toscano

The HILDA Survey has examined many aspects of family life since its inception in 2001. In this chapter analyses are presented for the 2001 to 2018 period on three different aspects of family life. First, we look at the changing living arrangements of Australians, as described by the household types in which they live. Second, we take the perspective of children and study their family circumstances and how these change over time, as well as the type of care each child experiences. Particular attention is paid to the use and cost of paid child care and how this relates to mothers' labour force participation. Last, we explore the prevalence and characteristics of break-ups of intimate co-resident relationships.

Household dynamics, 2001 to 2018

Table 2.1 considers the evolution of household types (as described in Box 2.3, page 10) over the 2001 to 2018 period, with every second year being displayed after 2002. It shows the proportion of individuals in each of 11 household types classified according to the nature of the family resident in the household and whether other related and unrelated people reside in the household (see Boxes 2.1, 2.2 (below) and 2.3 (page 10)).

In broad terms, the distribution of household types has been relatively stable across the 18-year period. A household containing a couple with dependent children (and no-one else) has remained the most common household type, with approximately 41% to 42% of individuals living in this household type across the entire period. Households containing a couple (and no children) have remained the second-most common household type, accounting for approximately 20% to 21% of individuals. Single-parent households have been the third most common household type,

Box 2.1: Dependent children

The definition of a dependent child used in this report is based on the Australian Bureau of Statistics' (ABS) approach (see ABS, 1995). According to this definition, a dependent child is: (1) any child under 15 years of age; or (2) a child aged 15 to 24 who is engaged in full-time study, living with one or both parents, not living with a partner, and who does not have a resident child of their own. Note that the definition of a child is based on social rather than biological parenthood, and that, in couple families, it is sufficient to be a child of only one member of the couple.

Box 2.2: Single parents

The definition of a single parent used in this report follows the Australian Bureau of Statistics' (ABS) concept of a single parent (see ABS, 1995). Based on this definition, a single parent is a person who has no spouse or partner usually resident in the household but who forms a parent-child relationship with at least one (dependent or non-dependent) child usually resident in the household. This does not preclude a single parent having a partner living in another household. However, a person who reports being legally or de facto married will not be classified as a single parent even if the partner is not usually resident in the household.



Table 2.1: Proportion of individuals in each household type, 2001 to 2018 (%)

	2001	2002	2004	2006	2008	2010	2012	2014	2016	2018	Change 2001 to 2018
<i>Couple with children</i>	52.4	52.1	52.7	53.0	52.7	52.8	51.3	50.8	50.3	51.1	-1.3
Couple with dependent children	41.4	41.8	41.5	41.4	40.3	40.9	40.6	41.1	40.6	40.8	-0.6
Couple with dependent children and others ^a	2.4	1.9	1.8	1.9	2.6	3.0	2.7	2.0	1.7	1.8	-0.6
Couple with non-dependent children, with or without others ^a	8.5	8.4	9.3	9.7	9.8	8.9	8.1	7.7	8.0	8.4	-0.1
<i>Couple without children (with or without others^a)</i>	20.4	20.5	20.6	20.6	20.7	21.0	21.2	21.2	21.1	20.5	0.1
<i>Single-parent household</i>	11.4	11.9	12.1	11.4	12.1	11.9	11.3	11.8	12.5	11.9	0.6
Single parent with dependent children	6.9	7.3	7.2	6.7	6.7	6.3	6.7	6.7	6.8	6.4	-0.5
Single parent with dependent children and others ^a	1.5	1.4	1.3	1.0	1.3	1.5	1.1	1.2	1.3	1.1	-0.4
Single parent with non-dependent children, with or without others ^a	2.9	3.2	3.6	3.7	4.1	4.1	3.6	3.9	4.4	4.4	1.5
<i>Single person</i>	9.5	9.4	9.3	9.2	9.3	9.4	9.5	9.6	9.7	9.9	0.4
<i>Other household type</i>	6.4	6.1	5.3	5.9	5.2	5.0	6.7	6.5	6.5	6.7	0.3
Other family household	1.1	1.3	1.3	1.1	0.9	1.0	1.3	1.3	1.1	1.3	0.1
Multiple-family household	2.7	3.0	2.6	3.6	3.2	2.7	3.9	4.1	4.4	4.1	1.4
Group household	2.5	1.8	1.4	1.3	1.1	1.3	1.5	1.1	0.9	1.3	-1.3
Total	100.0										

Notes: ^a 'Others' comprises related people as well as unrelated people. If dependent children are present, the household could (and often will) include non-dependent children. Cells may not add up to column totals due to rounding.



accounting for approximately 10% to 12% of individuals, while the fourth position in the ranking is for people living alone (that is, the single household type) with around 10% of individuals.

Some notable trends are nonetheless evident. The proportion of people living in multiple-family households has

risen by 1.4 percentage points to 4.1% in 2018. Couple households with dependent children, with or without other household members, have collectively declined by 0.6 percentage points. Single parents with dependent children (with or without others) have also declined, by 0.4 and 0.5 percentage points respectively,

but single parents with non-dependent children (and no dependent children) have increased by 1.5 percentage points. In contrast, the proportion of people living in group households has shrunk by 1.3 percentage points, although most of the decrease occurred between 2001 and 2003.

Changes in household structure

While the proportion of individuals in each household type remained quite stable over this 18-year period, the household type for many individuals would have changed at least once during this time. Individuals may have moved in with a partner or separated from a partner, or they may have given birth to a child, or had an adult child leave the family home. Adult children may move back in with their parents, and elderly parents may go to live in one of their children's households. Individuals in group

households may move out and form a single-person household, and individuals in single-person households may move in with unrelated people.

Changes in household structure at the individual level over various time-frames are shown in Table 2.2. The different panels show changes in household type from 2001, examining time-frames of one year (2001 to 2002), five years (2001 to 2006), 10 years (2001 to 2011) and 17 years (2001 to 2018). Each row of the table shows, for each initial household type, the proportion of individuals in each household

type in the subsequent year under examination. For example, the first row of the table shows that, for individuals in couple-family-with-children households in 2001, in the next year (2002) 91.5% were still in that household type, while 3.1% were in couple-without-children households, 2.7% were in single-parent households, 1.9% were in single-person households and 0.9% were in group, multiple-family or other-family household types.

Couple families, with or without children, are the most persistent household type over a one-year time-frame, with 90% or more of

Table 2.2: Changes in household type of individuals over various time-frames (%)

<i>Household type in 2002</i>						
<i>Household type in 2001</i>	<i>Couple with children</i>	<i>Couple without children</i>	<i>Single-parent household</i>	<i>Single person</i>	<i>Other household type</i>	<i>Total</i>
Couple with children	91.5	3.1	2.7	1.9	0.9	100.0
Couple without children	4.4	91.9	0.2	2.5	1.1	100.0
Single-parent household	8.7	1.7	81.3	6.0	2.4	100.0
Single person	1.6	4.9	1.7	89.6	2.2	100.0
Other household type	11.1	11.5	2.9	14.0	60.6	100.0
<i>Household type in 2006</i>						
<i>Household type in 2001</i>	<i>Couple with children</i>	<i>Couple without children</i>	<i>Single-parent household</i>	<i>Single person</i>	<i>Other household type</i>	<i>Total</i>
Couple with children	73.3	11.6	6.1	5.8	3.2	100.0
Couple without children	15.7	73.8	1.0	8.7	0.8	100.0
Single-parent household	18.4	5.3	58.6	14.3	3.3	100.0
Single person	5.8	10.8	2.6	79.0	1.8	100.0
Other household type	15.8	24.4	10.8	22.0	27.0	100.0
<i>Household type in 2011</i>						
<i>Household type in 2001</i>	<i>Couple with children</i>	<i>Couple without children</i>	<i>Single-parent household</i>	<i>Single person</i>	<i>Other household type</i>	<i>Total</i>
Couple with children	59.4	20.2	8.1	8.8	3.6	100.0
Couple without children	20.2	64.5	1.9	12.7	0.7	100.0
Single-parent household	21.7	10.5	41.7	20.0	6.1	100.0
Single person	12.1	12.8	3.2	70.3	1.6	100.0
Other household type	34.4	22.1	8.4	19.2	15.9	100.0
<i>Household type in 2018</i>						
<i>Household type in 2001</i>	<i>Couple with children</i>	<i>Couple without children</i>	<i>Single-parent household</i>	<i>Single person</i>	<i>Other household type</i>	<i>Total</i>
Couple with children	46.1	28.5	7.8	12.9	4.7	100.0
Couple without children	23.0	55.1	3.6	17.6	0.7	100.0
Single-parent household	23.8	15.9	21.6	31.7	7.1	100.0
Single person	17.5	14.6	4.2	62.1	1.7	100.0
Other household type	40.6	20.2	11.0	21.4	6.8	100.0

Note: Cells may not add up to row totals due to rounding.



individuals in those household types in the same household type one year later. Single-person households are also highly persistent from one year to the next, with just under 90% of people in single-person households still in that household type one year later. The category comprising group, other related-family and multiple-family households is the least persistent from one year to the next: only 60.6% of those in one of these household types in 2001 were still in one of those household types in 2002.

As might be expected, individuals are more likely to change household types over five years than over one year and are even more likely to change household types over 10, 15 and 17 years. Significantly, over the longer time-frames, the single-person household type is clearly the most persistent household type. For example, of those in single-person households in 2001, 70.3% were in that same household type 10 years later. This compares with 10-year persistence rates of 64.5% for couples without children, 59.4% for couples with children, 41.7% for single-parent

families and only 15.9% for the 'other household type' category. While persistence of household types declines over longer time-frames, it necessarily follows that people are more likely to transition from each household type to another as the time-frame increases. For example, of those people in couple-without-children households in 2001, 4.4% were in couple-with-children households in 2002, 15.7% were in couple-with-children households in 2006, 20.2% were in couple-with-children households in 2011 and 23.0% were in couple-with-children households in 2018. The relative frequencies of transitions from each household type to each other household type are, however, reasonably stable across the time-frames examined in Table 2.2. For example, for all time-frames examined in the table, the most common transition from both couple-with-children and single-person households was to couple-without-children households, while the most common transition from both couple-without-children and single-parent households was to couple-with-children households. Indeed, the ordering from most-

common to least-common transitions is the same across all five panels of Table 2.2 for these household types.

An exception to the finding that the most common type of transition for each household type is insensitive to the time-frame is the pattern evident for the 'other household type' category. The most common transition from this category depends on the time-frame examined: between 2001 and 2002, the most frequent transition was to a single-person household; between 2001 and 2006, it was to a couple-without-children household; and between 2001 and 2011, it was to a couple-with-children household with the latter being the most common transition also between 2001 and 2016 and 2001 and 2018. This result may be driven by young adults, some of whom may initially move from a group household to a single-person household (within one year), move in with a partner (within five years), and then have a child (within 10 years or more).

Changes in household structure are, of course, possible without any change in household type

occurring. For example, a couple with children may have another child, or those with more than one child may have one of their children leave home.

In Table 2.3, a broader range of changes to household structure is considered. The table shows the proportion of the population (including children under 15 years of age) experiencing various changes in household composition over various time-frames. The first row presents the proportion of people experiencing any change to household composition, whether this arises from the individual moving or from another person entering or leaving that person's household. The remaining rows present the proportion of people experiencing particular changes to household composition: partnering, separation of partners, birth of a child, child moving out, child moving in, death of a household member, other source of increase in household size and other source of decrease in household size.

Changes are examined over one, five, 10 and 17 years from 2001. The one-year estimates are constructed by comparing an individual's household composition in 2001 with that individual's household composition in 2002. The multiple-year estimates are constructed in a similar fashion, but in this case, we examine the changes occurring between every wave within the time-frame being

Box 2.3: Classification of household types

The comprehensive information in the HILDA Survey data on the composition of each household and the relationships between all household members allows for complete flexibility in defining household types. In this chapter, the following 11 household types are distinguished:

- (1) Couple with dependent children
- (2) Couple with dependent children and others
- (3) Couple with non-dependent children, with or without others
- (4) Single parent with dependent children
- (5) Single parent with dependent children and others
- (6) Single parent with non-dependent children, with or without others
- (7) Couple, with or without others
- (8) Single person
- (9) Other-family household
- (10) Multiple-family household
- (11) Group household

In interpreting these categories, note the following:

- The classification system is hierarchical, giving primacy to dependent children: a couple or single parent with non-dependent children (categories 3 and 6) will not have any dependent children, whereas a couple or single parent with dependent children and others—categories 2 and 5—may have non-dependent children. Consequently, the definition of 'others' (in categories 2, 3, 5, 6 and 7) depends on the household type. For couples with dependent children and single parents with dependent children, 'others' can include non-dependent children, other related people of the couple or single-parent (including siblings and parents) and unrelated people. For couples with non-dependent children and single parents with non-dependent children, 'others' can include other related people and unrelated people (but not dependent children). In a couple household, 'others' comprises related people other than children as well as unrelated people.
- A couple comprises a married or de facto married couple, whether opposite sex or same sex.
- A dependent child is as defined in Box 2.1 (page 6), while a non-dependent child is any other child who is living with one or both parents. Note, however, that a person will never be classified as a non-dependent child if they are living with a partner or a child of their own. (While a non-dependent child can in principle be of any age from 15 years upwards, 90% are aged under 40.)
- An 'other family' household is any other family not captured by categories 1 to 7, such as households with siblings living together (and not living with parents or any of their own children).
- A multiple-family household is one in which there are two or more of the family types itemised (categories 1 to 7 and 9).
- A group household consists of two or more unrelated people (none of whom is residing with a related person).
- For an individual to be classified as a member of the household, in most cases the individual must reside in the household at least 50% of the time. Consequently, dependent children in a 'shared care' arrangement who reside in the household less than 50% of the time are not treated as members of the household.

In some of the analysis presented in this report, individuals are classified according to family type (see Box 3.4, page 31) rather than household type. Family type and household type are in many cases the same but diverge when households contain people who are not all part of the same nuclear family or when non-dependent children live with their parents.



Table 2.3: Proportion of individuals who experienced a change to their household membership subsequent to 2001 (%)

	<i>Length of time since 2001</i>			
	<i>1 year</i>	<i>5 years</i>	<i>10 years</i>	<i>17 years</i>
Household had a change in membership	23.6	52.5	66.7	77.7
Household size increased	7.8	29.5	44.4	57.0
Household size decreased	13.0	38.6	54.9	68.6
<i>Nature of change in household membership</i>				
Partnering	3.3	13.1	23.4	34.0
Separation	2.2	10.2	17.1	24.6
Birth of a child	4.9	13.2	19.9	27.5
Child moving out of parent home	11.6	34.8	50.2	63.1
Child moving into parent home	3.9	14.6	23.6	32.4
Death of a household member	0.5	2.5	4.8	7.6
Other source of increase in household size (entry)	1.6	5.9	11.3	16.2
Other source of decrease in household size (exit)	3.5	8.8	13.7	19.3

examined. For example, to examine changes in household composition between 2001 and 2006 (a five-year time-frame) changes in the individual's household membership are examined between Waves 1 and 2, between Waves 2 and 3, between Waves 3 and 4, between Waves 4 and 5, and between Waves 5 and 6. It is therefore possible for an individual to have both an increase and a decrease in household size over multiple-year time-frames, and indeed it is possible for an individual to experience all of the changes examined in the table in any given time-frame of six or more years—including both partnering and separation.¹

From 2001 to 2002, approximately 23.6% of people experienced at least one change in household composition, be it through someone leaving the household or by someone joining

the household. Over the five-year period from 2001, slightly more than half of the population experienced at least one change in household composition (52.5%), while 67% experienced a change over 10 years, and 88.4% experienced a change between 2001 and 2018.

The lower panel of the table identifies the more obvious sources of changes in household composition—partnering, separation, birth of a child, a child moving into or out of the parental home and death of a household member—although it is clear that there are other significant sources of change in household composition, as reflected by the proportions experiencing 'other' sources of increase or decrease in household size. These would include moves of other related family members as well as moves of unrelated people.

The most important driver of changes in household composition, be it over one, five, 10 or 17 years, is change related to children in the household. The single most common source of change in the composition of an individual's household is a child leaving the parental home, with approximately 11.6% of individuals experiencing this source of change to the composition of their household between 2001 and 2002, and approximately 63.1% experiencing it at some stage between 2001 and 2018.

Children moving (back) into the parental home and the birth of children are also important sources of change in household composition.² Over a one-year period, partnering and separation are relatively unimportant sources of change in household composition, with 'other source of decrease in household size', in particular, more important

¹ Note that changes in household composition that occur between waves will not be captured by Table 2.3 if they are reversed between those waves. For example, no change in household composition occurs if an individual separates from their partner subsequent to being interviewed in one wave and then re-partners with that same person prior to the next wave's interview. The extent to which the prevalence of changes is underestimated will, moreover, differ across the different types of changes to household composition. For example, movements of children into and out of the parental home are more likely to be missed than births. Also note that the estimates in Table 2.3 relate to the population alive in all years over the time-frame under examination. For example, the estimates for changes in household membership over the 10 years following 2001 relate to the population in 2001 who were still alive in 2011.

² Note that a change in relation to children in the household will not just apply to the parents in the household; it applies to everyone who was living in the household left by the child, including the child who moves, any siblings, and any other related or unrelated people living in the household.



than separation. However, over longer time-frames (five or more years), both partnering and separation become relatively more important sources of change in household composition.

Family circumstances of children

The family circumstances of children in 2001, 2010 and 2018, disaggregated by age group, are described in Table 2.4. For all children aged under 18, in 2001, 71.5% were living with both (natural or adoptive) parents, while in 2018, 74.1% were living with both parents. The proportion of children aged under 18 living with one parent in a single-parent family was 16.1% in 2001, but had fallen to 14.4% in 2010 and 14.5% in 2018. The proportion living with

one parent and that parent's partner (a group that incorporates children living with one parent and a step-parent) was 6.2% in 2001, 6.5% in 2010 and 5.5% in 2018.

The percentage of children living with one parent in a multiple-family household (grandparents or other relatives) has remained relatively stable across time, at 4.2% in 2001 and 4.4% in 2018. Last, children under 18 living with neither parent accounted for 2.1% of all children in 2001, 1.7% of all children in 2010 and 1.6% of all children in 2018.

The proportion living with both parents is highest for children aged under 6 and lowest for children aged 13 to 17, which is consistent with most children initially living with both parents and then some parents subsequently separating as the children get older. Furthermore, while the proportion living with

one parent and that parent's partner is the smallest for children aged less than 6, it increases for children aged 6 to 12 and increases again for children aged 13 to 17. These patterns are consistent with individuals who become single parents subsequently re-partnering with a new partner, which—because of the inherent sequencing of these events—means older children are more likely to be living with one parent and that parent's partner.

The dynamics of the different family situations of children are examined in Table 2.5. The table shows, for each initial living arrangement, and for children initially aged under 6 and 6 to 12, the proportion of children subsequently in each living arrangement five years later. The estimates in bold on the main diagonal of each panel show the proportion remaining in the same living arrangement, and therefore

Table 2.4: Family circumstances of children, by age group, 2001, 2010 and 2018 (%)

	Age group			All aged under 18
	Less than 6	6–12	13–17	
<i>2001</i>				
Both parents	78.1	68.5	66.0	71.5
One parent in single-parent household	14.9	18.7	14.6	16.1
One parent and that parent's partner	2.6	7.9	9.3	6.2
One parent in multiple-family household	3.7	3.3	5.9	4.2
Neither parent	0.8*	1.7	4.3	2.1
Total	100.0	100.0	100.0	100.0
<i>2010</i>				
Both parents	82.6	69.2	63.3	72.9
One parent in single-parent household	11.8	16.0	16.1	14.4
One parent and that parent's partner	2.4	8.45	10.2	6.5
One parent in multiple-family household	2.5	4.7	7.0	4.5
Neither parent	*0.7	*1.6	3.4	1.7
Total	100.0	100.0	100.0	100.0
<i>2018</i>				
Both parents	82.0	72.5	63.5	74.1
One parent in single-parent household	11.7	14.8	18.5	14.5
One parent and that parent's partner	2.3	6.9	8.9	5.5
One parent in multiple-family household	3.2	4.2	6.4	4.4
Neither parent	0.9	1.3	2.8	1.6
Total	100.0	100.0	100.0	100.0

Notes: * Estimate not reliable. Cells may not add up to column totals due to rounding.



measure persistence of each living arrangement.

The most stable arrangement for children is living with both parents. Among children initially living with both parents, approximately 89% of children initially aged under 6 and 90.5% of children initially aged 6 to 12 are still in this living situation five years later. The living arrangements involving living

with only one parent (with or without a partner) have similar degrees of persistence.

For children initially living with both parents, the most common transition is to a single-parent household, applying to 7.8% of children initially aged under 6 and to 6.0% of children initially aged 6 to 12. This is also the most common transition for children initially living with one parent and

their partner. Children initially living in a single-parent household most commonly transition to living with one parent and their partner, although the transition to living with both parents is relatively common for children initially aged under 6, while the transition to an 'other' household type is relatively common for children initially aged 6 to 12.

Table 2.5: Living arrangements of children five years subsequent to the base year, by living arrangement in the base year, 2001 to 2018 (pooled) (%)

Living arrangement in base year	Children aged 0-5 in the base year					Children aged 6-12 in the base year				
	Living arrangement 5 years later					Living arrangement 5 years later				
	(1)	(2)	(3)	(4)	Total	(1)	(2)	(3)	(4)	Total
Both parents (1)	89.3	7.8	1.4	1.5	100.0	90.5	6.0	0.7	2.9	100.0
One parent in single-parent household (2)	9.5	65.2	20.7	4.6	100.0	3.6	67.1	17.5	11.8	100.0
One parent and that parent's partner (3)	*0.0	22.4	73.6	*4.0	100.0	*0.1	17.3	73.3	9.3	100.0
Other (4)	5.6	29.1	9.9	55.4	100.0	* 1.2	17.0	10.4	71.4	100.0

Notes: * Estimate not reliable. Cells may not add up to row totals due to rounding.

Contact with non-resident parents

As shown in the previous section, a substantial number of children are classified as living with only one of their parents.

Nevertheless, many of these children still have contact with the other parent and may, in fact, live with that parent up to 50% of the time. The HILDA Survey collects detailed information about contact with non-resident parents (see Box 2.4, page 14), and in this section we draw on this information to examine the amount of contact with non-resident parents and the prevalence and dynamics of shared-care arrangements.³

Table 2.6 presents descriptive information on the frequency of in-person contact with non-resident parents, for all children with a non-resident parent and disaggregated by the age of the child. The table compares the situation in 2003, the earliest year in which the information was collected by the HILDA Survey, with 2018, the most recent year.

The first row of each panel in Table 2.6 indicates, consistent with Table 2.4, that there has been a decline in the proportion of children with a non-resident parent, falling from 25.4% in 2003

Box 2.4: Information collected on children's contact with non-resident parents

Every wave, the HILDA Survey collects information on non-resident parents of children. Included in this information is the frequency with which the children have in-person contact with the non-resident parent, the number of nights the children stay with the non-resident parent and the number of days the children spend with the non-resident parent without staying overnight.

The question on frequency of in-person contact asks *How often does the youngest child usually see the parent?* and has response options *daily, at least once a week, at least once a fortnight, at least once a month, once every 3 months, once every 6 months, once a year, less than once a year and never.*

The question on the number of nights children spend with non-resident parents asks *About how many nights each week, fortnight or month does the youngest child usually stay overnight with their other parent?* This information can be used to measure 'shared care' arrangements. Note that the number of nights the child stays with the non-resident parent cannot exceed 50% of all nights, since the child would then be classified as resident in the other parent's household.

The question on the number of days children spend with non-resident parents asks *About how many days would the youngest child spend with their other parent each week, fortnight or month without staying overnight?* This information is not used in this year's report.

Note that the HILDA Survey also administers questions to parents with non-resident children about their contact with their children, but this information is not used for the analysis presented in this year's report.



³ Note that the term 'non-resident parent' refers to the parent who lives in a different household to that in which the child is deemed to be living. As noted, the child may, in fact, live with the non-resident parent up to 50% of the time.



to 22.9% in 2018. Overall, 31.1% of children with a non-resident parent had no contact with the non-resident parent in 2003, while in 2018 this proportion had dropped to 26.8%. Together, these findings imply that there has been growth in the proportion of children who have contact with both parents—specifically, the proportion with no contact fell from 7.9% in 2003 (25.4% multiplied by 31.1%) to 6.1% in 2018 (22.9% multiplied by 26.8%).

In both 2003 and 2018, over one-third of children with a non-resident parent had contact with that parent at least weekly, with a moderate increase evident over

the 15-year period, and well over half (50.9% in 2003 and 56.5% in 2018) had contact at least monthly. Younger children, particularly those aged under 6, are more likely than older children to have at least weekly contact, while children aged 13 to 17 are more likely to have contact only monthly, every three to six months, or once a year or less.

The prevalence of shared-care arrangements among children with a non-resident parent—whereby the children stay overnight with the non-resident parent—is examined in Table 2.7. In 2001, just under 50% of children with a non-resident parent had a shared-care

arrangement, with shared-care arrangements most common for children aged 6 to 12. In both 2001 and 2018, most shared-care arrangements involved the child spending one night per week or less with the non-resident parent. However, there has been a clear upward movement in shared care between 2001 and 2018. Over 60% of children with a non-resident parent had a shared-care arrangement in 2018, a significant increase on 2001. Moreover, there has been a substantial rise in the proportion of children with a non-resident parent averaging three or more nights per week with the non-resident parent, from 4.1% in 2001 to 16.3% in 2018.

Table 2.6: Frequency of children's contact with non-resident parents, 2003 and 2018 (%)

	Age group			All aged under 18
	Less than 6	6–12	13–17	
2003				
Have a non-resident parent	18.7	30.5	28.9	25.4
<i>Frequency of contact with non-resident parents</i>				
Daily	7.8	4.9*	4.4*	5.7
Weekly	22.2	20.4	27.3	22.9
Fortnightly	14.9	18.4	12.0	15.5
Monthly	3.8*	6.8	10.7	6.8
Every 3–6 months	14.1	17.9	12.6	15.2
Once a year or less	2.2*	2.8*	3.8*	2.9
Never	35.1	28.8	29.3	31.1
Total	100.0	100.0	100.0	100.0
2003–2018				
Have a non-resident parent	16.3	24.3	31.8	22.9
<i>Frequency of contact with non-resident parents</i>				
Daily	8.8	4.7*	5.2*	6.3
Weekly	28.8	24.0	25.5	26.1
Fortnightly	17.9	20.4	16.1	18.2
Monthly	4.8	5.5	7.4	5.9
Every 3–6 months	11.6	13.7	13.4	12.9
Once a year or less	0.9*	5.8*	4.6*	3.8
Never	26.9	25.7	27.8	26.8
Total	100.0	100.0	100.0	100.0

Notes: * Estimate not reliable. Cells may not add up to column totals due to rounding.

Table 2.7: Shared care arrangements of children with a non-resident parent, 2001 and 2018 (%)

Nights with non-resident parent	Age group			All aged under 18
	0–5	6–12	13–17	
2001				
3 or more nights per week ($\geq 42\%$)	*3.0	*5.6	*3.4	4.1
2 nights per week to less than 3 nights per week ($\geq 28\%$ to $< 42\%$)	*8.6	*5.1	*5.2	6.3
1 night per week to less than 2 nights per week ($\geq 14\%$ to $< 28\%$)	17.7	16.1	13.4	15.8
Less than one night a week (>0 to $<14\%$)	14.5	24.9	24.2	21.3
0%	56.3	48.3	53.9	52.5
Total	100.0	100.0	100.0	100.0
2018				
3 or more nights per week ($\geq 42\%$)	*8.4	14.8	21.6	16.3
2 nights per week to less than 3 nights per week ($\geq 28\%$ to $< 42\%$)	16.5	11.3	*6.3	5.3
1 night per week to less than 2 nights per week ($\geq 14\%$ to $< 28\%$)	15.9	22.1	18.1	19.0
Less than one night a week (>0 to $<14\%$)	*11.2	21.1	26.6	19.7
0%	48.1	30.6	27.4	39.7
Total	100.0	100.0	100.0	100.0

Notes: Nights with non-resident parent are expressed in terms of days per week, but shared care arrangements may revolve around a longer time-frame. For example, one night per week may arise from an arrangement where the child spends two consecutive nights with the non-resident parent every two weeks. * Estimate not reliable. Cells may not add up to column totals due to rounding.



Paid child care

Paid child care has become an important topic over the last several decades, mainly as a result of the steady growth in female employment participation since the 1970s. In every wave, the HILDA Survey has collected information at the household level on child-care use and access for all households containing children under 15 years of age, although changes to the questionnaire between Waves 1 and 2 mean that strictly

comparable data on child-care usage is only available from Wave 2 onwards.⁴

This section briefly updates the analyses on patterns and trends in the usage of paid child care for children not yet at school and children attending school undertaken in last year’s Statistical Report, and additionally presents new analyses of expenditure on child care.

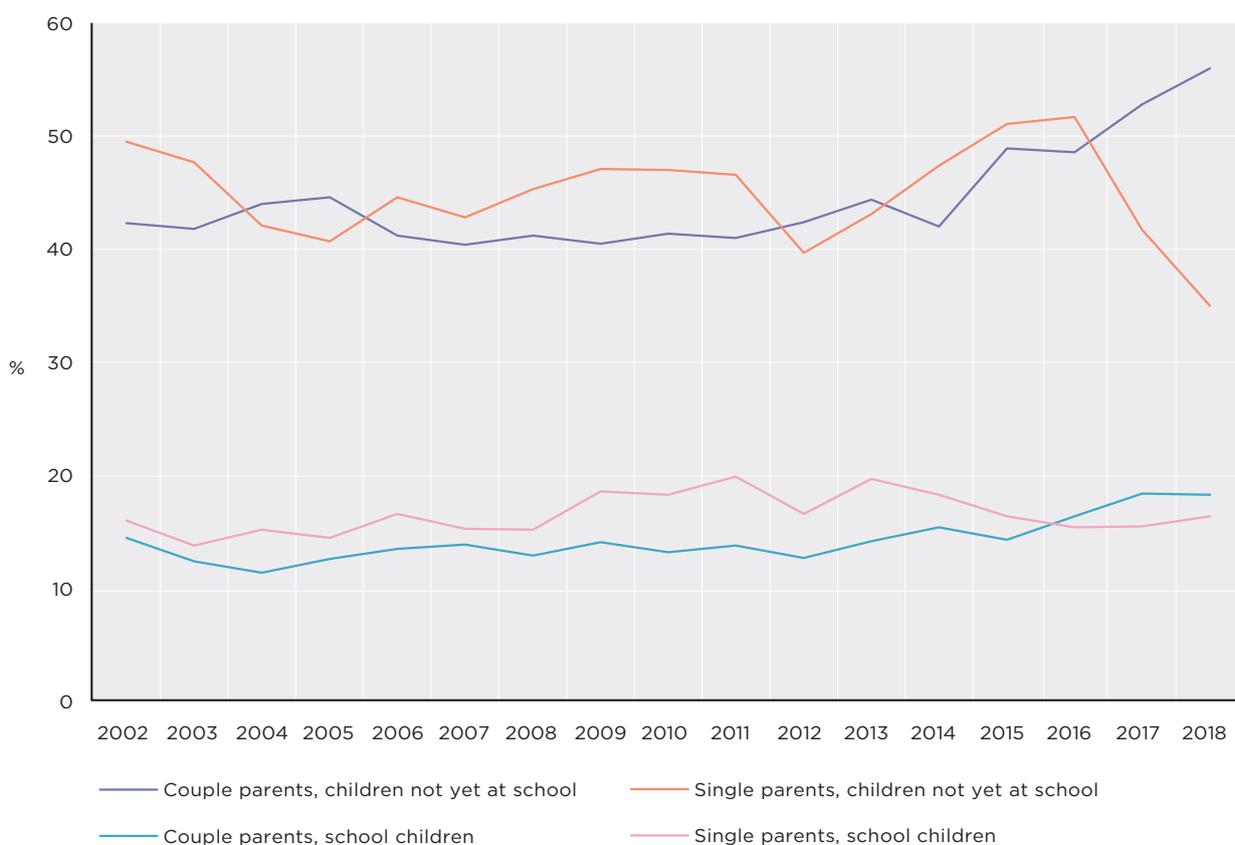
The focus is on paid types of child care, namely care provided

by paid sitters or nannies as well as ‘formal care’, which refers to regulated care away from the child’s home, such as before- or after-school care, long day care, family day care and occasional care. For school children, the analysis is confined to the use of care during term time—that is, care during school holidays is not examined. The analysis includes child-care usage for both work-related and non-work-related purposes. Both couple-parent and single-parent families are considered.⁵

⁴ Child-care questions are administered to only one household member, who is usually a parent or guardian of the children. All questions concern ‘usual’ use of child care, with respondents left to decide for themselves what constitutes ‘usual’.

⁵ Multiple-family households are excluded from the analysis if it is not possible to attribute child-care arrangements to a specific family. For the analysis of child care for children not yet at school, this occurs when more than one family has children aged under 5, while for the analysis of child care for school children it occurs when more than one family has children aged 5 to 14. Only a small number of households is excluded on this basis.

Figure 2.1: Use of paid child care, by family type and whether child at school



Use of paid child care

Previous analyses undertaken in last year's Statistical Report showed that parents are much more likely to use paid care for their children not yet at school than for their school children. The pattern continued in 2018, with approximately 56% of couple parents and 35% of single parents using paid child care for their children not yet at school, compared to approximately 18.3% of couple parents and 16.4% of single parents using paid child care for their school children. However, while for most of the HILDA Survey period, single parents were slightly more likely to use paid care than couple parents, since 2016 this has no longer been the case. Particularly notable is the sharp fall in the proportion of single parents using paid child care for children not

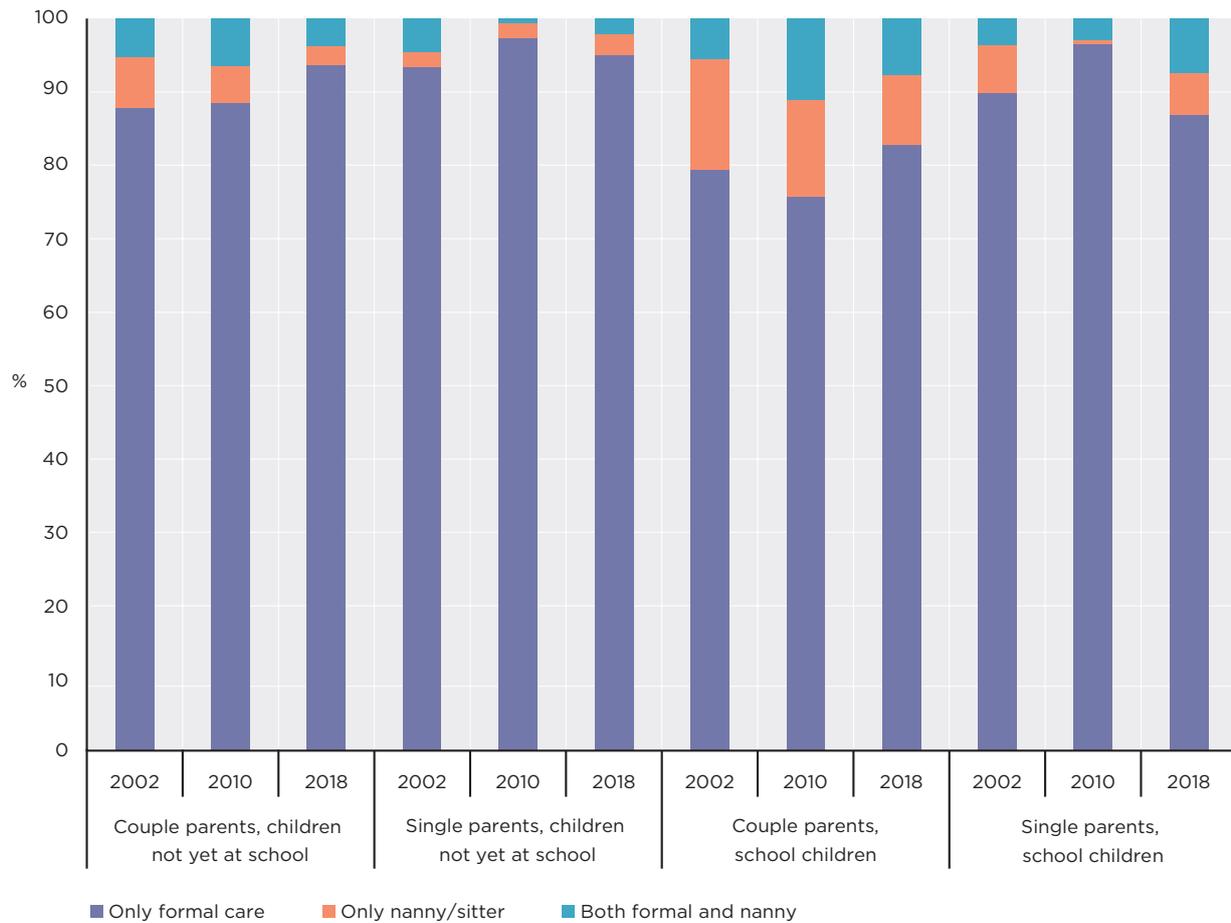
yet at school from approximately 52% in 2016 to 35% in 2018. It is not clear what has driven this decline, particular in 2018, when the introduction of the Child Care Subsidy would have acted to decrease hourly child-care costs for many single parents.⁶

Figure 2.2 disaggregates paid child-care use in 2002, 2010 and 2018 by the specific type of care, distinguishing between formal care and nanny/paid sitter care. The figure shows that formal care is the most common type of paid care used. Interestingly, while we observe an increase in the use of formal care among couple parents, both for children not yet in school (from 87.8% in 2002 to 93.6% in 2018) and school children (from 79.4% in 2002 to 82.8% in 2018), percentages remain stable and even decrease for single parents.



⁶ Sampling variability may also be a factor. In each wave since 2011, the HILDA Survey sample has contained approximately 200 single parents with children not yet at school.

Figure 2.2: Type of paid care used, by family type and whether child at school



A small proportion of parents use a combination of formal care and nanny care. We observe a decreasing trend among children not yet at school, while no clear pattern is found for school children. Thus, while formal care seems to be consolidating as the

most important type of paid care among children not yet at school, we observe that nanny care or a combination of nanny and formal care are more frequently used to cover care for school children than for younger children, especially among couple parents.

Costs of formal child care

In July 2018, the Federal Government introduced the new Child Care Subsidy. Implemented to replace the Child Care Benefit and Child Care Rebate with a single, means-tested subsidy, it is generally paid directly to

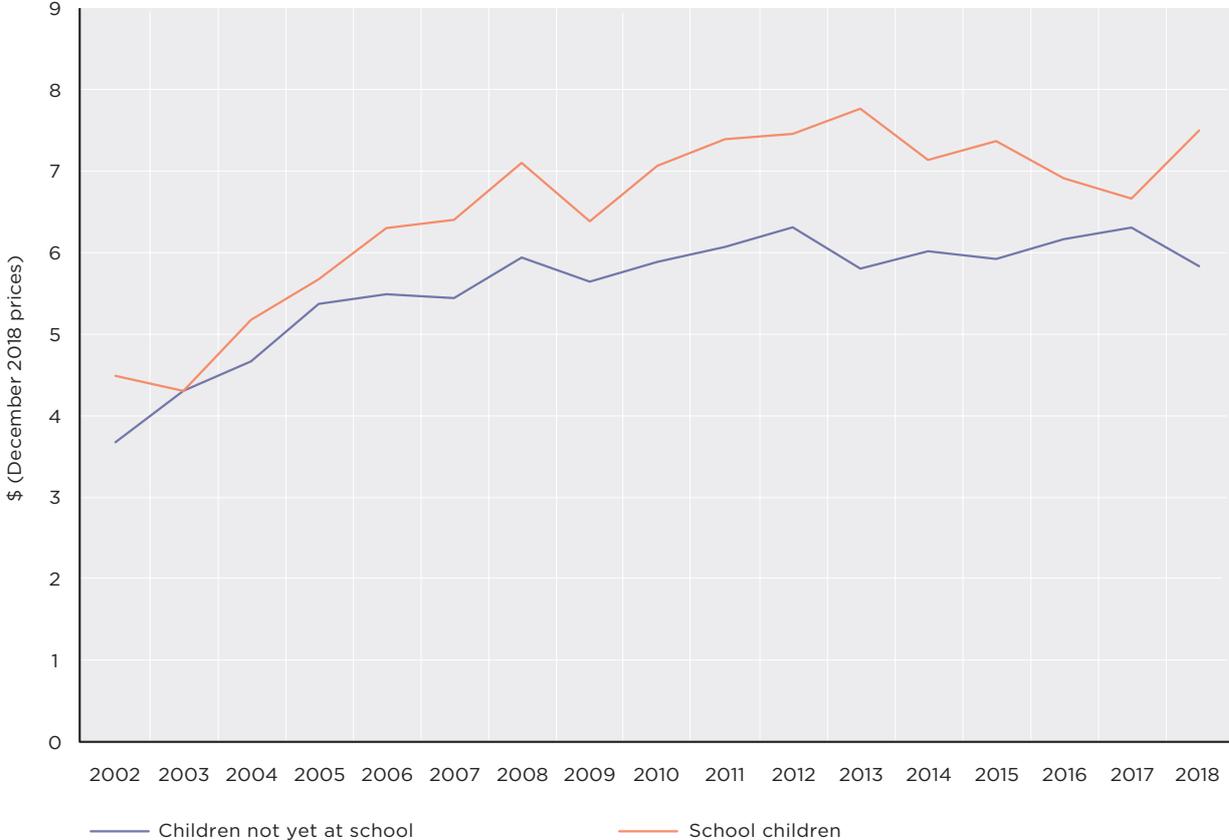
child-care providers to be passed on to families and mainly targeted to provide more assistance to low- and middle-income families. While it may still be too early to determine how better or worse off families are, Figure 2.3 presents the evolution of median expenditure per hour on formal child care for children not yet at school and children at school. Median hourly expenditure on formal child care for children not

yet at school rose in real terms fairly consistently between 2002 and 2017, but in 2018 declined. Median hourly expenditure for children at school rose more sharply between 2003 and 2013, trended downwards to 2017, and then rose sharply in 2018. Table 2.8 further examines hourly expenditure on formal child care for children not yet at school by comparing couple-parent and single-parent families. Here we see that the decline in median

hourly expenditure between 2017 and 2018 has been considerably larger for single parents, falling by 18.2%, compared with 4.1% for couple parents. This suggests that single parents have benefited more from the July 2018 introduction of the Child Care Subsidy, which makes the drop in single-parent use of paid child care for children not yet at school (shown in Figure 2.1) even more difficult to explain.⁷



Figure 2.3: Median expenditure per hour of formal child care, by whether child is at school



⁷ Analysis presented in Chapter 3 on incomes of single parents indicates the decline in child-care use may derive from a decline in incomes of single parents. However, further analysis is required to understand the reasons for the finding that incomes have declined, and whether this has led to lower use of child care.

Table 2.8: Median hourly expenditure on formal child care for children not yet at school, by type of family—2002, 2012, 2017, 2018 (\$, December 2018 prices)

	2002	2012	2017	2018	Change 2017 to 2018 (%)
Couple with children	4.41	6.71	6.36	6.09	-4.1
Single parents	1.89	4.34	4.24	3.46	-18.2

Note: The table presents expenditure on child care after deduction of child-care subsidies.

Number of hours of formal child care used

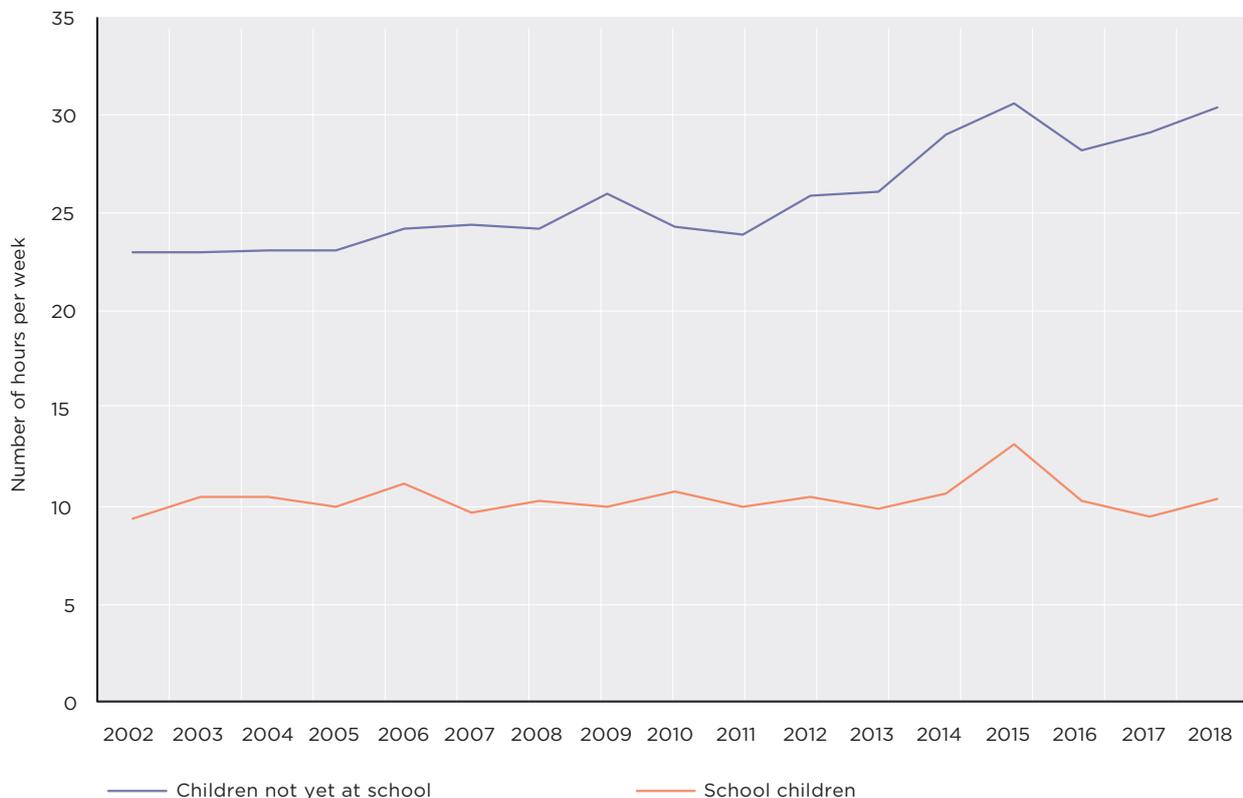
Figure 2.4 provides the median number of hours of formal child care used per week among those using formal child care, disaggregated by whether the child is at school. Unsurprisingly, given school children spend over

30 hours per week at school, the median number of hours of child care used for children not yet at school is considerably higher than the median for children at school. The median number of hours used for children not yet at school has, moreover, been growing in recent years. In 2001,

the median was 23 hours for children not yet at school, while in 2018 this had increased to 30.4 hours, a 32% increase. The median number of hours of formal child care for school children has remained relatively stable at around 10 hours per week.



Figure 2.4: Median weekly hours of formal child care for children at school and for children not yet at school





Dissolutions of couple relationships

Dissolution of intimate (romantic) co-resident relationships is often painful and stressful for all involved, irrespective of who made the decision to end the relationship. Psychological distress symptoms, grief reactions and overall decline of wellbeing, as well as lower

performance at work and increased risk of unemployment, are some of the large number of negative effects of the dissolution of couple relationships (Lampard, 1994; Tashiro and Frazier, 2003; del Palacio-González et al., 2017). This section investigates the prevalence of intimate-couple dissolutions and the personal characteristics and circumstances associated with these dissolutions.

Prevalence of dissolutions

Figure 2.5 provides information on number of couple relationship dissolutions from 2002 to 2018. Results show that in 2002 close to 195,000 people separated from their co-resident partner, translating to approximately five dissolution events per 1,000 people. In 2018, while the number of dissolutions was higher, the rate per capita remained similar.

Figure 2.5: Number of people separating from a co-resident partner each year

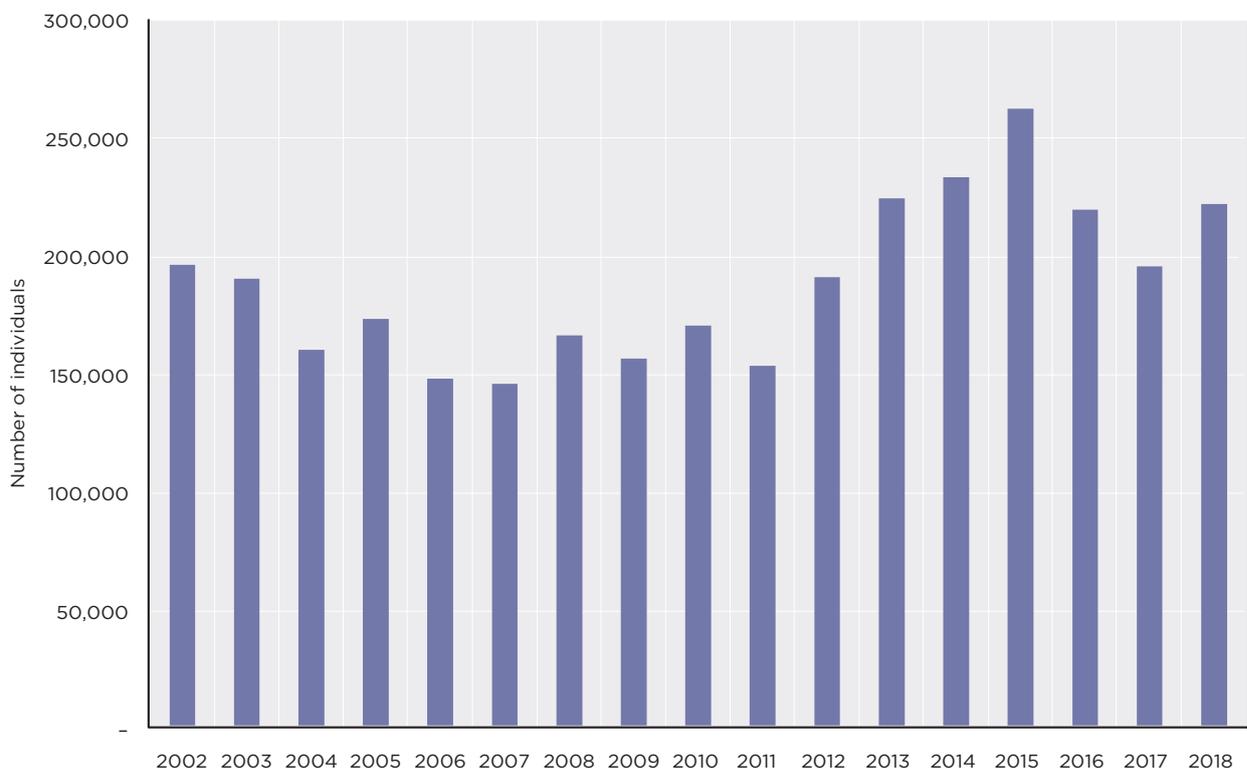


Figure 2.6 further reports the distribution of dissolutions across age groups in 2002 and 2018. In 2002, those aged between 25 and 54 accounted for most dissolutions. This was still true in 2018, but a significantly higher proportion of dissolutions in that year were among people aged 15 to 24 and 65 and over.

Intimate-partner dissolutions often affect dependent children. Figure 2.7 shows the distribution of the number of children living in families when the dissolution event takes place. It shows that, in 63% of the dissolutions in 2002, there were no dependent children in the household; this percentage increased to 70% in 2018, indicating a trend towards dissolutions involving no children. Families with one child accounted for 16% of dissolutions in 2002 and 13% in 2018, while families with two children accounted for 13% of dissolutions in 2002 and 11% in 2018.



Figure 2.6: Age distribution of individuals separating from their co-resident partner

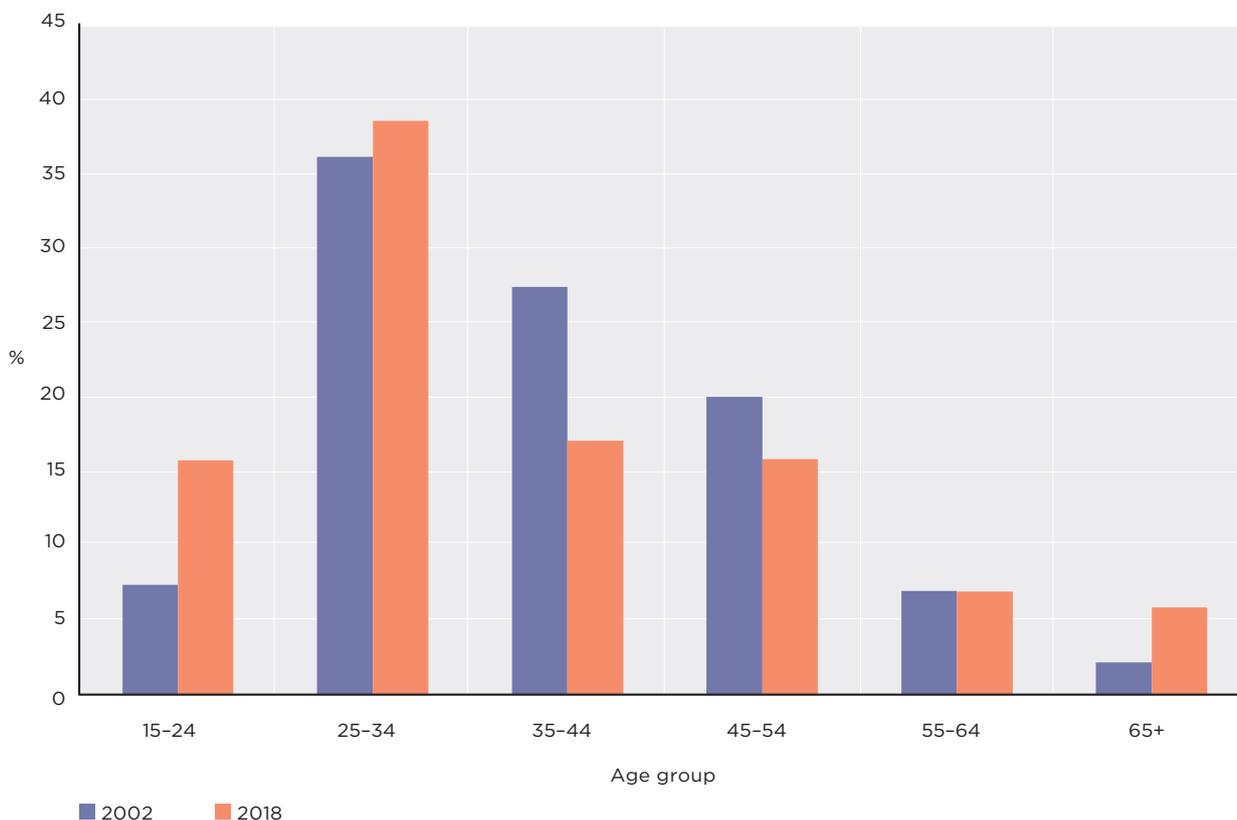
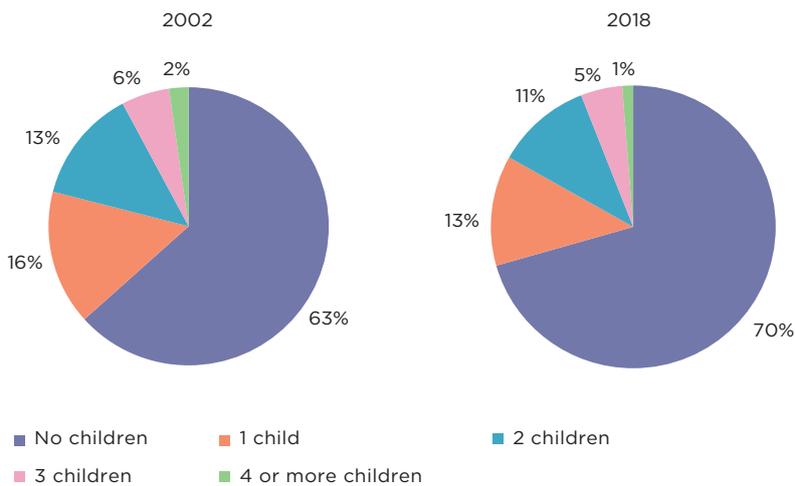




Figure 2.7: Distribution of number of dependent children of separating couples



Characteristics and circumstances associated with couple dissolution

This subsection deals with the question of what factors make it more or less likely for a couple to separate. This question is investigated using a regression model of the probability a partnered person experiences separation. Models are estimated separately for couples without dependent children and couples with dependent children.

All couples observed in the HILDA Survey between 2001 and 2018 are included in the analysis. The characteristics considered comprise variables for demographic characteristics, labour market outcomes, health and disability, and economic circumstances, all measured in the year prior to the (potential) dissolution.

Table 2.9 presents the results in the form of mean marginal effects. In the case of indicator variables, such as sex, the estimates are interpreted as the change in the probability of separating from one's co-resident partner if the characteristic is present (compared to the reference category in the case of related indicator variables such as for educational attainment). In the case of continuous variables, such as income, the estimates give the effect of a one-unit increase in this variable on the probability of separating.

Among both sub-samples (without and with dependent children), all else equal, older individuals are less likely to

Box 2.5: Classification of educational attainment

The classification of educational qualifications adopted by the HILDA Survey is based on the Australian Standard Classification of Education (ASCED) (ABS, 2001), which classifies formal educational qualifications by level and by field of study.

The level of highest educational attainment is derived from information on highest year of school completed and level of highest non-school qualification. In this report, up to five levels of attainment are distinguished: postgraduate degree (master's or PhD); bachelor's degree; Diploma or Certificate Level 3 or 4 (other post-school qualification); Year 12 (high school completion); and Year 11 and below (less than high school completion), although often fewer categories are examined by combining these categories (for example, combining postgraduate degree and bachelor's degree into one 'bachelor's degree or higher' category). Note that, as explained in ABS (2014), Year 12 is defined to be a higher qualification than a Certificate Level 1 or 2, so that the category 'Less than high-school completion' includes people who hold a Certificate Level 1 or 2.

Box 2.6: HILDA Survey measure of financial stress

In each wave, the self-completion questionnaire contains the following question: *Since January [survey year] did any of the following happen to you because of a shortage of money?*

- Could not pay electricity, gas or telephone bills on time
- Could not pay the mortgage or rent on time
- Pawned or sold something
- Went without meals
- Was unable to heat home
- Asked for financial help from friends or family
- Asked for help from welfare/ community organisations

Respondents are asked to indicate which of the seven events had occurred. Experience of any one of these events can be considered an experience of financial stress, although some events, such as going without meals, probably indicate more severe stress than other events, such as inability to pay bills on time.

Table 2.9: Predictors of couple dissolution, 2001 to 2018

	No children	With children
<i>Age group (Reference category: 15–24)</i>		
25–34	–0.029	–0.015
35–44	–0.031	–0.019
45–54	–0.064	–0.023
55–64	–0.076	–0.026
65 and over	–0.082	–0.027
<i>Educational attainment (Reference category: Bachelor's degree or higher)</i>		
Other post-school qualification	0.012	0.006
Completed high school	0.011	0.007
Less than high school completion	0.007	0.008
Female more educated than male	ns	ns
<i>Housing tenure type (Reference category: Owner outright)</i>		
Home owner with mortgage	ns	0.008
Private rental	0.015	0.006
Social housing	0.009	ns
Equivalised income (\$ '00,000, December 2018 prices)	–0.012	0.004
Household receives income support payments	0.007	0.006
<i>Perception of financial prosperity (Reference category: Prosperous/Very comfortable)</i>		
Reasonably prosperous	ns	ns
Just getting along	ns	ns
Poor/very poor	ns	ns
<i>Financial Stress (Reference category: No indicators of financial stress)</i>		
1 or 2 indicators of financial stress	0.005	0.003
3 or more indicators of financial stress	0.007	0.007
Both members of couple employed	–0.006	ns
Male unemployed	ns	ns
Female unemployed	ns	ns
Female earns more than male	ns	ns
Extent to which has a traditional view of marriage and children (1–7 scale)	–0.004	–0.004
One partner born in a country other than main English-speaking countries	–0.005	ns
Either member of the couple has a disability	ns	0.004
In poor general health (SF–36 measure)	–0.006	ns
In poor mental health (SF–36 measure)	ns	ns
Satisfaction with relationship with partner (0–10 scale)	–0.008	–0.004
Daily smoker	0.011	0.003
Regular drinker	ns	–0.005
Number of observations	54,709	50,145

Notes: The table presents mean marginal effects from logistic regression models of the determinants of partnership dissolution. See the Technical Appendix for an explanation of this model. Missing values for traditional attitudes towards marriage and relationships were imputed with the wave-specific mean and the models additionally include indicators for missingness on these variables. ns indicates the estimate is not significantly different from 0 at the 10% level.





Box 2.7: Summary measure of the extent to which one has traditional views on marriage and children

A measure of the extent to which one has 'traditional' views on marriage and children can be derived from the extent of agreement, on a 7-point Likert scale (where 1 is strongly disagree and 7 is strongly agree), with the following eight statements:

- a. *It is alright for an unmarried couple to live together even if they have no intention of marrying*
- b. *Marriage is a lifetime relationship and should never be ended*
- c. *Marriage is an outdated institution*
- d. *It is alright for a couple with an unhappy marriage to get a divorce even if they have children*
- e. *Children will usually grow up happier if they have a home with both a father and a mother*
- f. *It is alright for a woman to have a child as a single parent even if she doesn't want to have a stable relationship with a man*
- g. *When children turn about 18–20 years old they should start to live independently*
- h. *Homosexual couples should have the same rights as heterosexual couples do*

The score for the extent to which views about marriage and children are 'traditional' is calculated as an average across the eight items as follows: $[(8 - a) + b + (8 - c) + (8 - d) + e + (8 - f) + g + (8 - h)]/8$. The score potentially ranges from 1 to 7.

All items were first introduced (into the self-completion questionnaire) in 2005 and have subsequently been administered in Waves 8, 11 and 15. It is therefore possible to construct the summary measure in Waves 5, 8, 11 and 15.

experience separation, as are those with a bachelor's degree (see Box 2.5, page 23, for an explanation of the educational attainment categories). Renting privately is associated with a higher likelihood of separation, as is social housing for couples without children and owning a house with a mortgage for couples with children. These results may indicate that housing instability contributes to relationship instability, although the reverse is also likely to be true. For example, people in less stable relationships will be more inclined to rent rather than buy a home together.

Income support receipt is associated with an elevated risk (probability) of separation, which is consistent with financial strains being destabilising for relationships. This is further confirmed by the finding that experience of financial stress (see Box 2.6, page 23) increases the likelihood of separation. However, higher equivalised income (see Box 3.2, page 28) is also

associated with a higher risk of separation. This may reflect the fact that, at higher incomes, people are more likely to be able to 'afford' separation, for example, because each partner has their own independent source of income.

For couples without children, both members being employed is associated with a reduced risk of separation. Perhaps surprising, however, is that unemployment of either partner does not appear to increase the risk of separation, although we should note that unemployment increases the likelihood of financial stress and income support receipt, and so will increase the likelihood of separation through these channels. This finding simply indicates that unemployment does not significantly impact on likelihood of separation other than through its effects on financial circumstances.

Perhaps unsurprising is that more traditional views on marriage and children (see Box 2.7, page 25) are associated with a lower

likelihood of separation.⁸ But perhaps surprising is that if one of the partners is born in a country other than the main English-speaking countries (see Box 4.5, page 80) and the other partner is not, there is a reduced probability of separation.

Disability of one of the partners is associated with a higher probability of separation for couples with children, but not

couples without children. Poor general health is associated with a reduced probability of separation for couples without children, but otherwise general and mental health show no association with couple dissolution. Unsurprisingly, lower satisfaction with the relationship with one's partner is associated with a higher probability of separation, although the magnitude of the effect is

relatively small. Smoking is also associated with a higher probability of separation, particularly for couples without children. Regular consumption of alcohol (drinking on five or more days per week) is not associated with significant effects on the probability of separation for couples without children, but is associated with a slightly reduced chance of separation for those with children.⁹



⁸ Attitudes towards marriage and children have only been collected in Waves 5, 8, 11 and 15, so the gap waves are filled with linearly interpolated values. For example, if an individual's value for the measure is 3 in Wave 5 and 6 in Wave 8, the interpolated values will be 4 in Wave 6 and 5 in Wave 7. Further, the first observed value for each person is 'carried backwards' to earlier waves and the last observed value is 'carried forward' to subsequent waves. Observations with no information regarding one of these characteristics were assigned the wave-specific mean value, and the regression models additionally include indicator variables for missing values.

⁹ The measure of alcohol consumption available in the HILDA Survey every wave does not identify very heavy consumption of alcohol (that is, 'problem drinking'). One suspects that problem drinking would increase the probability of separation.

3

Household economic wellbeing

Roger Wilkins



Study of the distribution of income, and how an individual's income changes over time, is integral to understanding the economic fortunes of the Australian population. The HILDA Survey is the only nationally representative data source in Australia that has the capacity to provide information on both the distribution of household income at a point in time and how incomes of households change over time.

The HILDA Survey also regularly collects other information relevant to the assessment of economic wellbeing, most notably on household expenditure and wealth. Moreover, in addition to objective financial data, information is regularly collected on the experience of financial stress, the ability to raise funds at short notice, perceived adequacy of household income, saving habits, saving horizon, attitudes to financial risk and satisfaction with one's financial situation.

This chapter contains five sections that focus on the income data, respectively examining the distribution of household income, mobility of individuals in the income distribution, the incidence and persistence of income poverty, the extent of welfare reliance in the Australian community, the extent and nature of material deprivation, and alternative estimates of the size of the 'middle class' in Australia.

Income levels and income inequality

Annual income

Cross-sectional estimates of mean and median household annual disposable income (as

defined in Box 3.1, below) are presented in Table 3.1. For this table, the household is the unit of observation, meaning that each household contributes one 'observation' to the calculation of the mean and the median.

Box 3.1: Measurement of household income in the HILDA Survey

The main household income measure examined in this report is 'real household annual disposable income'. Household annual disposable income is the combined income of all household members after receipt of government pensions and benefits and deduction of income taxes in the financial year ended 30 June of the year of the wave (for example, 2001 in Wave 1). This is then adjusted for inflation—the rise in the general price level in the economy—using the Australian Bureau of Statistics (ABS) Consumer Price Index, so that income in all waves is expressed at December 2018 prices, to give real income. Since prices tend to rise over time, *real* incomes are higher than the nominal incomes reported by sample members.

HILDA Survey respondents do not actually report their disposable income; rather, each respondent is asked how much income they received from each of a number of sources, including employment, government benefits, investments and any businesses they own. Total gross income of each individual is equal to the sum of these income components. The disposable income of each respondent is then calculated by estimating the income tax payable by the individual and subtracting this from the individual's total gross income. Disposable incomes of all household members are added together to obtain *household* disposable income. See Wilkins (2014) for details on the construction of gross income and the methods used to calculate disposable income. Note that, consistent with the Canberra Group's recommendations (see United Nations, 2011), large irregular payments received by individuals are excluded from income for the analysis presented in this report—that is, it is *regular* disposable income that is examined.

Table 3.1: Household annual disposable incomes, 2001 to 2018

	Mean (\$, December 2018 prices)	Median (\$, December 2018 prices)	Number of households	Number of people
2001	72,101	62,372	7,281,363	18,824,376
2002	73,320	63,519	7,357,079	19,039,091
2003	73,255	63,508	7,433,836	19,258,412
2004	75,624	65,938	7,505,562	19,468,325
2005	79,278	69,833	7,589,921	19,714,426
2006	83,303	71,837	7,686,360	20,013,530
2007	86,798	75,293	7,836,760	20,382,461
2008	89,705	77,518	8,009,920	20,809,743
2009	92,317	82,236	8,175,735	21,216,949
2010	92,482	79,460	8,298,875	21,521,079
2011	92,746	78,265	8,414,482	21,834,344
2012	94,257	81,413	8,582,902	22,221,454
2013	94,961	81,447	8,746,065	22,594,836
2014	94,245	79,544	8,895,133	22,929,925
2015	94,171	79,958	9,045,569	23,266,630
2016	93,810	80,597	9,195,221	23,656,264
2017	94,323	80,100	9,372,857	24,051,649
2018	95,349	81,310	9,548,763	24,437,768



Box 3.2: Equivalised income

Equivalised income is a measure of material living standards, obtained by adjusting household disposable income for the household's 'needs'. Most obviously, a household of four people will require a higher household income than a single-person household to achieve the same living standard. There are, however, many factors other than household size that could be taken into account in determining need. These include the age and sex of household members, health and disability of household members (since poor health and/or disability increase the costs of achieving a given standard of living), region of residence (since living costs differ across regions) and home-ownership status (since the income measure does not usually include imputed rent for owner-occupiers).

In practice, it is common for adjustment of income to be based only on the number of adult and child household members, achieved by an equivalence scale. In this report, we have used the 'modified OECD' scale (Hagenaars et al., 1994), which divides household income by 1 for the first household member plus 0.5 for each other household member aged 15 or over, plus 0.3 for each child under 15. A family comprising two adults and two children under 15 years of age would therefore have an equivalence scale of 2.1 (1 + 0.5 + 0.3 + 0.3), meaning that the family would need to have an income 2.1 times that of a single-person household in order to achieve the same standard of living. This scale recognises that larger households require more income, but it also recognises that there are economies of scale in consumption (for example, the rent on a two-bedroom flat is typically less than twice the rent on an otherwise comparable one-bedroom flat) and that children require less than adults. The equivalised income calculated for a household is then assigned to each member of the household, the implicit assumption being that all household members experience the same standard of living (which will, of course, not always be the case—particularly in households containing unrelated people).

Mean and median household disposable incomes grew very strongly over the eight-year period from 2001 to 2009. Expressed at December 2018 prices, the mean increased by \$20,216, or \$2,527 per year; the median increased by \$19,864 over the same period. Most of

this growth in fact occurred between 2003 and 2009, when both the mean and median grew by over \$3,000 per year. However, since 2009, growth in both the mean and median has been much weaker. Over the nine-year period from 2009 to 2018, the mean household

Box 3.3: Income distribution statistics

A variety of inequality measures are used in income distribution studies. In this report, estimates are presented for several commonly used measures. Average income levels are described by the mean and median, while inequality in the income distribution is described by the ratio of the 90th percentile to the median, the ratio of the median to the 10th percentile and the Gini coefficient. The 90th percentile is the income of the individual who has 10% of individuals with higher incomes and 90% with lower incomes. The 10th percentile is the income of the individual who has 90% of individuals with higher incomes and 10% with lower incomes. The Gini coefficient is an overall measure of inequality that ranges from 0, where everyone has the same income, to 1, where one individual has all the income. See the Technical Appendix for further explanation of these measures.

income grew by only \$3,032, or 3.3%, while the median in 2018 was \$926 lower than in 2009 (having fallen between 2009 and 2011, risen in 2012, and remained broadly unchanged thereafter). That said, growth between 2017 and 2018 was quite strong, the mean and median rising by over \$1,000.

Table 3.2 considers the distribution of household income, taking into account potential changes to household composition by examining 'equivalised' income per person (see Box 3.2, page 28, for an explanation of how equivalised income is calculated and Box 3.3,

page 29, for an explanation of the statistics presented in the table).

The individual is the unit of observation, meaning the statistics presented are for the distribution of household equivalised incomes across all individuals in the population, including children.

Growth in the average level of incomes between 2003 and 2009, and the subsequent levelling-off of average incomes, is robust to the move to equivalised incomes and the individual as the unit of analysis. This is unsurprising given that changes in household composition of the population



Table 3.2: Distribution of individuals' equivalised household disposable income, 2001 to 2018

	Mean (\$, December 2018 prices)	Median (\$, December 2018 prices)	Ratio of 90th percentile to the median	Ratio of median to the 10th percentile	Gini coefficient
2001	42,666	37,981	1.89	2.14	0.304
2002	43,331	38,249	1.88	2.09	0.300
2003	43,578	39,188	1.85	2.13	0.298
2004	44,638	40,190	1.84	2.11	0.291
2005	46,725	41,831	1.84	2.07	0.292
2006	49,051	43,295	1.92	2.05	0.296
2007	51,613	45,088	1.92	2.12	0.305
2008	52,819	46,356	1.88	2.12	0.302
2009	54,546	49,345	1.81	2.18	0.295
2010	54,401	47,790	1.91	2.11	0.302
2011	54,780	47,496	1.97	2.12	0.309
2012	55,610	48,406	1.92	2.04	0.301
2013	56,048	48,592	1.92	2.02	0.302
2014	55,731	48,670	1.93	1.98	0.299
2015	55,898	48,791	1.92	1.98	0.297
2016	55,643	48,749	1.88	1.97	0.296
2017	56,110	48,652	1.91	2.02	0.302
2018	56,811	49,485	1.90	2.04	0.302



between 2001 and 2018 have been relatively modest (see Table 2.1, page 7, in Chapter 2). The HILDA Survey indicates that there has been little net change in income inequality between 2001 and 2018. For example, the Gini coefficient, a common measure of overall inequality, has remained between 0.29

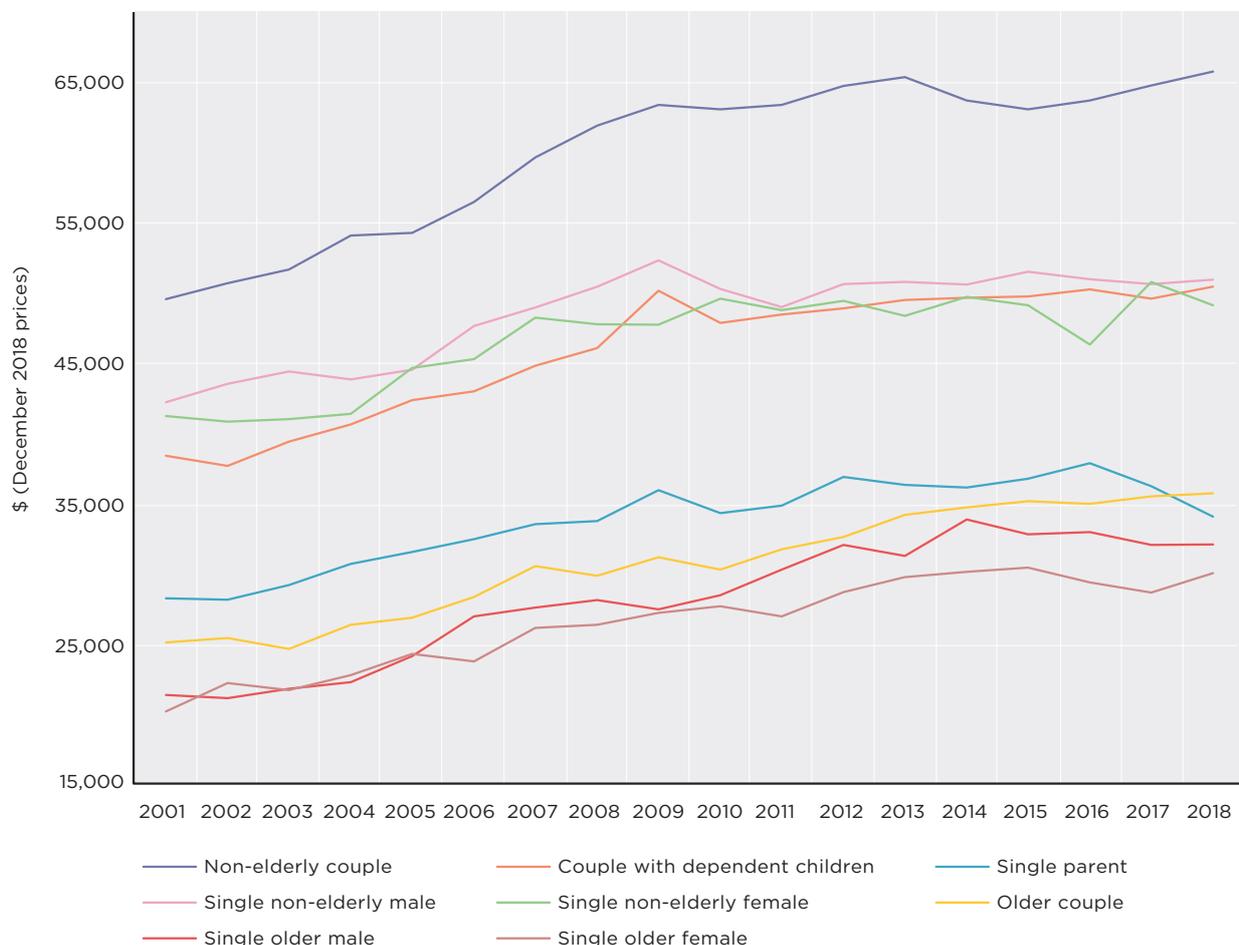
and 0.31 over the entire 18 years of the HILDA Survey.

Income differences by family type

Figure 3.1 compares median equivalised incomes across family types (defined in Box 3.4, page 31). A reasonably consistent ordering by type of family is

evident across the 18 waves of the survey, ranging from older people at the bottom to non-elderly couples without dependent children at the top. It also appears that there are three broad 'clusters' of family types: non-elderly couples without dependent children, who have the highest incomes; couples with children and non-elderly single

Figure 3.1: Median equivalised income, by family type





Box 3.4: Family types

The following eight family types are distinguished in this chapter: (1) non-elderly couples, defined to be couples (married or de facto) without dependent children with at least one member of the couple under 65 years of age; (2) couples with at least one dependent child living with them; (3) single parents living with at least one dependent child; (4) non-elderly single males (under 65 years of age); (5) non-elderly single females; (6) older couples, where both people are over 65 years of age; (7) older single males (aged 65 and over); and (8) older single females.

Note that some households will contain multiple 'families'. For example, a household containing a non-elderly couple living with a non-dependent son will contain a non-elderly couple family and a non-elderly single male. Both of these families will, of course, have the same household equivalised income. Also note that, to be classified as having dependent children, the children must live with the parent or guardian at least 50% of the time. Consequently, individuals with dependent children who reside with them less than 50% of the time will not be classified as having resident dependent children. See Wilkins (2016) for an analysis of parents in this situation.

people, who have middle-level incomes; and single-parent families and older people, who have low incomes. All family types have exhibited growth in median incomes between 2001 and 2018, with non-elderly couples without children faring slightly better than other family types. However, between 2016 and 2018, single-parent families have exhibited a substantial decline in median income, falling from approximately \$38,000 to approximately \$34,000 over the two-year period.¹

Income differences by region

There is much public discussion about how economic fortunes differ across regions, with particular interest in how regional areas are faring compared with the major cities. Figure 3.2 compares mean equivalised incomes over the 2001 to 2018 period across 13 regions of Australia (see Box 3.5, page 32).

Mean incomes are considerably higher in the mainland capital cities than in the other regions of each state. Tasmania also has a relatively low mean income. The mean incomes in the Australian Capital Territory and Northern Territory are highest of all the

regions examined in Figure 3.2. However, after rapid growth between 2006 and 2011, the mean income in the Australian Capital Territory fell considerably between 2013 and 2016, and has only partially recovered, although it remains the region with the highest mean income. Figure 3.2 also indicates that, among the mainland capital cities, Adelaide consistently has the lowest mean income. The mean income in Perth surged between 2010 and 2013, giving the city the highest mean income of the mainland capital cities, but its mean income fell in 2016 and in 2018 was similar to that of Sydney and Melbourne.

Income mobility

Table 3.3 takes advantage of the longitudinal information from the HILDA Survey to examine income mobility over the short- to medium-term. For each quintile (20%) of the equivalised income distribution, it shows the proportions of people moving to a lower quintile, staying in the same quintile and moving to a higher quintile. The more people who move up or down, the greater is income mobility. The table examines mobility over

¹ Analysis of the Australian Bureau of Statistics' Survey of Income and Housing (SIH) by the author shows a smaller decrease in median income of people living in single-parent families between 2015-16 and 2017-18. Sample representativeness and sampling variability may be factors in explaining differences between the two data sources. However, the income measure also differs between the two sources, the SIH examining 'current weekly income' and the HILDA Survey examining annual income. Also note that the HILDA Survey shows a higher median income among single parent families in 2015-16 than the SIH, but approximately the same median income in 2017-18.

three time-frames: one year, five years and 10 years. The analysis is also presented separately for three sub-periods of the 2001 to 2018 period based on the initial year in which the income quintile is measured: 2001 to 2005, 2006 to 2011 and 2012 to 2017.

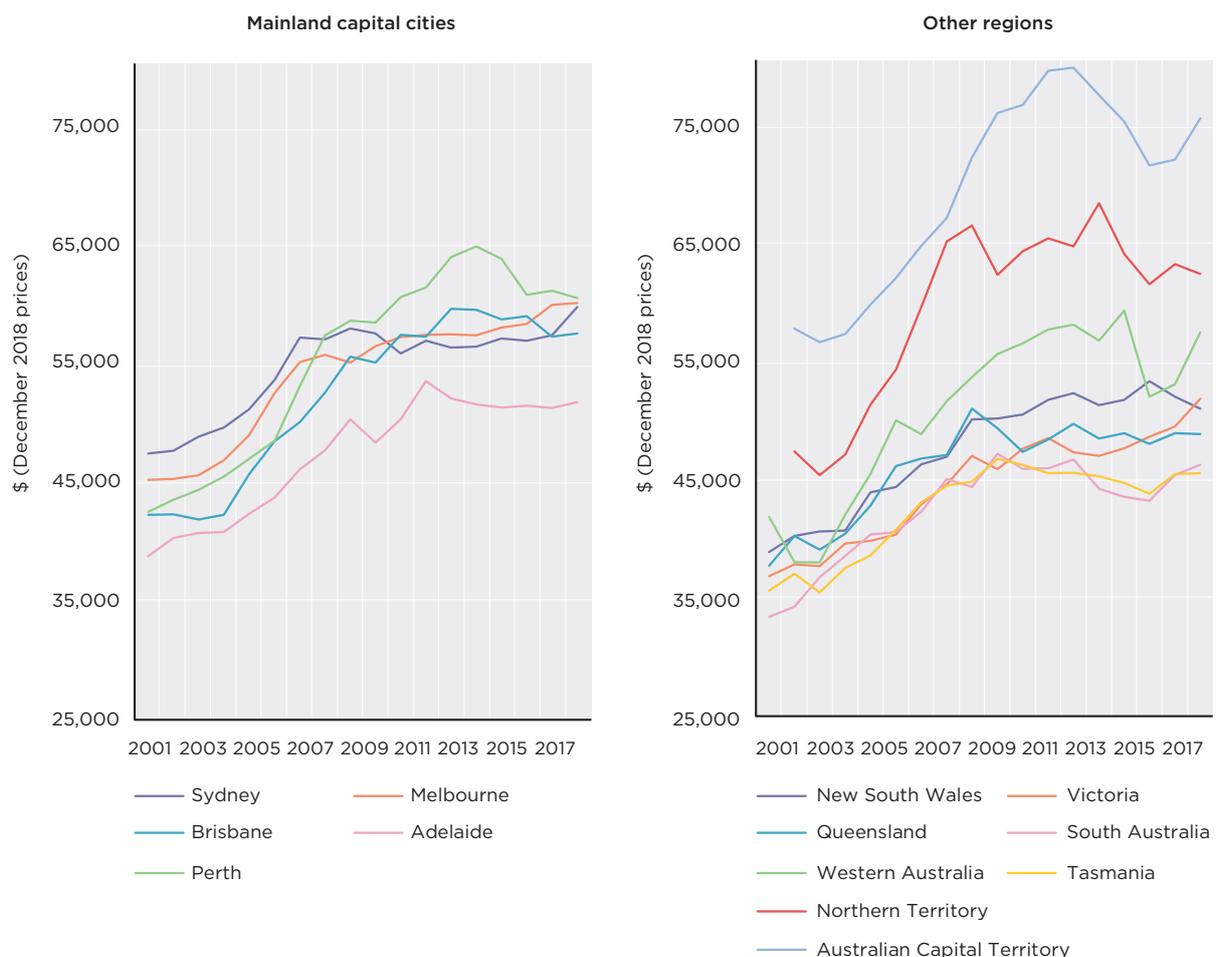
As an example to aid interpretation, the upper right cell of the table shows that, of those in the bottom quintile in any given year between 2012 and 2017, on average 31.3% were in a higher quintile in the next year. The remaining 68.7% stayed in the bottom quintile. (Note that it is not possible to move down from the bottom quintile or move up from the top

Box 3.5: Classification of region of residence

There are various ways of characterising the region of residence of sample members. In this report, we primarily characterise regions by state or territory of residence or by the region's population density. Based on the Australian Bureau of Statistics (ABS) Australian Standard Geographical Classification 2011 'Section of State' (ABS, 2011), three levels of population density are distinguished: **major urban** (cities with populations of 100,000 or more); **non-major urban** (towns and cities with populations of 1,000 to 99,999); and **non-urban regions** (towns with populations of less than 1,000, and rural and remote areas). The HILDA Survey data show that, in 2016, approximately 65% of the population resided in major urban areas, 20% resided in other urban areas and 15% resided in non-urban areas.

In more detailed analysis by region undertaken in this report, information on state or territory of residence and whether resident of the state's capital city is combined to create 13 distinct regions, each of which has a sufficient sample size to support the statistical analyses presented. The regions comprise: (1) Sydney; (2) Rest of New South Wales; (3) Melbourne; (4) Rest of Victoria; (5) Brisbane; (6) Rest of Queensland; (7) Adelaide; (8) Rest of South Australia; (9) Perth; (10) Rest of Western Australia; (11) Tasmania; (12) Australian Capital Territory; and (13) Northern Territory. Additionally, in some analysis, non-urban regions of Australia are distinguished (as a single category) and urban Northern Territory is combined with Australian Capital Territory, to give the following categories: (1) Sydney; (2) Other urban New South Wales; (3) Melbourne; (4) Other urban Victoria; (5) Brisbane; (6) Other urban Queensland; (7) Adelaide; (8) Other urban South Australia; (9) Perth; (10) Other urban Western Australia; (11) Urban Tasmania; (12) Urban Northern Territory and Australian Capital Territory; and (13) Non-urban Australia.

Figure 3.2: Mean household equivalised income, by region



Notes: Mainland capital cities are 'greater capital cities'. States are 'rest of state' (that is, excluding greater capital city). For the Northern Territory and Australian Capital Territory, estimates are two-year rolling averages (2001 and 2002, 2002 and 2003, and so on) to reduce variability due to small sample sizes.

quintile, so the corresponding cells are always zero.)

The table shows that ‘stickiness’ is greatest for the bottom and top quintiles. The proportion remaining in the same quintile is always highest for these two quintiles, regardless of the time-frame over which mobility is measured. For example, over a one-year time-frame, the proportion of the bottom quintile remaining in the bottom quintile is always just under 70%, while the proportion of the top quintile remaining in the top quintile is always just over 70%. For other quintiles, the proportion remaining in the same quintile from one year to the next is approximately 50%. For example, over the period from 2012 to 2018, the proportion remaining in the same quintile from one year to the next was 51.4% for the second quintile (that is, the second-lowest quintile), 49.1% for the middle quintile and 52.2% for

the fourth quintile (that is, the second-highest quintile).

The greater stickiness of the top and bottom quintiles is unsurprising, since it is only possible for people in these quintiles to move in one direction—down for the top quintile, and up for the bottom quintile. Perhaps also reflecting the greater scope for movement up the lower the initial quintile, and the greater scope for moving down the higher the initial quintile, is that the likelihood of moving to a higher quintile tends to be higher the lower the initial quintile, while the likelihood of moving to a lower quintile tends to be higher the higher the initial quintile. For example, in the 2012 to 2017 period, the proportion moving up from one year to the next was 31.3% for the bottom quintile, 27.2% for the second quintile, 26.1% for the middle quintile and 19.2% for the fourth quintile.

The table also shows that income mobility is greater the longer the time-frame. Over a 10-year time-frame, the proportion of those in the top quintile remaining in that quintile is approximately 47% (compared with over 70% over a one-year time-frame), and the proportion of those in the bottom quintile remaining in that quintile is approximately 54% (compared with just under 70% over a one-year time-frame). For other quintiles, the proportion in the same quintile 10 years later is always under 30% (compared with approximately 50% over a one-year time-frame).

There is some evidence that short- to medium-term income mobility has reduced slightly this century, as indicated by changes across the three sub-periods examined in Table 3.3. For all quintiles, the proportion remaining in the same quintile one year later rose slightly in the 2012 to 2017 period compared with the 2001 to 2005 period.

Table 3.3: Movements of individuals in the income distribution, by initial income quintile (%)

Initial years:	2001 to 2005			2006 to 2011 ^a			2012 to 2017 ^b		
	Moved down	No change	Moved up	Moved down	No change	Moved up	Moved down	No change	Moved up
<i>One-year changes</i>									
Bottom quintile	0.0	68.4	31.6	0.0	68.9	31.1	0.0	68.7	31.3
Second quintile	21.4	49.5	29.1	20.5	49.1	30.4	21.4	51.4	27.2
Middle quintile	26.4	46.5	27.1	27.3	45.9	26.8	24.8	49.1	26.1
Fourth quintile	30.7	50.3	19.1	28.9	50.7	20.4	28.6	52.2	19.2
Top quintile	29.7	70.3	0.0	27.7	72.3	0.0	26.5	73.5	0.0
<i>Five-year changes</i>									
Bottom quintile	0.0	60.1	39.9	0.0	59.8	40.2	0.0	59.6	40.4
Second quintile	26.5	36.7	36.8	23.5	35.7	40.9	23.4	38.1	38.5
Middle quintile	32.5	31.7	35.7	31.2	32.5	36.3	34.3	32.6	33.2
Fourth quintile	41.4	34.4	24.2	37.5	35.8	26.8	39.1	34.5	26.4
Top quintile	44.8	55.2	0.0	42.9	57.1	0.0	42.7	57.3	0.0
<i>10-year changes</i>									
Bottom quintile	0.0	54.4	45.6	0.0	54.7	45.3	–	–	–
Second quintile	26.4	28.1	45.5	26.1	27.7	46.2	–	–	–
Middle quintile	34.9	25.7	39.4	34.8	26.9	38.4	–	–	–
Fourth quintile	45.7	27.3	27.0	45.9	27.4	26.7	–	–	–
Top quintile	53.2	46.8	0.0	52.3	47.7	0.0	–	–	–

Notes: ^a Ten-year changes are for initial years 2006, 2007 and 2008 only. ^b Five-year changes are for initial years 2012 and 2013 only.



Most notable is that the proportion of the top quintile remaining in that quintile rose from 70.3% in the 2001 to 2005 period to 73.5% in the 2012 to 2017 period.

The pattern is also evident for all but the bottom quintile when examining mobility over five years. For example, the proportion remaining in the top quintile five years later rose from 55.2% in the 2001 to 2005 period to 57.3% in the 2012 to 2017 period.

Longer-term incomes

Figure 3.3 examines inequality of income measured over five years. Five-year income is calculated for each individual as the sum of inflation-adjusted annual equivalised income over the five years—that is, equivalised income is obtained for each of the years and these values are

then added together. To the extent that income fluctuates from year to year, distributional statistics for five-year income can provide a clearer sense of longer-term inequality.

The figure shows that, consistent with fluctuations in income from year to year, inequality in five-year income, as measured by the Gini coefficient, is lower than inequality in one-year income (Table 3.2). The differences are not large however, implying there is a high degree of persistence in household incomes. Moreover, the Gini coefficient for five-year income increased by approximately 3.8% between 2003 and 2009, and has remained relatively stable at the 2009 level since.

The rise in inequality in five-year income is seemingly at odds with the finding of little change in inequality of one-year income.

However, it is consistent with the evidence in Table 3.3 that income mobility has declined over the HILDA Survey period. This is because lower income mobility over the short- to medium-term means that poor people tend to remain poor from one year to the next and rich people tend to remain rich from one year to the next, so that the decrease in inequality in moving from one-year to five-year income will be smaller—in the extreme, if everyone has the same income every year, then inequality of five-year income will be the same as inequality of one-year income.

While this increase in income stability from year to year is a positive development for people with good incomes, this is not a good development for people with low incomes, since they are more likely to have *persistently* low incomes.

Income poverty

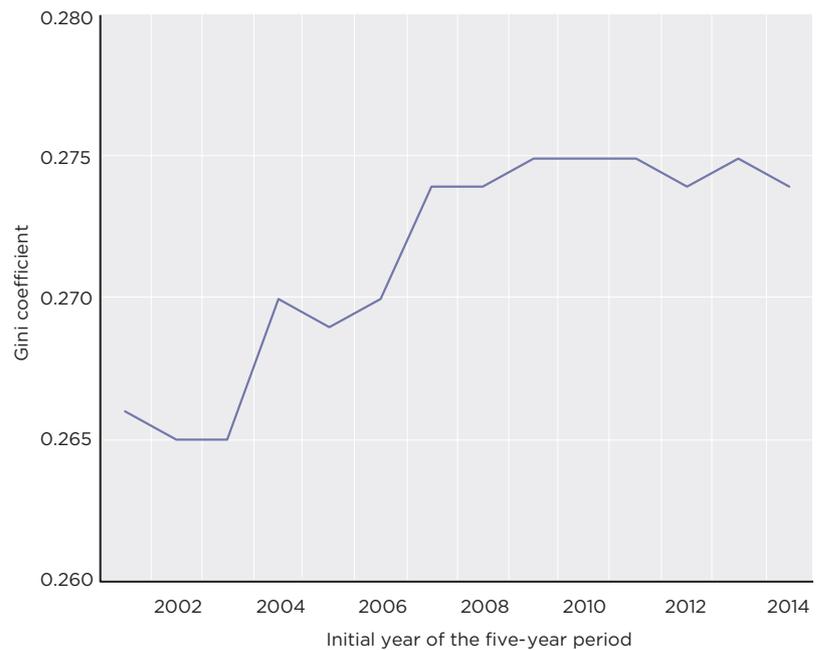
A wide variety of definitions or measures of poverty, or material deprivation, have been employed by economic and social researchers. As in previous volumes of this report, we examine the most commonly employed definition applied to the study of poverty in developed countries, which conceives of poverty as *relative* deprivation or socio-economic disadvantage, and which measures deprivation in terms of inadequacy of *income*. Consistent with the approach of the Organisation for Economic Co-operation and Development (OECD) and other international bodies, we define relative income poverty as having a household income below 50% of median income.

While based on a degree of public and researcher consensus, it should nonetheless be acknowledged that there is an element of arbitrariness to this—or any other—definition of relative poverty. In this year's report we therefore consider how poverty estimates are affected by variations to the poverty measure, in particular examining how estimates are affected by 'anchoring' the poverty line at different levels and by examining income net of housing costs (that is, the income left over after deducting mortgage or rent payments on the home). In addition, later in this chapter, we examine data collected in 2014 and 2018 on experience of 'material deprivation' as an alternative way to measure socio-economic disadvantage.

Cross-sectional poverty rates

Figure 3.4 presents relative income poverty rates in each year covered by the HILDA Survey. It also presents poverty rates holding the purchasing power of

Figure 3.3: Inequality of five-year income (Gini coefficient)





the poverty line constant at the 2001 relative poverty line. This is referred to in the figure as the 'anchored' poverty line (see Box 3.6, below). Our income measure is equivalised income; thus, the relative poverty lines presented at the bottom of Figure 3.4 can be interpreted as the minimum annual income after taxes and government benefits that a single-person household would require to avoid relative

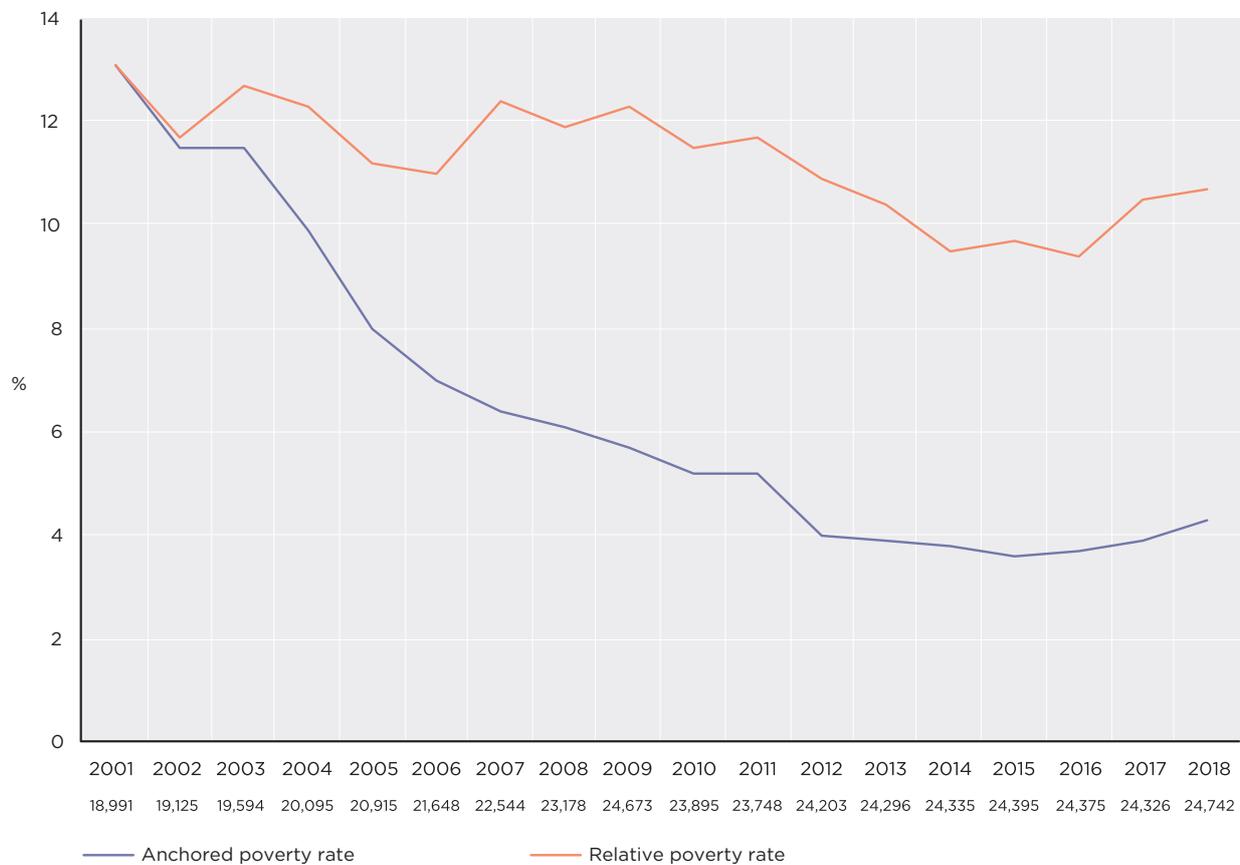
income poverty. Poverty rates refer to the proportion of people (not households) living in poverty. Reflecting the high rate of household income growth that occurred up to 2009, the relative poverty line increased substantially from \$18,991 in 2001 to \$24,673 in 2009 (expressed at December 2018 prices). Median income has changed little since 2009, and as a result the relative

Box 3.6: Relative and anchored income poverty

A person is in **relative income poverty** if they are unable to afford the goods and services needed to enjoy a normal or mainstream lifestyle in the country in which they live (OECD, 2019). In this report, we define a person to be in relative income poverty if household equivalised income is less than 50% of the median household equivalised income.

An **anchored poverty line** is an income poverty threshold that has its real value held constant over time rather than adjusted for changes in average living standards. It is 'anchored' in the sense that the *purchasing power* of the poverty line—the basket of goods and services that it can purchase—remains fixed over time. The level at which an anchored poverty line is set may be based on the level of a relative poverty line obtained at a particular point in time, for example (as is the case in this report), the beginning of the time period under study.

Figure 3.4: Percentage of the population in income poverty



Note: Values at the base of the figure are the dollar values of the relative poverty lines in each of the financial years, expressed at December 2018 prices.



poverty line was almost the same in 2018 as it was in 2009.

The proportion of the population below the relative poverty line has fluctuated over time. The broad trend was downwards between 2007 and 2016, when the poverty rate declined from 12.4% of the population to 9.4%. However, the relative poverty rate has increased since 2016, to be 10.7% in 2018.

The poverty rate obtained when the real value of the poverty line is maintained at its 2001 level of \$18,595 (at December 2018 prices) has fallen considerably more than the relative poverty rate. This anchored poverty rate was 13.1% in 2001 and was only 4.3% in 2018. Thus, even among those in relative income poverty, average living standards (as measured by equivalised income) have increased over the full 18-year period. That said, the anchored poverty rate has risen slightly since 2015, when it reached a low of 3.6. Thus, the pattern of improved living standards among the poor has not been maintained in the three most recent years of the HILDA Survey. The reasons for this measured decline in living standards are not clear and warrant further research.

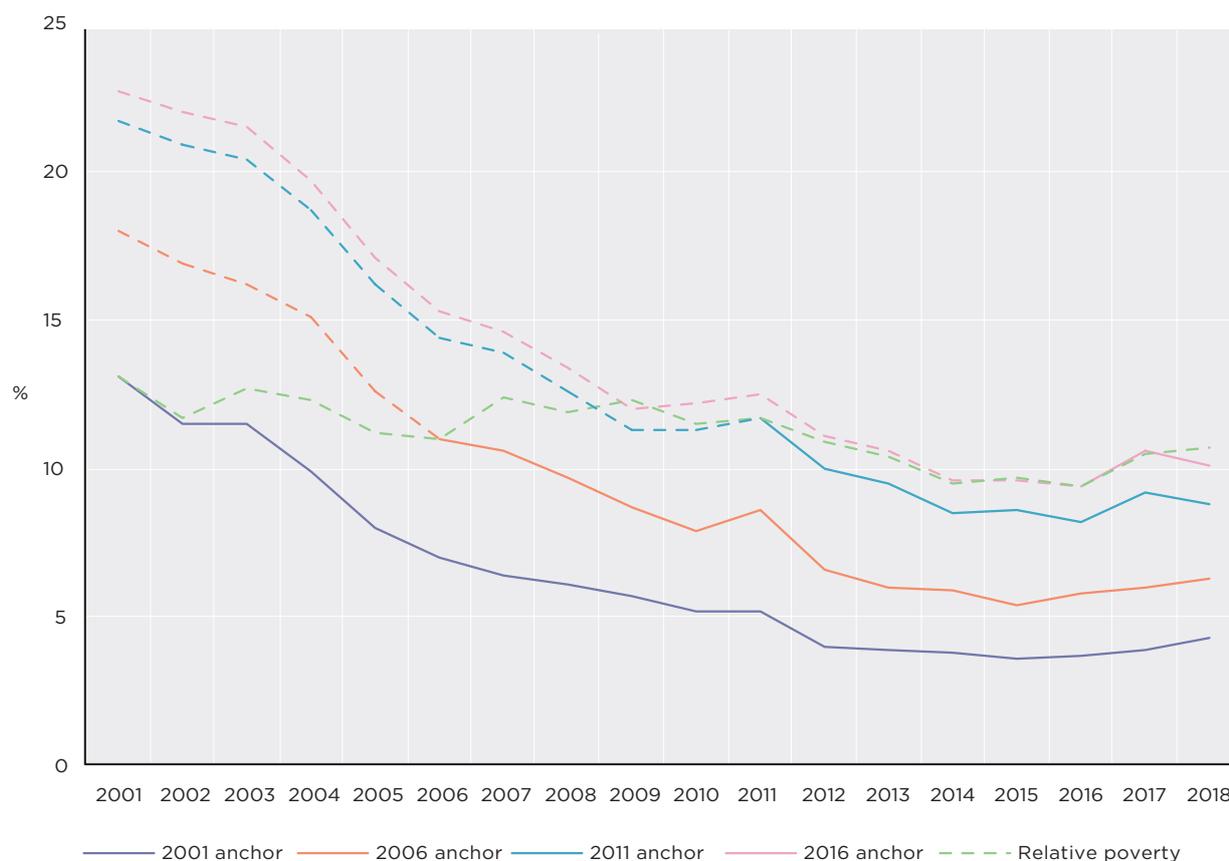
Figure 3.5 examines anchored poverty rates for different anchor years—2001, 2006, 2011 and 2016. For each poverty line, the poverty rate in the years subsequent to the anchor year is represented as a solid line, while the poverty rate in the years prior to the anchor year are represented as dashed lines. Note that the anchored poverty rate always equals the relative poverty rate in the anchor year.

As we move from the 2001 to 2016 anchor years, the anchored poverty rate increases in each year, reflecting the growth in median income, and hence the relative poverty line, between each anchor year. (As Table 3.2 shows, while there has been little net change in median income since 2009, there was slight growth in the median between 2011 and 2016.) For example, in 2018, the relative poverty rate was 10.7%, but was 10.1% when anchored to the 2016 poverty line, 8.8% when anchored to the 2011 poverty line, 6.3% when anchored to the 2006 poverty line, and 4.3% when anchored to the 2001 poverty line. Conversely, using the 2016 poverty line, the poverty rate in 2001 would have been 22% instead of 13.1%; even using the 2006 poverty line, the poverty rate in 2001 would have been 16.9%.

One of the implications of Figure 3.5 is that, while relative poverty rates are more appropriate for examining poverty over the medium- to long-term, anchored poverty lines may be more useful for understanding short-term movements in poverty. A fluctuation in relative poverty from one year to the next could result from changes in either the equivalised incomes of the poor or changes in the median income, whereas the anchored poverty rate will only fluctuate because of changes in the equivalised incomes of the poor.

Arguably, in gauging how a society is faring from one year to the next—for example, assessing the impact of a particular poverty-reduction policy—the anchored poverty line will provide a clearer signal by not being affected by movements in median income. However, over the longer-term, if we conceive of poverty as an inability to fully participate in the normal activities of the community (because of a lack of economic resources), the relative poverty measure is likely to provide more meaningful information. That said, since 2009, there has, in fact, been little difference in changes from one year to the next in the relative and anchored poverty rates.

Figure 3.5: Anchored poverty rates using different 'anchor years'



Poverty by family type

Figure 3.6 shows that relative poverty rates vary substantially by family type. Rates are consistently higher among older people, particularly older single people, although they declined substantially between 2009 and 2014 for all three groups of older people distinguished in the figure. Moreover, older people tend to have lower housing costs, an issue addressed by examination

of an 'after housing' poverty measure later in this chapter.

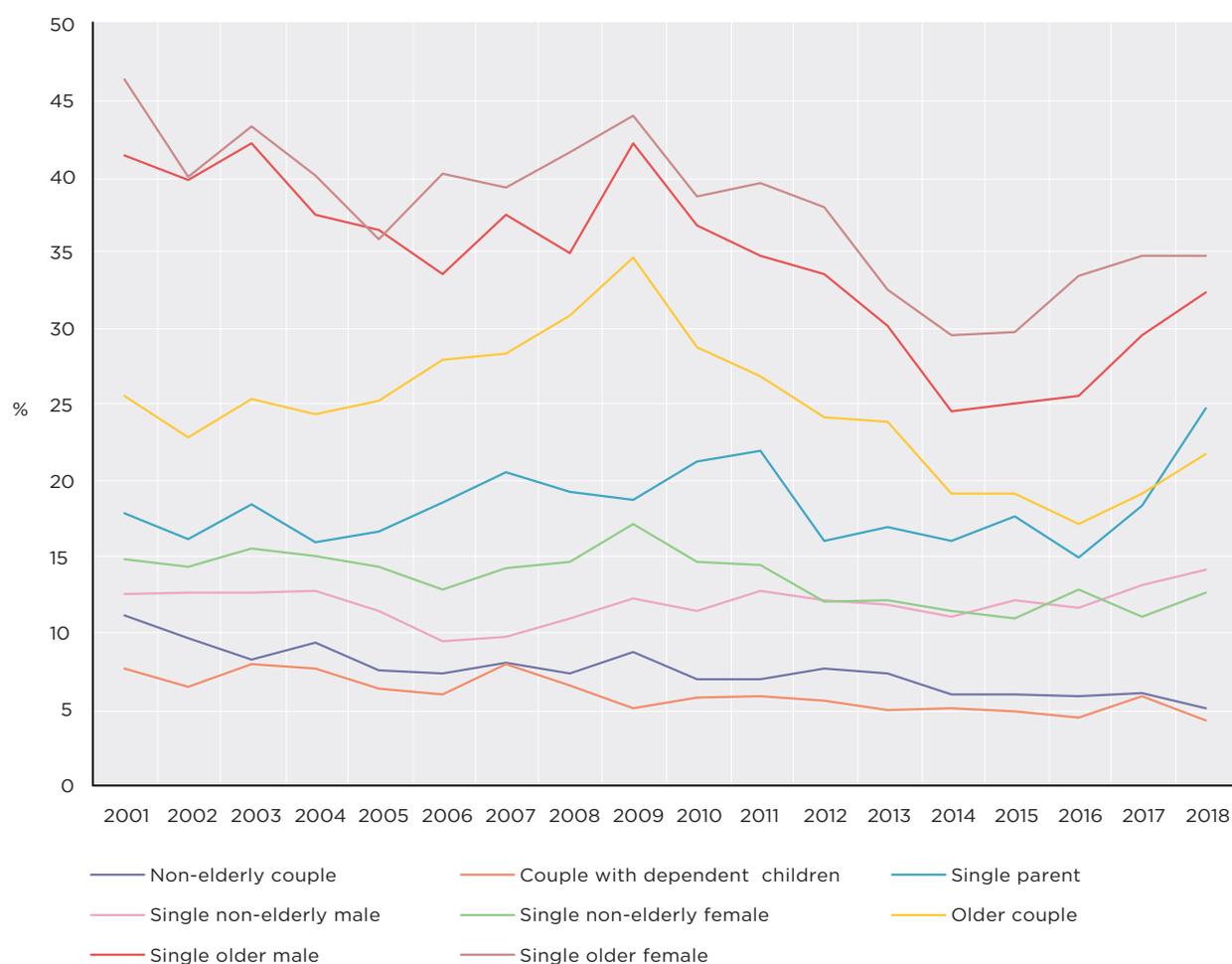
Poverty rates are also somewhat higher for people living in single-parent families. By contrast, non-elderly couples, whether with or without dependent children, have consistently lower poverty rates, which in the most recent years have been in the vicinity of 5%.

Since 2016, there have been sizeable increases in poverty

rates among single-parent families, older couples and older single males. The increase in the poverty rate been particularly sharp for single-parent families, rising from 15% in 2016 to 25% in 2018. This is consistent with the fall in median equivalised income of single-parent families shown in Figure 3.1, but is nonetheless a surprisingly large increase in such a short period of time.²

² The sharpness of the rise in poverty among people in single-parent families also highlights that measured poverty rates can be quite sensitive to relatively small changes in income for population groups with a significant proportion with incomes close to the poverty line. For example, in every year of the HILDA Survey, more than 20% of people in single-parent families had equivalised incomes between 40% and 60% of the median equivalised income (recalling that the poverty line is set at 50% of median income). This provides one rationale for studies of the depth of poverty, which consider not only how many people are in poverty, but also how far below the poverty line are their incomes. That said, analysis by the author of the Australian Bureau of Statistics' Survey of Income and Housing shows a similar increase in the rate of poverty among people in single-parent families, rising from 18% in 2015-16 to 25% in 2017-18.

Figure 3.6: Poverty rates by family type



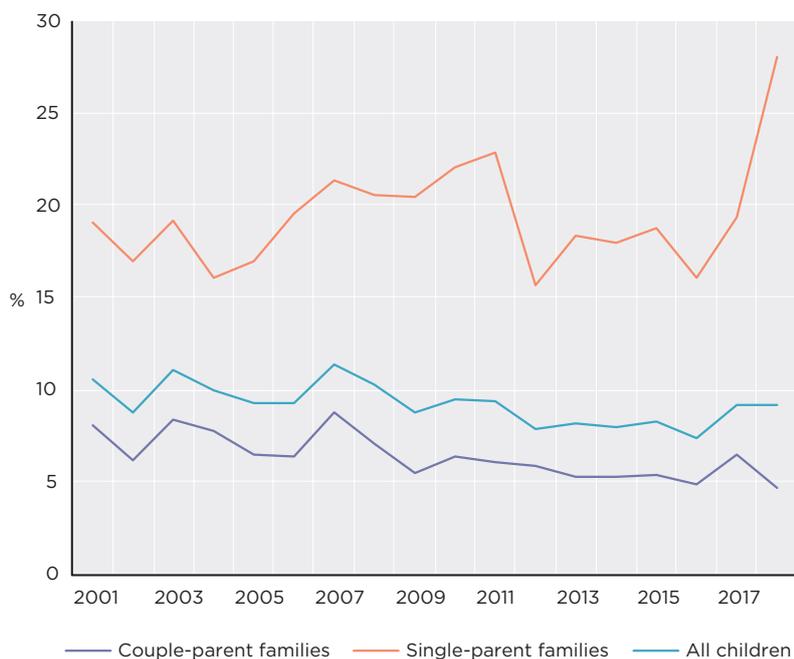
Child poverty

Child poverty is a particular concern for policy-makers because of the damage poverty may cause to children's future productive capacity and life prospects more generally. Figure 3.7 presents child relative poverty rates (before housing costs) for dependent children aged under 18, in total and separately for children in couple-parent families and children in single-parent families.

The child poverty rate is consistently below the community-wide poverty rate, in most years being below 10%, and in 2018 equal to 9.2%. However, consistent with the evidence in Figure 3.6, poverty is considerably more prevalent among children in single-parent



Figure 3.7: Child poverty rates by family type—Dependent children aged under 18



families than among children in couple-parent families. In all years, the poverty rate for children in single-parent families is over twice the poverty rate for children in couple-parent families. Moreover, between 2016 and 2018, the poverty rate for children in single-parent families rose from 16.1% to 28.1%, compared with a fall from 4.9% to 4.7% for children living in couple-parent families.

After-housing-costs measure of poverty

A criticism of the income poverty measure examined so far in this report is that it does not take into account the potentially large variation in housing costs across people, leading some people with low housing costs to be classified as poor, when they are not, and others with high housing costs to be classified as not poor, when in fact they have very little left over after paying for their housing. Most important in this regard is that many home owners effectively receive substantial ‘in-kind’ income in the form of ‘implicit rent’ they receive from their home. An approach for addressing this criticism is to examine income net of housing costs—that is, income after deducting mortgage or rent payments on the home.³ For example, this is the approach favoured by the Australian Council of Social Service in its two-yearly poverty report (Davidson et al., 2020).

Here we examine relative income poverty based on income after housing costs, whereby a person is defined to be in poverty if equivalised income net of housing costs is less than 50% of the median of this income measure. Note that, while this measure addresses the issue of variation in housing costs across



³ To understand how this approach accounts for implicit rent on owner-occupied housing, note that we are effectively adding implicit rent to home-owners’ income, but then subtracting it from their income because—by definition—it is entirely spent on housing. Also note that there are alternative ways to measure housing costs, including broadening the measure to include other costs such as council rates. (However, council rates are not measured by the HILDA Survey.)

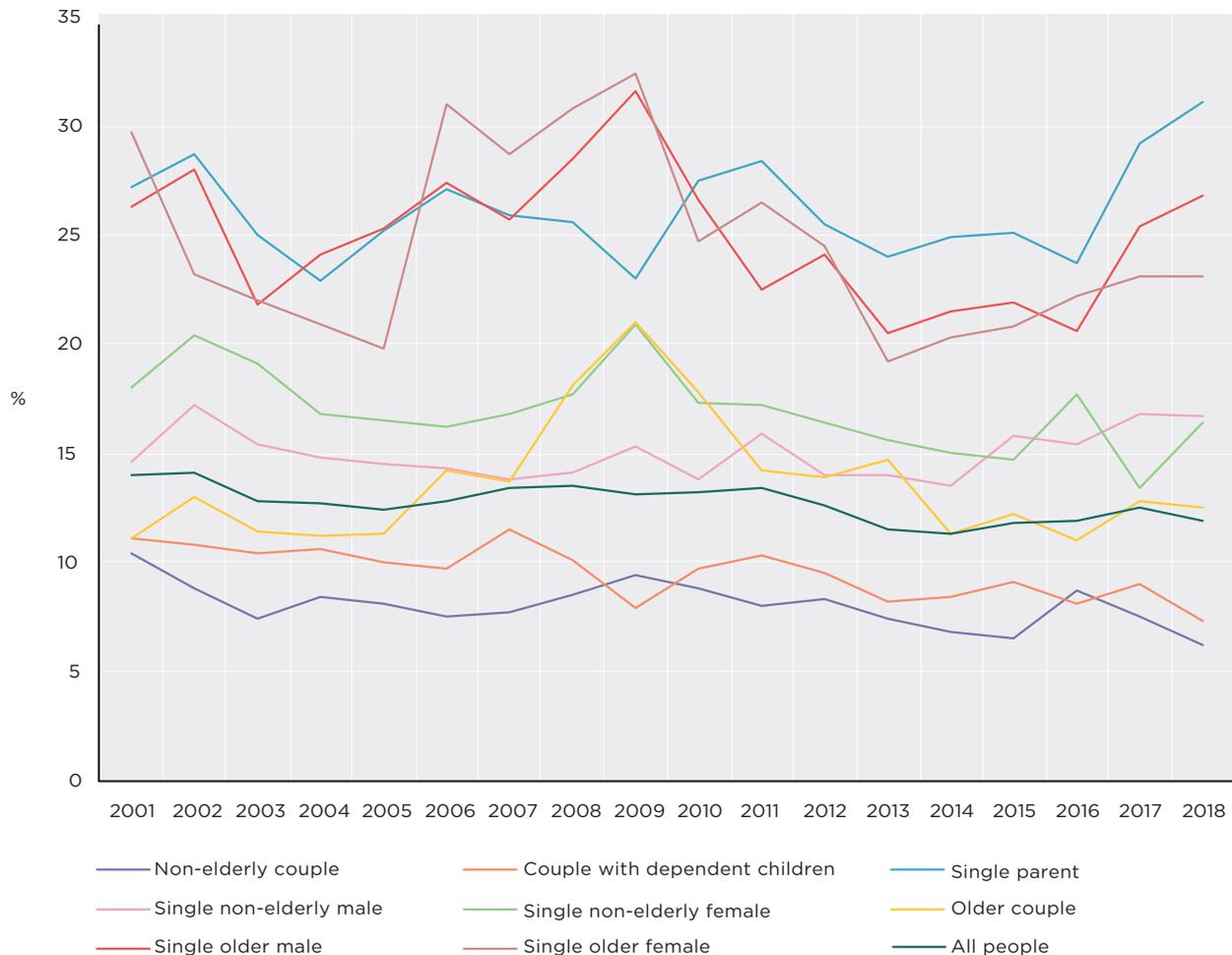


people, it has its own problems. Housing costs are, like expenditures on all goods and services, the outcome of choices made by individuals. To the extent that some people choose to have high housing costs, we may classify people as poor who are not in fact poor—that is, some people may choose to spend a lot on housing, despite having available lower-cost (but still adequate) housing.

Figure 3.8 presents estimates of poverty rates for income after housing costs. The overall poverty rate, as given by the grey line, is somewhat higher than the overall before-housing-costs poverty rate shown in Figure 3.4. For example, in 2018, the after-housing poverty rate was 11.9%, compared with 10.7% for the before-housing poverty rate. Most striking is that single-parent families have, since 2010, had the

highest poverty rate of all the family types distinguished in Figure 3.8, with older people—especially older single people—having relatively lower poverty rates compared with the before-housing measure of poverty. This reflects the fact that older people are more likely to own their own home outright than are younger people. That said, older single people still have relatively high poverty rates

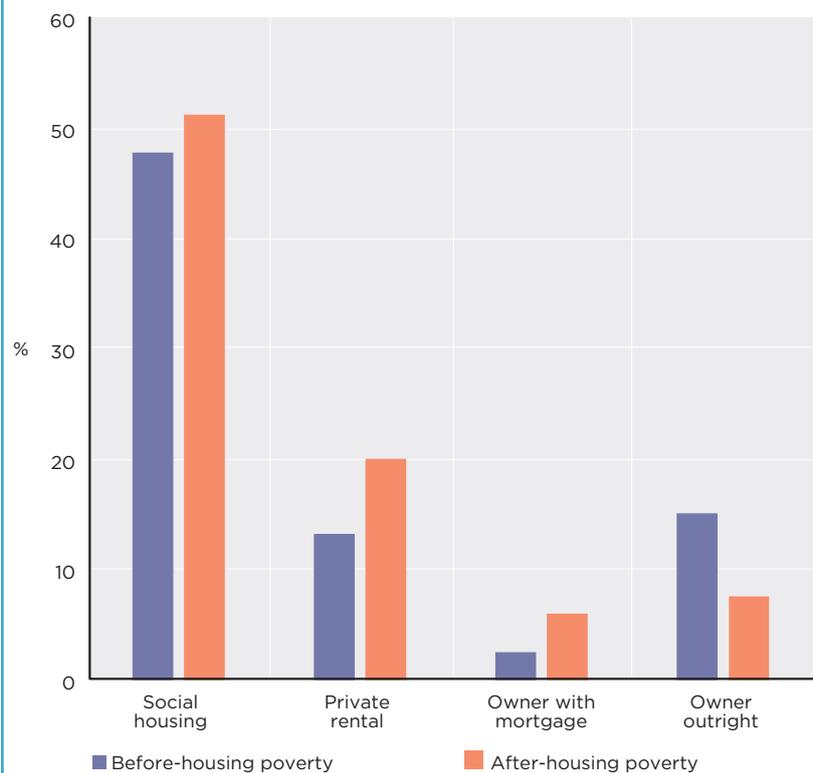
Figure 3.8: Poverty rates by family type based on income net of housing costs



compared to family types other than single-parent families.

Figure 3.9 shows, in 2018, how estimated poverty rates before and after housing costs vary across housing tenure types. For both poverty measures, poverty rates are highest for tenants of social housing, followed by private renters and then home owners without a mortgage. Home owners with a mortgage have the lowest poverty rates. However, the effects of moving to an after-housing-costs measure differ across the four housing tenure types. The poverty rate increases most for private renters, from approximately 13% to 20%, while it increases by approximately three percentage points for both home owners with a mortgage and renters of social housing. For outright home owners, the poverty rate actually decreases, falling from approximately 15% to 7.5%.

Figure 3.9: Relative poverty rates by housing tenure type, 2018



Poverty over the longer-term

While poverty experienced for a short period of time is undesirable, there is a great deal more public policy concern attached to long-term or entrenched poverty. Table 3.4 considers the amount of time people spend in poverty over a 10-year period (using the before-housing poverty measure as in Figure 3.4). Each of the table's top two panels examines the 10-year period from 2001 to 2010 and the 10-year period from 2009 to 2018. The first of these panels examines men and women who were aged 18 to 64 over the entire 10-year period (and therefore aged 18 to 55 at the start of the period), while the second panel examines people aged 65 and over for the entire 10-year period.

Approximately 73% of men and 68% of women aged 18 to 55 in 2001 did not experience income poverty in that year or any of the





Table 3.4: Experience of poverty over a 10-year period (%)

	Number of years in poverty					Total
	0	1 or 2	3 or 4	5 or 6	7 or more	
<i>People aged 18–55 at the start of the 10-year period</i>						
<i>2001 to 2010</i>						
Men	73.1	17.1	5.1	2.3	2.5	100.0
Women	68.1	19.4	5.8	3.6	3.1	100.0
<i>2009 to 2018</i>						
Men	75.5	14.9	5.2	2.6	1.8	100.0
Women	72.5	16.3	5.9	3.4	1.8	100.0
<i>People aged 65 and over at the start of the 10-year period</i>						
<i>2001 to 2010</i>						
Men	29.3	24.7	12.1	11.9	22.0	100.0
Women	23.2	23.7	15.5	8.6	29.0	100.0
<i>2009 to 2018</i>						
Men	35.5	24.0	16.9	7.0	16.5	100.0
Women	26.5	29.2	14.3	9.2	20.7	100.0
<i>First 10 years of life for children born 1 July 2000 to 30 June 2009</i>						
All	71.3	17.6	5.8	3.7	1.7	100.0
Major urban regions	74.2	15.6	5.6	3.7	0.8	100.0
Other regions	66.1	21.0	6.1	3.6	3.2	100.0

Note: Cells may not add up to row totals due to rounding.

subsequent nine years, necessarily implying that 27% of men and 32% of women did experience poverty in at least one year. For approximately 17% of men and 19% of women, poverty was experienced in only one or two years, and a further 5% of men and 6% of women experienced poverty in three or four of the 10 years.

Highly persistent or recurrent poverty was confined to the 4.8% of men and 6.7% of women who were in poverty in at least five of the 10 years. Consistent with the downward trend in the rate of poverty over the HILDA Survey period as a whole (Figure 3.4), the 10 years from 2009 to 2018 saw slightly lower proportions of working-age people experience poverty at any stage over the 10-year period. However, while there was a small decline in the proportion of people experiencing poverty in seven or more years, there were slight increases in the proportion experiencing poverty for between three and six of the 10 years.

For people aged 65 and over at the start of the 10-year period, poverty tends to be much more

persistent. Indeed, for women, it was more common to be in poverty in seven or more of the 10 years from 2001 to 2010 than it was to avoid poverty in all 10 years—29.0% were in poverty in seven or more years, whereas only 23.2% were never in poverty.

Similar to what is found for working-age people, older men are less likely to experience poverty, and less likely to experience entrenched poverty, than older women. The decline in experience of poverty between the 2001 to 2010 period and the 2009 to 2018 period evident for 'working-age' people is also evident for older people. Moreover, a substantial decline in entrenched poverty among older people is evident. The proportion experiencing poverty in seven or more years fell from 22.0% to 16.5% for men, and from 29.0% to 20.7% for women.

Long-term poverty experiences of children are considered in the bottom panel of Table 3.4 by examining the number of years children were in poverty in the first 10 years of their lives. This requires identification of poverty status in each of the first 10 years of each child's life, and as such

the figure examines children born in the period from 1 July 2000 to 30 June 2009.

The table shows that 71.3% of children born in this period were not living in poverty in any of their first 10 years of life, and 17.6% were in poverty in one or two years, while 5.4% were in poverty for at least half of their first 10 years.

Poverty experience in the first 10 years of life is also examined separately for major urban regions (towns and cities of at least 100,000 people; see Box 3.5, page 32) and other regions. Experience of poverty is considerably more common for children growing up outside the major urban areas, with 66.1% never experiencing poverty, compared with 74.2% for children growing up in major urban areas. Most of this difference derives from a higher proportion experiencing poverty in one or two of the 10 years—21.0% versus 15.6%—although children growing up outside major urban areas are also much more likely to be in long-term poverty, with 3.2% in poverty for seven or more of the 10 years, compared with 0.8% of other children.⁴



⁴ Note, however, that housing costs tend to be higher in major urban areas. Analysis of after-housing poverty shows smaller differences between major urban and other regions in long-term experience of poverty in the first 10 years of life. The proportion of children in major urban areas who never experience poverty in the first 10 years of life is 55.8%, compared with 49.2% of children living in other regions. Most of this difference derives from a lower likelihood of experiencing only one or two years of poverty over the 10-year period (23.9% versus 28.6%). Indeed, the proportion experiencing five or more years of poverty based on income net of housing costs is the same for children in major urban regions and children in other regions.

Welfare reliance

Reliance on welfare remains a significant concern for policy-makers in Australia (see Box 3.7, below, for a brief explanation of the Australian welfare system). It is associated with significant demands on government budgets and reduced economy-wide market output. Moreover, reliance on welfare is often associated with long-term poverty, social exclusion and other adverse outcomes for recipients and their children.

That said, the welfare system provides an important social 'safety net'. Indeed, it may be important in assisting people to 'bounce back' from adverse shocks, and could conceivably be beneficial to both economic output and the government budget over the longer-term. In any case, it is clear that policy concern should be greatest for long-term or entrenched welfare reliance.

The HILDA Survey is an important data source for understanding welfare reliance, since the longitudinal nature of the data enables the study of the duration and dynamics of welfare receipt. Importantly, it is possible to identify entrenched welfare reliance and the factors associated with it. The HILDA Survey is therefore a key data source for policy-

makers seeking to address long-term welfare reliance.

Income support receipt and welfare reliance over a one-year time-frame

Figures 3.10 and 3.11 respectively present cross-sectional estimates of welfare receipt and welfare reliance for 'working-age' people, defined here as people aged 18 to 64. In 2018, 27.9% of individuals aged 18 to 64 were living in a household that received income support at some stage of the financial year ending 30 June 2018. This is substantially lower than at the beginning of the HILDA Survey in 2001, when the corresponding figure was 37.8%. However, most of the decline in household welfare receipt was in the period to 2009.

Figure 3.11 presents estimates of welfare reliance for two definitions of welfare reliance (as explained in Box 3.8, page 46): more than 50% of annual household income comes from welfare; and more than 90% of annual household income comes from welfare. As would be expected, the proportion of the population classified as welfare reliant depends on whether the 50% or 90% threshold is employed. However, the two measures show similar trends, both declining between 2004 and 2008, and both remaining relatively stable until 2012.

Box 3.7: Welfare payments

Welfare payments in Australia are known as income support payments, which are cash benefits paid to Australian residents that are intended to represent the primary source of income of recipients.^a Studies of welfare reliance in Australia correspondingly focus on receipt of income support payments, although supplementary government cash benefits, known as non-income support payments, are typically included by studies when determining the extent of welfare reliance of those who have received income support payments. Income support payments comprise the Age Pension, Disability Support Pension, Carer Payment, Parenting Payment (Single and Partnered), Newstart Allowance (replaced with JobSeeker Allowance in March 2020), Youth Allowance and Department of Veterans' Affairs Service Pension, as well as several other smaller payment types. Non-income support payments include Family Tax Benefit (Parts A and B) and Carer Allowance.

^a 'Welfare' is a somewhat contested term, and many would argue that a much broader range of government expenditures than income support and non-income support payments should be classified as welfare payments. However, the approach taken in this report is consistent with the approach taken by most Australian researchers on welfare reliance.



Figure 3.10: Receipt of income support payments by people aged 18–64

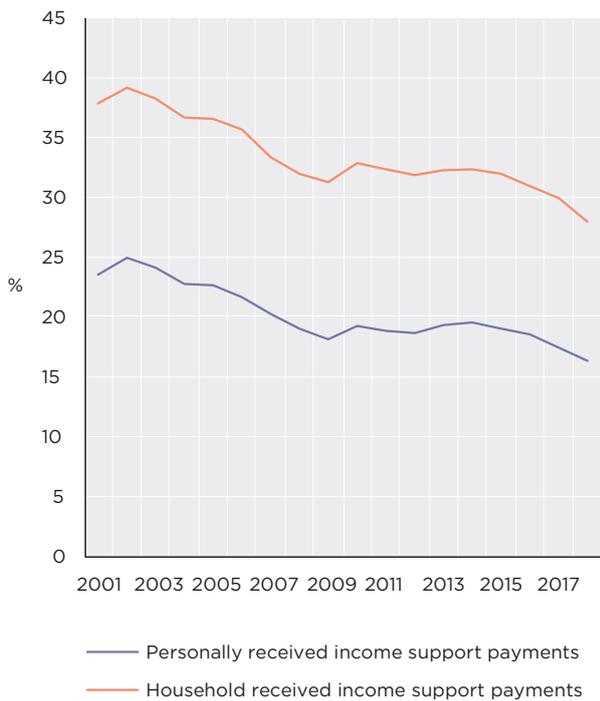
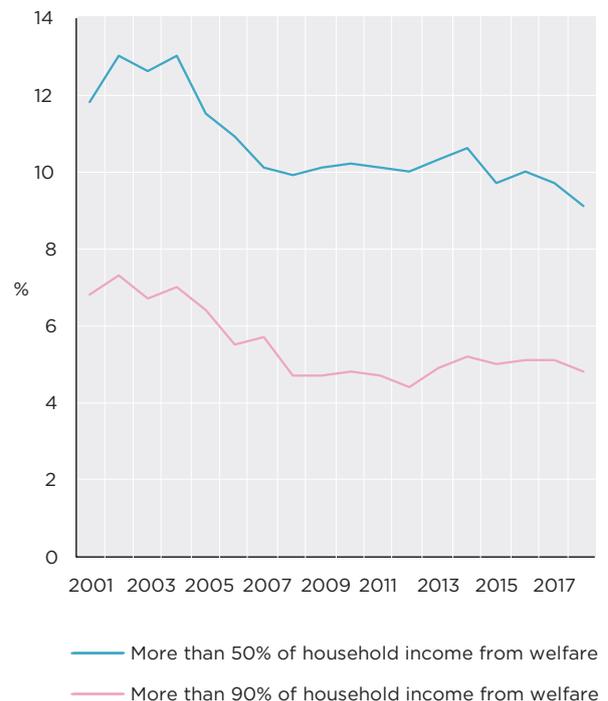


Figure 3.11: Reliance on welfare among people aged 18–64



Between 2012 and 2014 there were small increases in both measures, followed by a slight decrease in the proportion deriving more than 90% of income from welfare (from 5.2% in 2014 to 4.8% in 2018) and more sizeable decrease in the proportion deriving more than 50% of income from welfare (from 10.6% to 9.1%).

Figure 3.12, examining family types (see Box 3.4, page 31), shows that welfare reliance among working-age people is very much associated with living in single-parent families. For each year from 2001 to 2018, the figure presents the proportion of individuals in each family type obtaining more than 50% of financial-year household income from welfare benefits. Single parents have considerably higher rates of welfare reliance than people in other family types, although there was some decline in single-parent welfare reliance between 2002 and 2016, falling from 45.3% to 30.7%. Since 2016, however, welfare reliance among

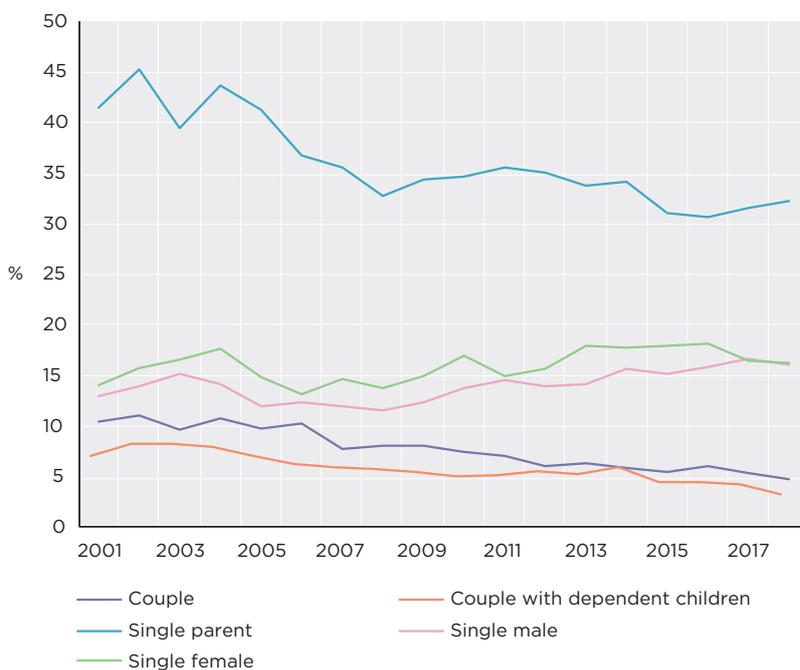
Box 3.8: Definitions of welfare reliance

Welfare reliance is usually conceived as a situation in which welfare payments represent the primary or main source of income. In this report, two alternative specific definitions of welfare reliance are adopted:

- (1) The household receives income support payments and more than 50% of household income comes from income support and non-income support payments.
- (2) The household receives income support payments and more than 90% of household income comes from income support and non-income support payments.



Figure 3.12: Welfare reliance of people aged 18 to 64 years, by family type



Note: A person is defined to be welfare-reliant if more than 50% of household annual income comes from welfare.

single parents has again risen, to be 32.3% in 2018.

Individuals in couple families, with or without dependent children, have the lowest rates of welfare reliance, and have also exhibited declines in welfare reliance. The proportion of people who were welfare-reliant fell from 8.3% in 2002 to 3.3% in 2018 for couples with dependent children, and from 11.1% in 2002 to 4.8% in 2018 for couples without dependent children.

Single men and women have welfare-reliance rates somewhat higher than couples, and have exhibited no trend decline in welfare reliance. Indeed, since 2008, there has been a significant rise in welfare reliance among single people, rising from 13.8% to 16.3% for women and from 11.6% to 16.3% for men. The gap between couples (with or without dependent children) and single people (without dependent children) has therefore risen over the HILDA Survey period.

Income support receipt and welfare reliance over 10 years

Drawing on the longitudinal nature of the HILDA Survey data provides significant insights into long-term contact with the income support system. Table 3.5 examines contact with the system over a 10-year period, presenting the proportion of people who at some stage in the 10-year period personally received an income support payment, and the proportion who at some stage were living in a household in which at least one member received an income support payment. The population examined is restricted to people who were aged 18 to 64 for the entire 10-year period (and therefore aged 18 to 55 at the start of the 10-year period and aged 27 to 64 at the end of the period). Estimates are disaggregated by sex and age





Table 3.5: Income support receipt over 10 years, by sex and age group at the start of the 10-year period (%)

	Age group at the start of the 10-year period				All aged 18-55 in initial year
	18-24	25-34	35-44	45-55	
<i>2001 to 2010</i>					
<i>Men</i>					
Personal receipt	47.0	26.6	30.3	35.4	33.2
Household receipt	78.6	57.8	60.6	60.6	62.5
<i>Women</i>					
Personal receipt	61.0	50.9	46.5	41.7	48.3
Household receipt	75.0	60.4	64.4	66.9	65.6
<i>People</i>					
Personal receipt	53.7	38.6	38.6	38.6	40.8
Household receipt	76.9	59.1	62.6	63.9	64.1
<i>2009 to 2018</i>					
<i>Men</i>					
Personal receipt	43.7	27.7	27.3	26.0	30.0
Household receipt	75.1	51.2	51.4	57.1	57.2
<i>Women</i>					
Personal receipt	54.8	42.0	38.0	31.7	40.0
Household receipt	70.6	54.2	55.0	62.8	59.7
<i>People</i>					
Personal receipt	49.1	35.0	32.7	29.0	35.1
Household receipt	72.9	52.7	53.2	60.1	58.5

group and, as in the analysis of poverty presented in Table 3.4, two 10-year periods are examined: 2001 to 2010; and 2009 to 2018.

The bottom-right cell of the top panel of the table shows that 64.1% of the working-age population had direct or indirect contact with the income support payments system at some stage between 2001 and 2010. Moreover, 40.8% of this cohort *personally* received income support payments at some stage between 2001 and 2010. Given that approximately 20% of working-age individuals received

income support in any given year of this period, this indicates that the income support system was indeed providing temporary rather than long-term support for most recipients, and was potentially playing a very important safety-net role. Contact with the income support system was lower over the 10 years from 2009 to 2018 (lower panel of Table 3.5), but still substantial, with 58.5% having household contact and 35.1% having personal contact.

Rates of contact with the income support system are high for both men and women across all age

groups. For both men and women, in all age groups, and in both the 2001 to 2010 and 2009 to 2018 periods, household contact with the income support system is approximately 50% or higher.

Personal contact with the income support system varies more by sex, age group and indeed time period than does household contact. For men, over the 2001 to 2010 period, personal contact was lowest among those aged 25 to 34 in 2001, and thereafter increased as we move up the age distribution, rising from 26.6% of the 25 to 34 age group to 35.4%

of the 45 to 55 age group. However, in the 2009 to 2018 period, rates of personal contact were similar across the 25 to 34, 35 to 44 and 45 to 55 age groups, and indeed tended to decrease slightly with age.

In both of the 10-year periods, rates of personal contact with the income support system are somewhat higher for women than men in all age groups, but particularly among those aged under 45. This is likely to be at least partly due to women being a high proportion of single parents. That said, the gap between men and women in the 25 to 44 age range was

considerably smaller in the 2009 to 2018 period than in the earlier period, with women in the 25 to 34 and 35 to 44 age groups experiencing approximately 9 percentage-point declines in rates of personal contact with the income support system.

The *extent* of working-age individuals' contact with, and reliance on, the income support system over a 10-year period is examined in Table 3.6. The upper panel of the table shows the distribution of the number of years in which the individual's household received income support. Measuring the extent of contact with the system by the

number of years in which one's household received income support payments, it is evident that the majority of working-age people have either no or only temporary contact with the system. Over the 2001 to 2010 period, 70.0% of men and 63.6% of women had contact with the system in three or fewer of the 10 years; while over the 2009 to 2018 period, 68.7% of men and 66.2% of women had contact with the system in three or fewer of the 10 years.

The bottom panel of Table 3.6 examines the extent of welfare reliance over a 10-year period, presenting the mean proportion

Table 3.6: Welfare receipt over 10 years—People aged 18 to 55 at the beginning of the 10-year period

	2001 to 2010		2009 to 2018	
	Men	Women	Men	Women
<i>Number of years of household income support receipt (%)</i>				
0	37.5	34.5	42.8	40.4
1-3	32.5	29.1	25.9	25.8
4-6	12.2	13.8	13.2	12.9
7-9	8.4	11.0	9.0	9.9
10	9.4	11.6	9.1	11.0
Total	100.0	100.0	100.0	100.0
Mean proportion of household income from welfare—All persons (%)	11.4	15.1	10.8	13.4
Proportion obtaining more than 50% of 10-year household income from welfare (%)	6.9	10.6	6.3	8.9

Note: Cells may not add up to column totals due to rounding.



of household income deriving from welfare over the 10 years for all people and the proportion of the population who were reliant on welfare over the 10-year period as a whole (defined as obtaining more than 50% of household income over the 10 years from welfare). On average, working-age men derived 11.4% of household income from welfare payments between 2001 and 2010, while working-age women on average derived 15.1% of household income from welfare. These figures dropped to 10.8% and 13.4%, respectively, in the 2009 to 2018 period. Similarly, comparing the same two 10-year periods, the proportion who were welfare-reliant fell from 6.9% to 6.3% for men, and from 10.6% to 8.9% for women.

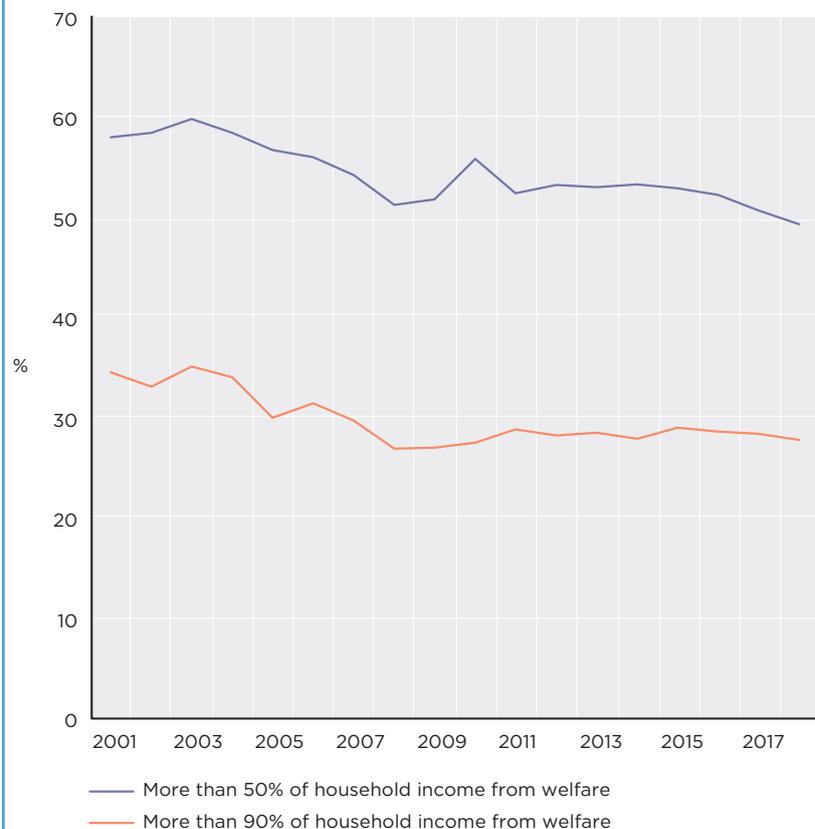
Income support receipt among older people

While many people continue to work in paid employment beyond 65 years of age (and the Age Pension age is gradually increasing to 67 by 1 July 2023), most people aged 65 and over are retired (see, for example, Wilkins and Laß, 2018). We would correspondingly expect welfare reliance to be relatively high among this age group. Indeed, income support for people aged 65 and over primarily comprises the Age Pension, the payment designed to support people in retirement.⁵

Figure 3.13 shows that welfare reliance is, as expected, considerably higher among people aged 65 and over than among people aged 18 to 64 (Figure 3.11). For example, the proportion of people aged 65 and over obtaining more than half of household income from welfare is between approximately 50% and 60% across the entire 2001 to 2018 period, compared



Figure 3.13: Reliance on welfare among people aged 65 and over



⁵ Interpreting ages 65 and over as 'non-working age' is problematic, however, particularly in light of the gradual increase in the minimum age of eligibility for the Age Pension from 65 to 67 over the period from 1 July 2017 to 1 July 2023.

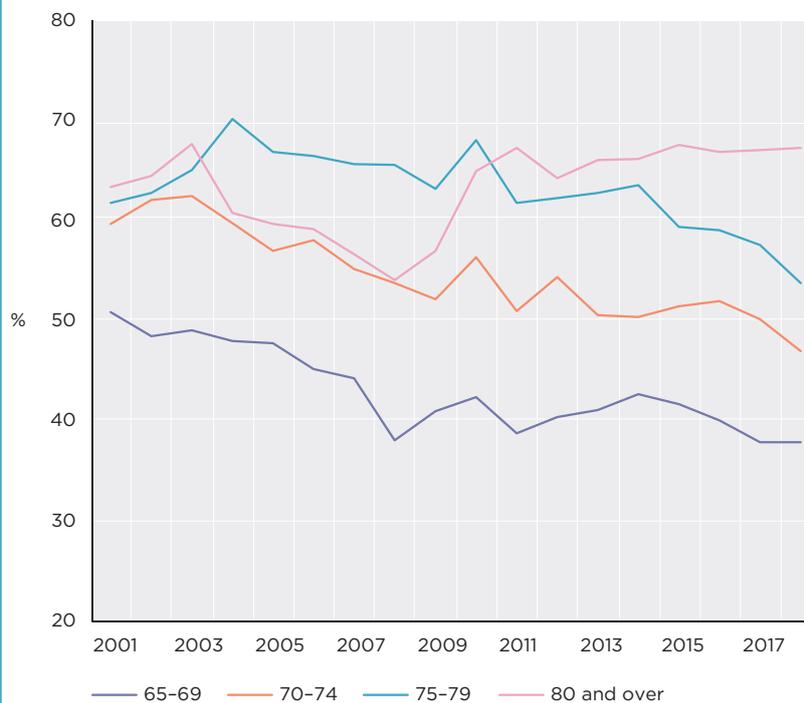
with between approximately 9% and 13% of people aged 18 to 64. There has, however, been a decline in welfare reliance among people aged 65 and over since 2003. In 2003, 59.9% of the older relied on welfare for more than 50% of their income, and 35.2% relied on welfare for more than 90% of their income; by 2018, these figures had respectively fallen to 49.4% and 27.9%.

Increased reliance on superannuation is likely to be an important contributor to this decline. However, as with the working-age population, most of the decline in reliance happened between 2003 and 2009. The continued maturation of the superannuation system since 2009 might have been expected to further reduce reliance on income support, but there has

been relatively little net change since 2009. That said, this measure of welfare reliance has trended slightly downwards since 2014, declining from approximately 53% in 2014 to 49% in 2018.

Figure 3.14 examines welfare reliance among older people disaggregated into four age groups. Welfare reliance tends to be more prevalent in older age groups, although between 2004 and 2010 it was higher for the 75 to 79 age group than for the 80 and over age group. Reliance decreased for the three youngest age groups between 2001 and 2018, but increased for the 80 and over age group, particularly between 2008 and 2010.

Figure 3.14: Reliance on welfare among people aged 65 and over, by age group



Notes: A person is defined to be welfare-reliant if more than 50% of household annual income comes from welfare. Age groups are based on age at the beginning of the financial year.



Material deprivation

Material deprivation exists when people do not have and cannot afford to buy items or undertake activities that are widely regarded in society as things that everyone should have (Townsend, 1979; Mack and Lansley, 1985). It is now widely used to provide an insight into the nature and extent of poverty that is based on the acceptability of people's actual living standards rather than on how much income they have. Although it can thus be regarded as an alternative to conventional poverty line studies, the deprivation approach can also be combined with income studies to produce poverty measures that reflect both the level of resources available to people and the living standards that they are able to achieve from those resources.

A suite of questions allowing construction of deprivation measures was included in the household questionnaire of the HILDA Survey for the first time in Wave 14 and was again included in Wave 18. Administered to one member of each responding

household, the questions establish, for each of 26 items in 2014 and 25 items in 2018, whether the item is regarded as 'necessary or essential for all Australians—something that no-one in Australia should have to go without today', whether the respondent's household has the item and, if not, whether this is because they cannot afford it.

Items that are regarded as essential by a majority in the community are classified as the

essentials of life and it is this subset of items that is used to identify deprivation. A household is defined to be deprived of an item only if it does not have the item and this is because it cannot afford it.

Table 3.7 presents summary data from responses to the material deprivation questions in 2014 and 2018.⁶ For the questions on which items are regarded as essential, responses are similar in 2014 and 2018. In 2014, 22 of the 26 items

were regarded as essential by a majority of households, while in 2018, 23 of the 25 items were regarded as essential by a majority of households. In both years, the items without majority support in 2014 were 'a week's holiday away from home each year', and 'buying presents for immediate family or close friends at least once a year'. In 2014, a television was regarded as essential by only 43.5% and for this reason was excluded from

Table 3.7: Responses to questions for each material deprivation item, 2014 and 2018 (%)

	<i>Believe it is essential</i>		<i>Don't have it and can't afford it</i>	
	2014	2018	2014	2018
1. Getting together with friends or relatives for a drink or meal at least once a month	78.4	75.6	2.5	3.1
2. Medical treatment when needed	99.7	99.1	1.2	1.1
3. Furniture in reasonable condition	82.2	81.5	0.4	0.7
4. A decent and secure home	96.8	97.2	0.3	0.4
5. Medicines when prescribed by a doctor	99.0	98.7	0.5	0.5
6. Warm clothes and bedding, if it's cold	99.6	99.0	*0.1	*0.1
7. A television	43.5	–	*0.1	–
8. A substantial meal at least once a day	99.2	98.8	*0.1	*0.2
9. A week's holiday away from home each year	42.0	40.6	16.5	14.8
10. A roof and gutters that do not leak	85.3	85.8	2.3	1.5
11. A telephone (Landline or mobile)	83.5	84.7	*0.1	*0.1
12. Home contents insurance	61.2	56.2	8.4	8.2
13. A washing machine	79.5	77.9	0.3	*0.2
14. Access to the internet at home	49.5	56.8	1.7	1.0
15. A motor vehicle	56.7	51.0	1.9	1.4
16. Comprehensive motor vehicle insurance	58.3	53.6	4.7 ^a	4.9 ^a
17. At least \$500 in savings for an emergency	78.0	77.2	12.3	11.3
18. A home with doors and windows that are secure	94.5	94.6	0.7	0.5
19. Dental treatment when needed	97.5	97.0	5.2	5.3
20. Buying presents for immediate family or close friends at least once a year	47.2	42.7	2.4	2.8
21. When it is cold, able to keep at least one room of the house adequately warm	95.7	95.4	0.6	0.6
22. A separate bed for each child	78.8	75.5	0.8 ^b	0.8 ^b
23. A yearly dental check-up for each child	93.9	93.4	3.3 ^b	2.8 ^b
24. A hobby or a regular leisure activity for children	82.7	80.2	3.6 ^b	3.5 ^b
25. New school clothes for school-age children every year	56.0	52.4	6.9 ^c	5.1 ^c
26. Children being able to participate in school trips and school events that cost money	82.7	82.0	1.8 ^c	1.3 ^c

Notes: The item 'a television' was not included in Wave 18. ^a Households that have a motor vehicle. ^b Households with children aged under 15. ^c Households with children aged under 15 attending school. * Estimate not reliable.

⁶ The first two columns of Table 3.7 use household weights, while the third and fourth columns (and all subsequent tables in this section) use enumerated population weights on the assumption that the answers provided for the household apply to all household members.

the list in 2018. The only item for which majority support switched was 'access to the internet at home', which was regarded as essential by 49.5% of people in 2014 and 56.8% in 2018.

While majority support did not change for any other items between 2014 and 2018, it is notable that the proportion of people regarding items as essential declined for most items. Declines were particularly large for 'a motor vehicle' (5.7 percentage points), 'home contents insurance' (4.9 percentage points), 'comprehensive motor vehicle insurance' (4.7 percentage points) and 'buying presents for immediate or close friends at least once a year' (4.4 percentage points). Aside from internet access at home, only for 'a telephone (landline or mobile)' did the proportion regarding it

essential rise by more than one percentage point.

Among the items regarded as essential by a majority of people in 2014 or 2018, deprivation rates (the proportion of people who do not have an item, and do not have it because they cannot afford it) are highest for 'at least \$500 in savings for an emergency', 'home contents insurance', 'new school clothes for school-age children every year' and 'dental treatment when needed', all of which have deprivation rates of at least 5% in both years. Deprivation rates are lowest for 'warm clothes and bedding, if it's cold', 'a substantial meal at least once a day', 'a telephone (landline or mobile)', 'a washing machine' and 'a decent and secure home', all of which have deprivation rates less than 0.5% in both 2014 and 2018.

Between 2014 and 2018, deprivation rates decreased slightly for most items, the biggest falls being for 'new school clothes for school-age children each year' (1.8 percentage points) and 'a week's holiday away from home each year' (1.7 percentage points).

Extent of material deprivation

A measure of the extent of an individual's overall level of deprivation can be constructed as simply the number of essential items of which the individual is deprived—that is, the number of essential items the individual's household does not have because it cannot afford them. Based on this 'deprivation score', the first two columns of Table 3.8 present estimates of the overall extent of material deprivation in



Table 3.8: Material deprivation in Australia by family type, 2014 and 2018

	Mean deprivation score		Percentage deprived of 2 or more items		Percentage deprived of 3 or more items	
	2014	2018	2014	2018	2014	2018
Non-elderly couple	0.28	0.27	7.1	6.5	4.0	3.0
Couple with dependent children	0.45	0.38	11.0	8.3	6.4	4.7
Single parent	1.28	1.27	30.2	29.4	19.9	20.6
Single non-elderly male	0.66	0.58	16.0	14.5	9.7	8.2
Single non-elderly female	0.64	0.66	15.7	17.3	8.2	10.6
Older couple	0.13	0.18	2.8	5.2	1.0	3.1
Single older male	0.31	0.46	7.5	10.6	3.9	6.6
Single older female	0.39	0.33	9.4	8.8	3.9	4.8
All people	0.49	0.45	11.9	10.7	7.0	6.3



Australia in 2014 and 2018, for all people and disaggregated by family type (see Box 3.4, page 31).

Over the population as a whole, the mean deprivation score was 0.49 in 2014 and 0.45 in 2018. Single-parent families have the highest rate of deprivation, followed by single non-elderly males and females. Couples with children have a higher mean deprivation score than other non-elderly couples, in part because there are more deprivation items that apply to households with children.⁷ Older couples have the lowest deprivation rate.

In terms of changes between 2014 and 2018, there was a marked rise

in the mean deprivation score among single older men, and also a rise evident for older couples. Couples with dependent children, single non-elderly males and single older women experienced declines in the mean deprivation score.

It is common for deprivation studies to set a threshold (equivalent to a poverty line) to estimate the incidence of deprivation (synonymous with the poverty rate examined earlier in this chapter) that provides a useful summary measure of overall severity. Although it can be argued that an inability to afford any one of the identified 'essentials of life' is indicative of

deprivation, a harsher threshold is normally used to allow for response errors and other factors that might cause deprivation to be exaggerated. The results in Table 3.8 indicate that the proportion of Australians deprived of at least two essential items was 11.9% in 2014 and 10.7% in 2018, while the proportion deprived of at least three items was 7.0% in 2014 and 6.3% in 2018. Deprivation rates across the family types examined in the table are ordered in the same way as mean deprivation scores.

Persistence of material deprivation

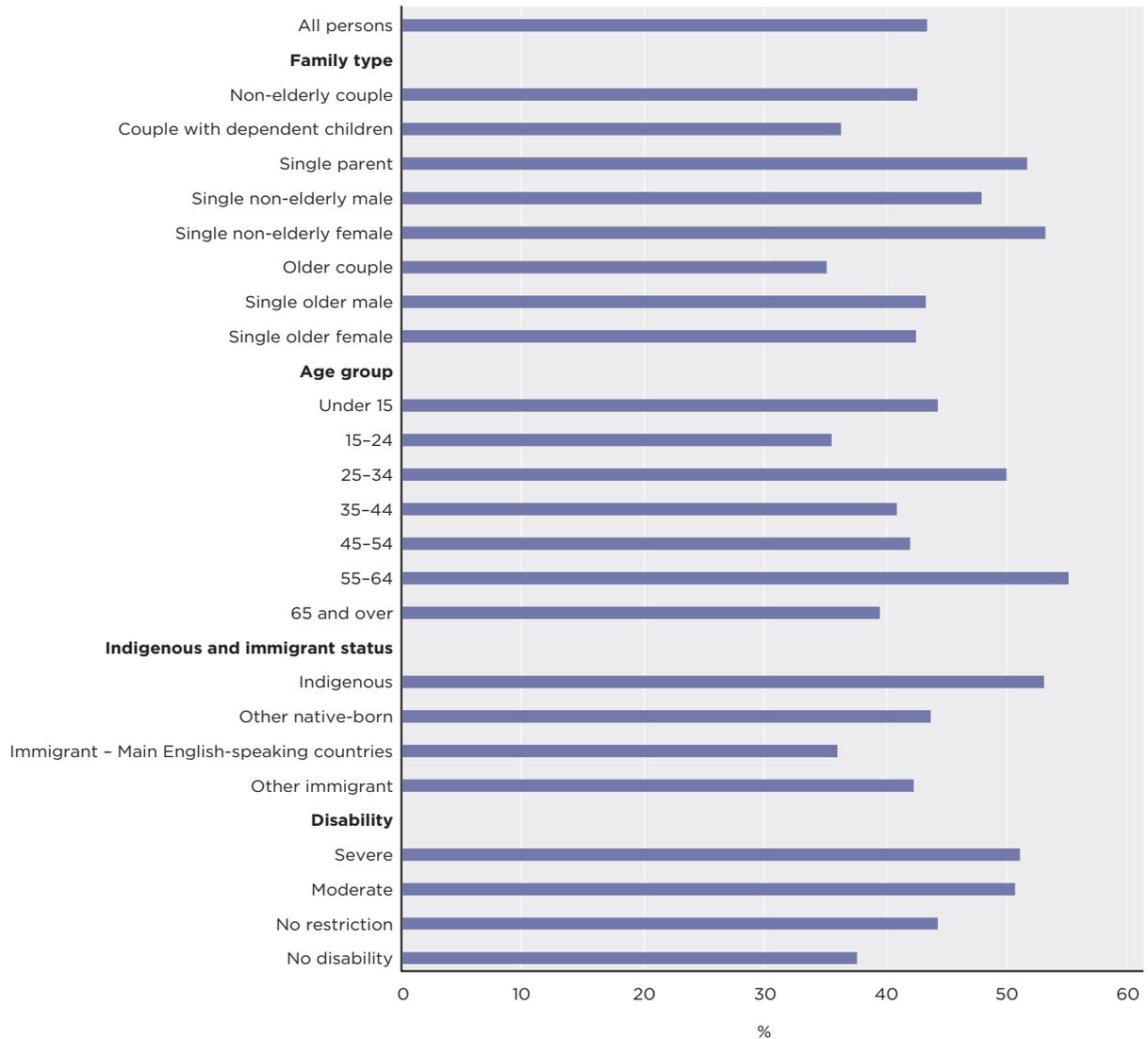
Figure 3.15 presents evidence on the persistence of material deprivation over time. For those who were deprived of two or more items in 2014, it presents the proportion who were also deprived of two or more items in 2018, in total and for various demographic groups (defined by their characteristics in 2014).

Among all people deprived in 2014, 43.4% were also deprived in 2018, indicating a high degree of persistence in material deprivation. Comparing across family types, single parents and non-elderly single people exhibit the greatest persistence in material deprivation over the four years. Older couples and couples with dependent children have the lowest persistence in material deprivation.

Differences in persistence across age groups are also evident, with persistence lowest for the 15 to 24 age group and highest for the 55 to 64 age group. The figure further shows a high degree of persistence in material deprivation for Indigenous people and for people with a moderate or severe disability (see Box 7.2, page 108).

⁷ When the items specific to children are excluded, the mean deprivation score for couples with children falls to 0.35 in 2014 and 0.31 in 2018, while for single parents it falls to 1.06 in both years.

Figure 3.15: Persistence of material deprivation between 2014 and 2018—Proportion of those deprived of two or more items in 2014 who were also deprived of two or more items in 2018



Alternative estimates of the size of the middle class in Australia

While plenty of people would probably describe themselves as 'middle class', there is no universally accepted definition of the middle class. One way to define it is in terms of being close to the middle of the income distribution and/or wealth distribution. Table 3.9 shows the proportion of people that can be described as middle class for nine alternative definitions.

Definitions based on household income only, on household wealth only, and on both household income and household wealth are presented in the table. Definitions that rely on household wealth are only available in 2002, 2006, 2010, 2014 and 2018, when wealth data was collected. For each of these ways to identify the middle class, 'narrow', 'medium' and 'wide' criteria are used. The narrow measure defines a person as middle class if they are between 75% and 125% of the median of income or wealth (where the individual must be between 75% and 125% of the medians of both income and

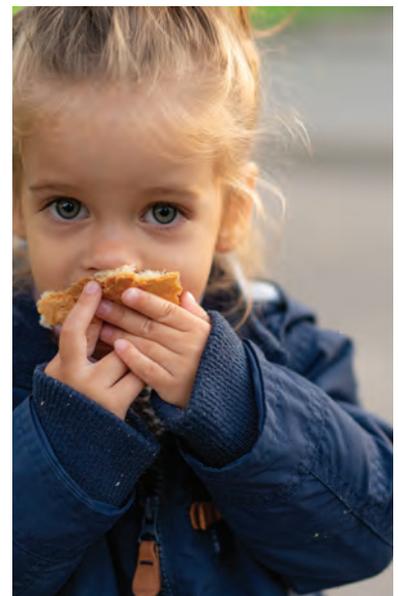


Table 3.9: Proportion of the population that is ‘middle class’ based on income and/or wealth, 2001 to 2018 (%)

	1. Income			2. Wealth			3. Income and wealth		
	Medium	Narrow	Wide	Medium	Narrow	Wide	Medium	Narrow	Wide
2001	65.9	34.8	78.7	–	–	–	–	–	–
2002	67.0	35.7	80.3	31.4	15.7	40.7	22.6	6.4	34.4
2003	67.3	35.3	79.8	–	–	–	–	–	–
2004	67.0	36.4	80.4	–	–	–	–	–	–
2005	69.1	37.2	81.3	–	–	–	–	–	–
2006	68.0	37.4	80.3	33.9	17.5	44.1	25.5	7.7	37.5
2007	66.7	37.4	79.2	–	–	–	–	–	–
2008	66.5	36.9	79.6	–	–	–	–	–	–
2009	68.8	40.6	80.8	–	–	–	–	–	–
2010	67.6	37.9	80.0	34.3	17.4	44	24.6	7.3	36.7
2011	65.7	36.2	78.8	–	–	–	–	–	–
2012	67.7	37.1	80.6	–	–	–	–	–	–
2013	68.2	36.6	80.9	–	–	–	–	–	–
2014	69.2	35.3	81.6	30.6	15	39.8	22.8	6.0	34.1
2015	69.3	37.3	81.7	–	–	–	–	–	–
2016	70.3	38.3	82.7	–	–	–	–	–	–
2017	68.5	37.0	81.2	–	–	–	–	–	–
2018	68.2	37.1	81.1	31.9	15.9	40.5	23.4	6.2	34.6
Change ^a	2.3	2.3	2.4	0.5	0.2	–0.2	0.8	–0.2	0.2

Notes: ^a Change is over the period from 2001 to 2018 for income (first panel) and over the period from 2002 to 2018 for measures that include wealth (second and third panels). The median income values are reported in Table 3.2, while Table 8.3 reports median wealth values by age group (albeit with somewhat different age categories).

wealth for the definition based on both income and wealth). The medium measure applies thresholds of 50% and 150% of the median, while the wide measure applies thresholds of 50% and 200% of the median.

The income measure is equalised income, as examined in Table 3.2 (page 29). The wealth measure is total household wealth (Box 8.1, page 115). However, because wealth tends to accumulate with age, at least up until around the time of retirement, an individual is compared with the median for their age group. That is, a person is classified as middle class on the

basis of wealth if household wealth is within the relevant thresholds of the median for that person’s age group. Seven age groups are distinguished for the purposes of this calculation: less than 15, 15 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64, and 65 and over.

As can be seen, the proportion of the population regarded as middle class varies a great deal depending on one’s definition. In most years, over 80% of the population is classified as middle class if defined only in terms of income and based on the wide criterion (income between half

and double the median income). At the other extreme, if both one’s income and household wealth needs to be between 75% of the median and 125% of the median, only around 6% of people are classified as middle class, suggesting most people are either below or above middle class in terms of their income and wealth.

What is striking, however, is the degree of stability in the measures over the 18 years since 2001. Indeed, most of the measures show a slight increase in the size of the middle class since the beginning of this century.



4

The labour market

Roger Wilkins



A primary focus of the HILDA Survey is the labour market activity of household members. In each wave, detailed information is obtained from respondents to ascertain their labour force status, earnings, hours worked, type of work undertaken, employer characteristics and a host of other work-related aspects. Perceptions and attitudes on a range of labour market issues, such as preferred hours of work, satisfaction with the current main job and likelihood of retaining the current job, are also collected every year. Periodically, additional information is gathered on retirement intentions, attitudes to work, work-related training and experience of job-related discrimination.

Such an emphasis on the labour market reflects the pivotal role employment plays in determining economic and social wellbeing. Not only is it the key determinant of the majority of households' incomes, it is key to participation in society, both economically and socially. Understanding individuals' labour market outcomes, and the causes and consequences of those outcomes, is correspondingly core to the purpose of the HILDA Survey.

Labour force status

Standard statistical summaries of the labour force, such as those produced by the Australian Bureau of Statistics (ABS) for its monthly publication, *Labour Force, Australia* (ABS, 2019), divide the population aged 15 and over into 'employed', 'unemployed' and 'not in the labour force' (see Box 4.1, page 59). The HILDA Survey collects information from respondents each year enabling classification of all respondents into one of these three categories. This allows us to produce cross-sectional labour statistics of the same kind as those produced by the ABS but, more importantly, it facilitates longitudinal analysis of many aspects of labour force status mobility—that is, movements over time across different labour force states.

Table 4.1 presents cross-sectional HILDA Survey estimates of the labour force status of the

population aged 18 to 64 for each year over the 2001 to 2018 period. They show, consistent with ABS labour force survey data, that the Global Financial Crisis (GFC) marked something of a turning point for the Australian labour market. From 2001 until 2008, employment participation had been rising and unemployment had been falling. The labour market has subsequently been somewhat mixed, with the proportions of men and women employed remaining at or below their 2008 peaks and the proportions unemployed remaining above the 2008 trough. That said, employment picked up in 2017, particularly for women, who saw their employment rate rise from 69.5% in 2016 to 72.5% in 2018, a level higher than the previous peak of 70.2% in 2008.

For men in the 18 to 64 age range, the proportion employed part-time rose after the GFC and has remained at approximately 14% since 2013, up from 10.2% in 2008. Full-time employment of

men showed a continued trend decline between 2008 and 2016, falling from a peak of 73.4% in 2008 to 67.0% in 2016. There was, however, some recovery in full-time employment of men beginning in 2017, with the

proportion employed on this basis increasing to 68.5% by 2018. For women aged 18 to 64, the proportion employed full-time likewise declined in the wake of the GFC but has since largely recovered to be 39.4% in 2018,

0.5 percentage points below its 2008 peak of 39.9%.

What is not clear from Table 4.1 is how this overall softening and then partial recovery of the labour market has translated into the rates at which various

Table 4.1: Labour force status of the population aged 18 to 64, 2001 to 2018 (%)

	Employed	Unemployed	Not in the labour force	Total	Employed full-time	Employed part-time
<i>Men</i>						
2001	79.7	5.8	14.5	100.0	68.7	11.0
2002	80.3	4.9	14.8	100.0	69.3	11.0
2003	80.5	4.1	15.4	100.0	69.1	11.5
2004	82.0	3.3	14.7	100.0	70.5	11.6
2005	82.3	3.6	14.2	100.0	71.4	10.9
2006	82.6	3.2	14.2	100.0	70.8	11.8
2007	82.9	2.9	14.3	100.0	71.6	11.2
2008	83.6	3.0	13.4	100.0	73.4	10.2
2009	81.7	4.8	13.5	100.0	70.2	11.5
2010	83.1	3.8	13.1	100.0	71.7	11.3
2011	83.0	3.6	13.3	100.0	69.9	13.2
2012	82.6	4.3	13.2	100.0	68.7	13.8
2013	81.4	4.3	14.4	100.0	67.5	13.8
2014	81.6	4.9	13.6	100.0	67.0	14.6
2015	82.1	4.7	13.2	100.0	67.4	14.7
2016	81.1	4.4	14.5	100.0	67.0	14.0
2017	81.9	4.2	13.9	100.0	68.2	13.7
2018	82.3	3.9	13.8	100.0	68.5	13.8
<i>Women</i>						
2001	64.3	3.7	32.0	100.0	35.3	28.9
2002	64.0	3.7	32.3	100.0	34.6	29.4
2003	64.5	3.0	32.5	100.0	34.8	29.7
2004	65.6	3.5	31.0	100.0	35.2	30.4
2005	66.8	3.1	30.1	100.0	35.6	31.1
2006	68.6	2.5	28.8	100.0	37.9	30.8
2007	69.8	2.7	27.5	100.0	38.9	30.8
2008	70.2	3.1	26.7	100.0	39.9	30.3
2009	69.7	2.9	27.4	100.0	37.9	31.7
2010	69.5	3.1	27.4	100.0	38.4	31.1
2011	68.5	3.7	27.8	100.0	36.9	31.5
2012	68.5	3.2	28.4	100.0	36.5	31.9
2013	68.6	3.8	27.6	100.0	37.1	31.5
2014	68.7	3.8	27.5	100.0	36.8	31.8
2015	70.0	3.9	26.1	100.0	37.5	32.5
2016	69.5	3.7	26.7	100.0	38.3	31.2
2017	71.3	3.6	25.2	100.0	39.1	32.1
2018	72.5	3.1	24.5	100.0	39.4	33.1

Note: Cells may not add up to row totals due to rounding.

transitions in labour force status occur. For example, a lift in employment could arise from an increase in transitions into employment, or decreased transitions out of employment.

Figure 4.1 examines this issue by describing one-year transitions between employment and non-employment of people aged 18 to 64 over the 2001 to 2018 period. The figure shows the proportion of non-employed individuals moving into employment from one year to the next, and the proportion of employed individuals moving into non-employment from one year to the next.

Compared with women, men have lower transition rates out of employment, and higher transition rates into employment, in large part because of the effects of childbirth on women's employment participation. In any given year, approximately 25% of non-employed men aged 18 to 64 transition into employment, while approximately 5% of employed men aged 18 to 64 leave employment. Approximately 20% of non-employed women aged 18 to 64 move into employment each year, and just under 10% of employed women aged 18 to 64 leave employment.

While there are no clear trends in transition rates sustained over the full 2001 to 2018 period, several patterns are evident. For men, there was a steady increase in the rate of transition out of employment between 2007 and 2012 from 4.3% to 6.4%; since 2012, the transition rate has trended slightly downward, to be 4.8% in 2017 (that is, for transitions between 2017 and 2018). For women, there was a sharp rise in transitions out of employment between 2007 and 2009, reaching a peak of 10.4% in 2009. Since then, there has been a downward trend in the rate of female transitions out of employment, which has been at



Box 4.1: Labour force status

In this report, insofar as is possible, we follow international and Australian Bureau of Statistics (ABS) conventions in determining an individual's labour force status. In particular:

- A person is classified as **employed** if that person had a job, business or farm in the week leading up to the interview, and had either worked in the last four weeks or had not worked but: had been in paid work for any part of the last four weeks; or had been on worker's compensation and expected to return to work for the same employer; or had not worked because of a strike or lock-out.
- An employed person is classified as **employed part-time** if usual weekly hours of work in all jobs total less than 35. Otherwise, an employed person is classified as **employed full-time**.^a
- A non-employed person is classified as **unemployed** if that person had actively looked for work at any time in the four weeks preceding the interview and was available to start work in the week preceding the interview; or if that person was waiting to start a new job within four weeks from the date of interview and could have started in the week preceding the interview if the job had been available.
- A non-employed person who is not unemployed is classified as not in the labour force. Among people **not in the labour force**, several distinctions are often made based on the degree of 'attachment' to the labour market. This includes identifying the **marginally attached**—people who want to work and are either available to start work but are not currently looking, or are looking for work but are not currently available.

Several key statistics are commonly produced based on these definitions of labour force status, including the **participation rate** (the proportion of the population in the labour force) and the **unemployment rate** (the proportion of those in the labour force who are unemployed).

^a The definition of part-time employment adopted in this report differs from the definition the ABS uses in its Labour Force Survey. The ABS definition requires both usual and current actual weekly hours to be less than 35.

approximately 7% in the most recent years.

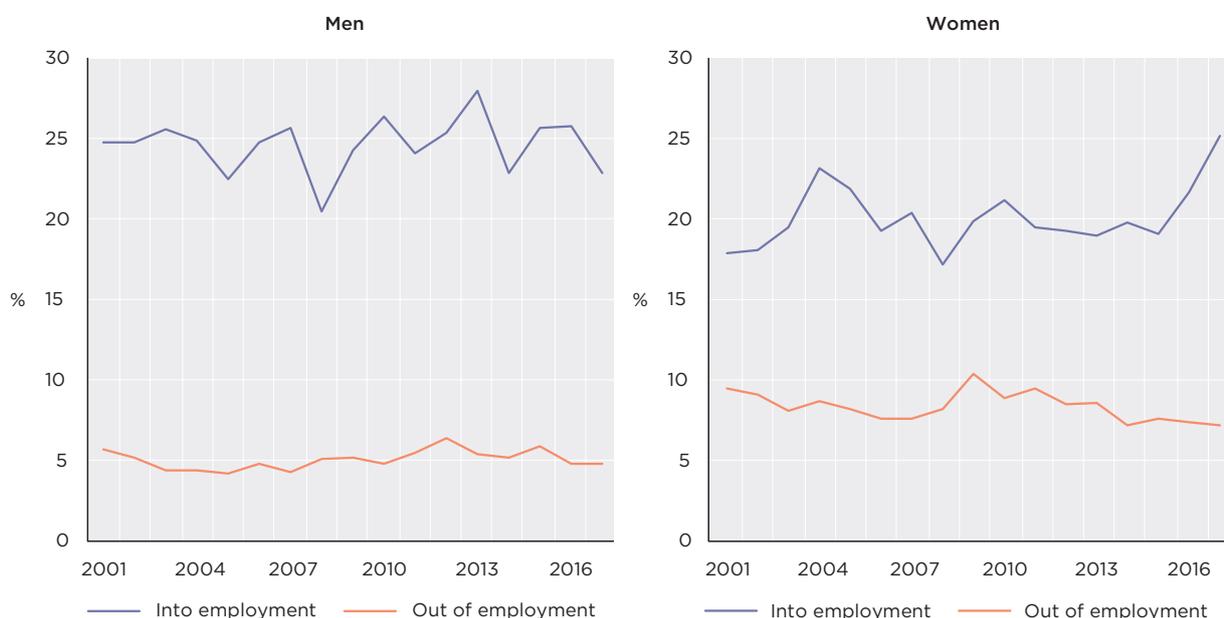
The male rate of transition into employment has fluctuated from year to year, but shows no clear pattern over time. For women, the rate of transition into employment rose between 2001 and 2004, declined between 2004 and 2008, rose between 2008 and 2010 and was stable between 2010 and 2015. Since 2015, the female rate of transition into employment

has risen sharply, to reach 25.2% in 2017. Indeed, the rate of transition into employment between 2017 and 2018 was, for the first time, higher for women than men, for whom the transition rate was 22.9%.

Figure 4.2 probes more deeply into labour market transitions by distinguishing between full-time and part-time employment. The upper two panels present transitions from non-employment, showing that

men have higher rates of transition to full-time employment, while in most years, women have a higher rate of transition into part-time employment. However, consistent with the evidence in Table 4.1, it appears that there has been a significant change for men in the post-GFC period. Between 2008 and 2013, there was a large increase in the male rate of transition from non-employment to part-time employment.

Figure 4.1: Rates of movement into and out of employment from one year to the next—People aged 18 to 64

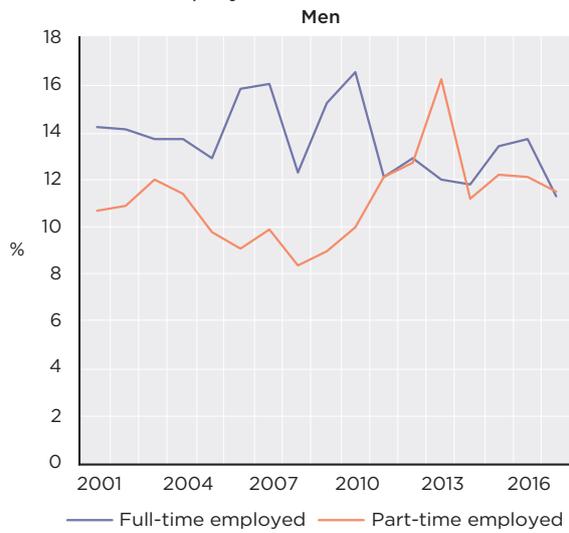


Notes: Years on the horizontal axis refer to the first year of the two-year transition period. For example, 2001 refers to transitions between 2001 and 2002.

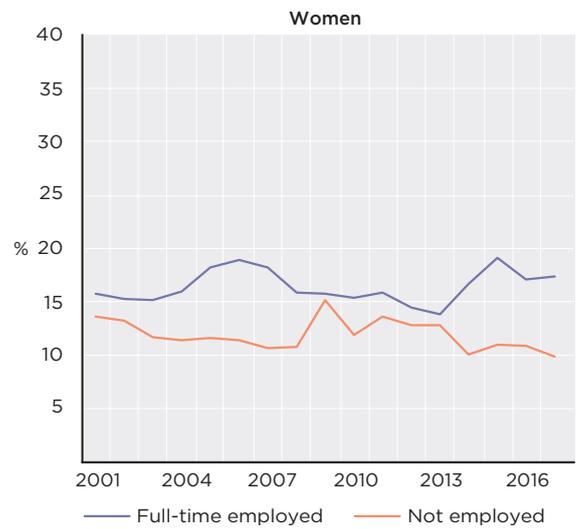
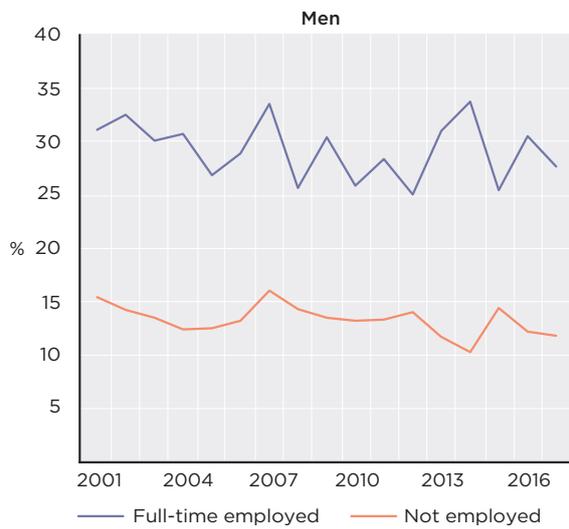


Figure 4.2: Rates of movement between non-employment, part-time employment and full-time employment from one year to the next—People aged 18 to 64

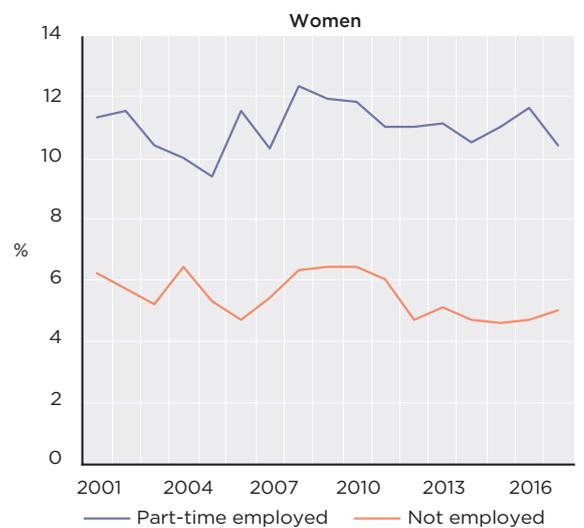
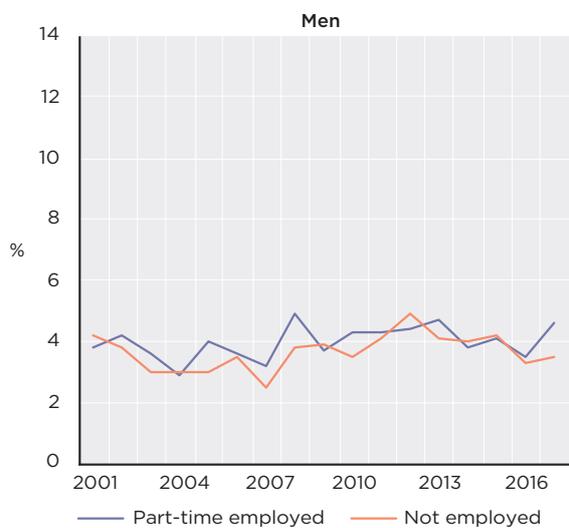
A. From non-employment



B. From part-time employment



C. From full-time employment



Notes: Years on the horizontal axis refer to the first year of the two-year transition period. For example, 2001 refers to transitions between 2001 and 2002.

Over the 2001 to 2014 period, there was also a slight trend decline in the proportion of non-employed men moving into full-time employment from one year to the next. For women, Figure 4.2 shows that the increase in the rate of transition from non-employment into employment since 2015 that is evident in Figure 4.1 has involved increases in both transitions into part-time employment and transitions into full-time employment

The second panel of Figure 4.2 examines transitions from part-time employment. Men are much more likely than women to move from part-time employment to full-time employment, while men and women have similar rates of movement from part-time employment to non-employment. The rate of movement from part-time employment to full-time employment tended to decline for men up until 2012, since when there has been no clear trend.

For women, there has been a sustained trend decline in the rate of movement from part-time employment into non-

employment—although this trend was interrupted by the GFC, when there was a spike in the rate of movement into non-employment. There was also a slight trend decline in the rate of movement from part-time employment to full-time employment up until 2013, but this transition rate increased quite rapidly over the following two years, and has since remained at this higher level of approximately 17%.

The bottom panel of Figure 4.2 examines transitions out of full-time employment. Women have higher rates of transition out of full-time employment, to both non-employment and part-time employment. The rate of transition to part-time employment is approximately 10–12% for women, compared with approximately 4% for men, while the rate of transition to non-employment is approximately 5% for women and 4% for men.

Between 2007 and 2012 there was a slight but steady rise in the proportion of full-time employed men transitioning to both part-time employment and

non-employment. Since 2012, the broad trend has been for declines in the proportions of full-time employed men moving into part-time employment or non-employment. For women, the rate of transition from full-time employment to non-employment has trended downwards over this century, while transitions from full-time employment to part-time employment, after rising between 2005 and 2008, have since declined slightly.

Labour force status over 18 years

Table 4.2 provides a summary picture of the employment participation of individuals over the entire 18 years spanned by the HILDA Survey. It shows the mean number of years in each of three labour force states: employed full-time, employed part-time and not employed. This is shown separately for three groups defined by age in 2001—15 to 24, 25 to 34 and 35 to 44—which is equivalent to examining the following three birth cohorts: 1977 to 1986, 1967 to 1976 and 1957 to 1966.¹



¹ Note that the estimates are based on labour force status at the time of the annual interview and may therefore not precisely represent the distribution of years in each labour force state.

Table 4.2: Mean number of years in each labour force state over the 18-year period from 2001 to 2018, by age group in 2001

	15-24 (Born 1977-1986)	25-34 (Born 1967-1976)	35-44 (Born 1957-1966)
<i>Males</i>			
Employed full-time	13.2	15.2	14.3
Employed part-time	2.5	1.2	1.5
Not employed	2.3	1.6	2.2
Total	18.0	18.0	18.0
<i>Females</i>			
Employed full-time	7.4	7.0	7.3
Employed part-time	5.9	6.3	6.3
Not employed	4.7	4.7	4.4
Total	18.0	18.0	18.0

The table shows the mean number of years in full-time employment between 2001 and 2018 was 13.2 for males born between 1977 and 1986, 15.2 for males born between 1967 and 1976 and 14.3 years for males born between 1957 and 1966. The mean time spent in full-time employment is considerably lower for females, for whom the corresponding means are 7.4, 7.0 and 7.3.

The differences in the mean number of years in full-time employment across the three birth cohorts are perhaps surprisingly small. Nonetheless, it is notable that men aged 25 to 34 in 2001 spent the most time in full-time employment of the three male birth cohorts, while women aged 25 to 34 spent the least time in full-time employment of the three female birth cohorts.

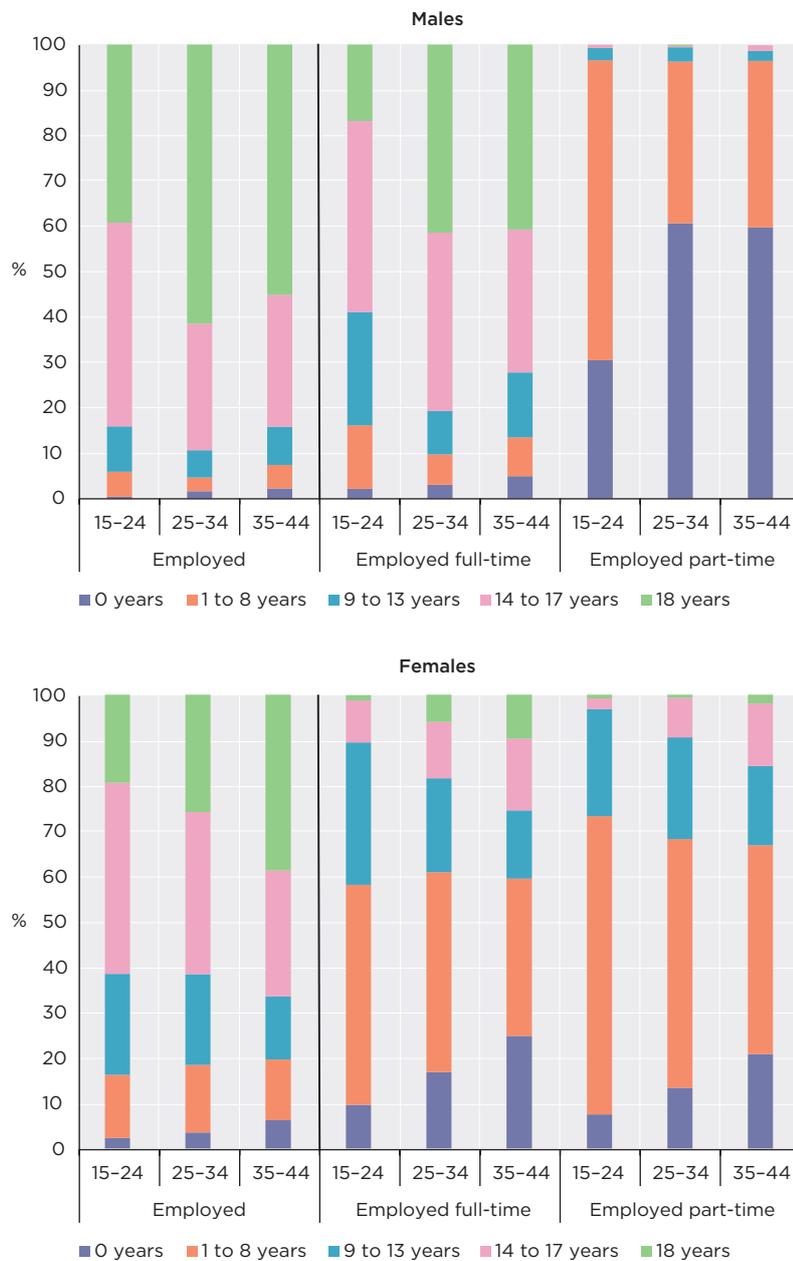
The differences between males and females in mean time spent in full-time employment are driven by greater time spent by females in both part-time employment and non-employment, with greater time in part-time employment accounting for approximately 60-70% of the gap and greater time in non-employment accounting for approximately 30-40% of the gap.

A more comprehensive picture of the distribution of labour force status over 18 years is provided by Figure 4.3. It shows the distribution of the number of years in employment (part-time or full-time), the number of years in part-time employment, and the number of years in full-time employment for males and females in each of the three birth cohorts. Five categories of years spent in each labour force statement are distinguished: 0, 1 to 8, 9 to 13, 14 to 17 and 18, with the proportion of people in each category presented in the figure.

Considering first the number of years in employment, we can see that males are considerably more likely than females to have been employed in all 18 years. For males, approximately 40% of the youngest cohort, 60% of the middle cohort and 55% of the oldest cohort were employed in all 18 years, compared with respective proportions of approximately 20%, 25% and 40% for females. Most of the remaining males were employed in at least 14 of the 18 years, with only 10-15% of males employed in eight or fewer years. By contrast, between 33% and 38% of the female birth cohorts were employed in eight or fewer years.



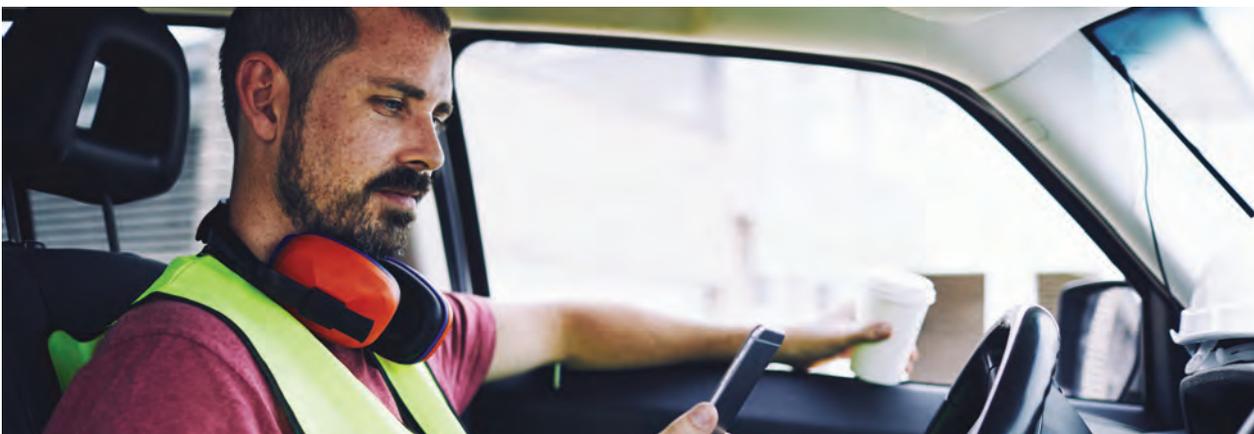
Figure 4.3: Distribution of number of years in each labour force state between 2001 and 2018, by age group in 2001



Similar patterns are evident for full-time employment, but for all birth cohorts of both males and females, those who were employed full-time in all 18 years are in the minority. Only 17% of males aged 15 to 24 in 2001 were in full-time employment in all 18 years, while for males in the older two birth cohorts, approximately 40% were in full-time employment in all 18 years. For females, full-time employment in all 18 years is quite rare, applying to approximately 1% of those aged 15 to 24 in 2001, 6% of those aged 25 to 34 in 2001 and 10% of those aged 35 to 44 in 2001.

As with overall employment, the majority of males not employed full-time in all 18 years were employed full-time in at least 14 years, although a significant minority of males aged 15 to 24 in 2001 were employed full-time in 13 or fewer years. For females, the most common category for full-time employment is 1 to 8 years.

Given the higher rate of part-time employment of females (Table 4.1), it is unsurprising that females spent more time in part-time employment than males. Nonetheless, less than a third of females were in part-time employment in nine or more of the 18 years, and a very small proportion were employed part-time in every year. Among males, very few were in part-time employment in nine or more years, but two-thirds of those



aged 15 to 24 in 2001, and over one-third of the two older birth cohorts, were in part-time employment in at least one year.

Labour market earnings

Earnings levels and distribution

Earnings represent a key dimension of labour market outcomes. A worker's earnings per hour measures the rate at which their labour is rewarded in the labour market, and thus provides a measure of the value of that worker's labour. Earnings are also an important contributor to an individual's economic wellbeing, being the main income source for most working-age people.

Figures 4.4, 4.5 and 4.6 provide an overall picture of earnings outcomes and changes over the period spanned by the HILDA Survey. They present graphs of summary measures of the male and female real earnings distributions over the 2001 to 2018 period, plotting the mean, median, 10th percentile, 90th percentile and Gini coefficient. Figure 4.4 examines weekly earnings of full-time employees, Figure 4.5 examines hourly earnings of part-time employees and Figure 4.6 examines weekly earnings of all employees.²

Over the full 2001 to 2018 period, the graphs show that mean weekly earnings of full-time employees increased by 20.8% for men and 30.0% for women, and the Gini coefficient (see Box 3.3, page 29) increased by 5.2% for men and 13.3% for women, indicating that there has been a

Box 4.2: HILDA Survey measures of labour market earnings

The HILDA Survey does not ask respondents to report their hourly wage; rather, usual weekly (typically gross) earnings and usual weekly hours of work are obtained from everyone who is employed. Hourly rates of pay can then be calculated from this information. The hourly rate of pay so obtained is 'current usual earnings per hour worked'. While the hourly wage rate is the appropriate focus when interest is in the rate at which labour is rewarded, one concern that arises in hourly wage rate analysis is that additional measurement error is introduced by dividing reported weekly earnings by reported weekly hours of work. This provides one rationale for examining weekly earnings, at least as an augmentation to the study of hourly earnings. Another reason for examining weekly earnings is that, for full-time employees who are paid a salary, the notion of an hourly wage is less relevant. For example, a full-time employee may report working more than 38 hours per week but may implicitly only be paid for 38 hours.



rise in earnings inequality since 2001. However, the Gini coefficient for men has been decreasing since 2013, falling from 0.298 to 0.285. For women, the Gini coefficient was rising up until 2017 but declined in the last year of the survey period.

While there is considerable growth in mean and median weekly earnings of full-time employee men over the period as a whole, since 2012 there has been almost no change. Mean and median earnings of full-time employee women, by contrast, have continued to grow since 2012.

Collectively, the recent movements in both average levels and inequality of male and female full-time employee earnings

distributions imply that there has been some convergence between full-time employee male and female earnings distributions in recent years.

For hourly earnings of part-time employees, between 2001 and 2018, the mean increased by 29.1% for males and by 20.1% for females. The Gini coefficient for hourly earnings of part-time employees exhibits considerable year-to-year fluctuation for males, so it is difficult to discern an underlying trend. However, a downward trend is clearly evident for females since 2005, the Gini coefficient decreasing from approximately 0.32 in that year to approximately 0.28 in 2018.

Figure 4.6 provides a sense of the total distribution of earnings

² See Box 4.2 (above) for an explanation of the earnings measures. Note further that Figures 4.3, 4.4 and 4.5 are for earnings of *employees* and therefore exclude earnings of the self-employed and employers, whose earnings are often confounded with returns on capital invested in the business, either because reported earnings include a return on capital, or because reported capital income includes a component that is actually a return on labour. In addition, in Figures 4.4 and 4.5, where an employee holds more than one job, we restrict analysis to earnings and hours worked in the employee's main job. Figure 4.6 examines earnings in all jobs (combined).

among all employees—that is, how much total wage and salary income each employee receives, irrespective of part-time or full-time status. This perhaps gives a better indication of how, on average, employees are faring, and of the extent of inequality in the labour market.

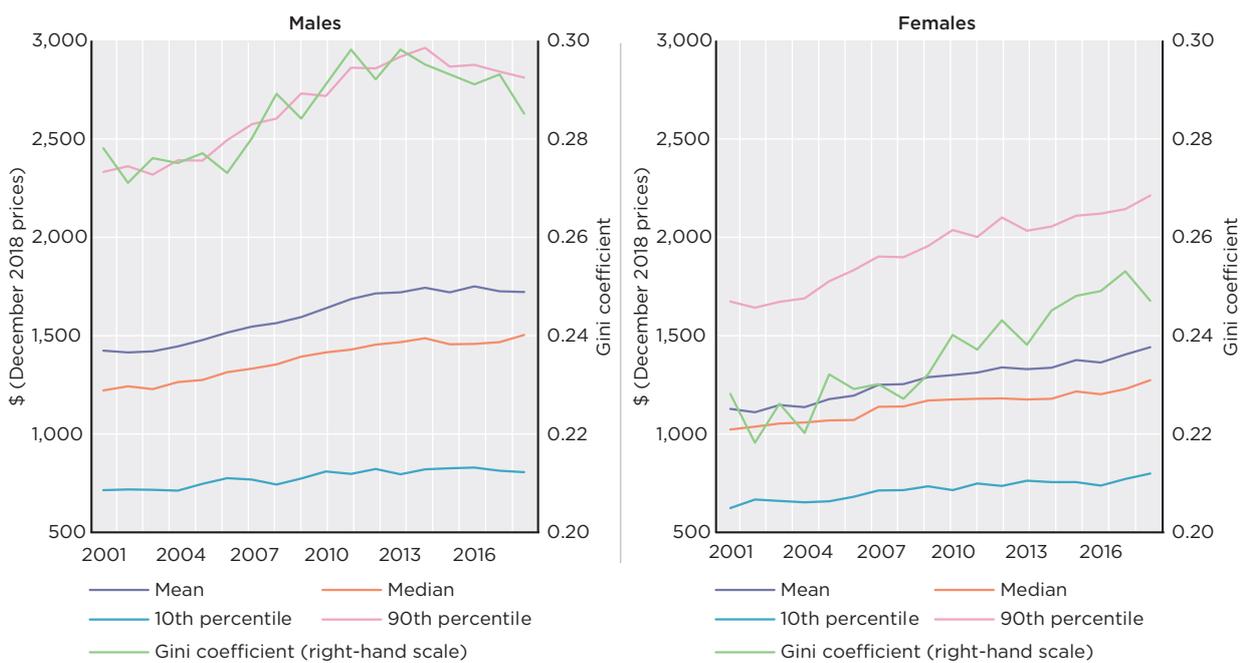
For both males and females, the growth in mean weekly earnings between 2001 and 2018 is almost identical for all employees as for

full-time employees, rising by 20.4% for males and 29.9% for females. The growth in mean weekly earnings of all female employees is markedly higher than the 20.1% increase in mean hourly earnings of female part-time employees. This reflects the growth in full-time employment evident in Table 4.1, as well as growth in the mean weekly hours of female part-time employees (from 18.6 in 2001 to 20.4 in 2018).

The Gini coefficient for weekly earnings of all male employees remained relatively unchanged between 2001 and 2007, and then rose sharply up to 2011; since 2013 it has been declining, with the fall particularly sharp between 2016 and 2018. The sharp rise in the Gini coefficient is not evident for female employees, and indeed the Gini coefficient has hovered at approximately 0.35 for the entire 2001 to 2018 period.

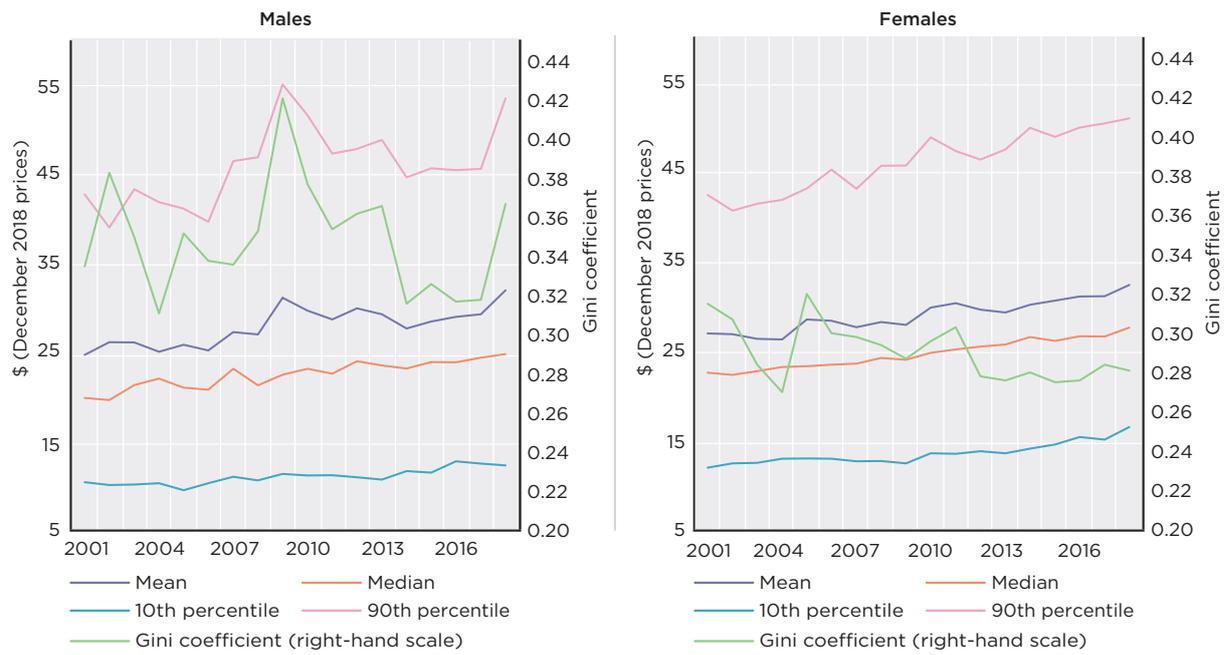


Figure 4.4: Weekly earnings in main job of full-time employees



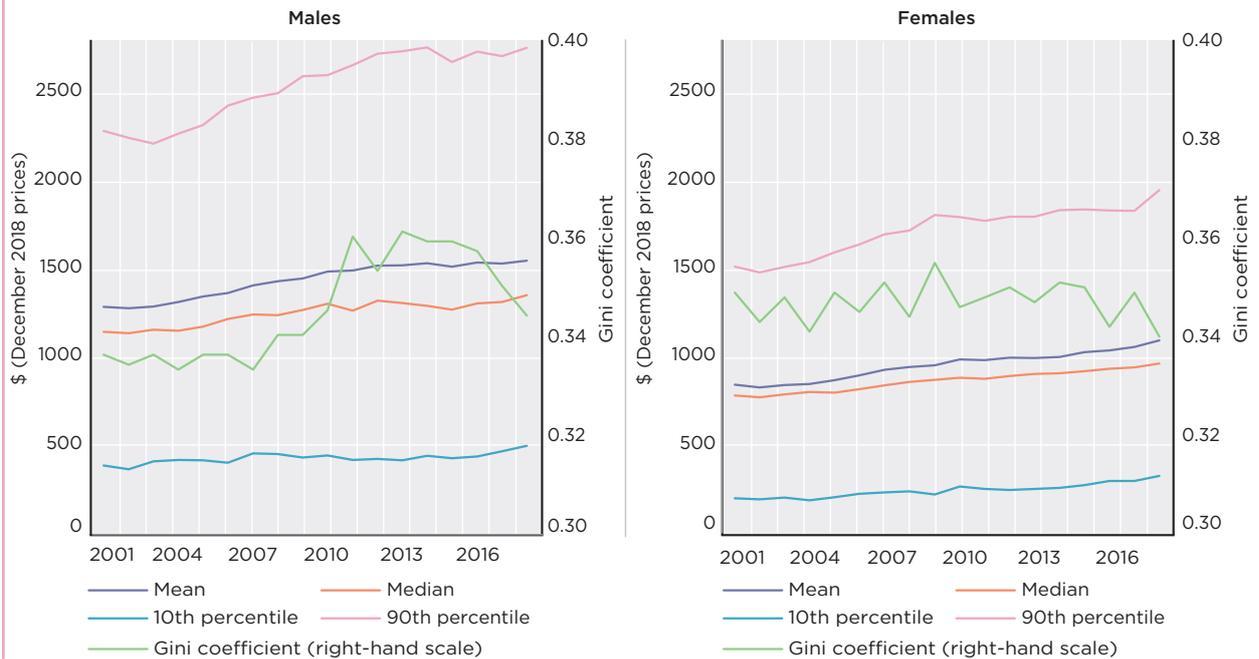
Note: Weekly earnings less than \$100 at December 2018 prices have been excluded.

Figure 4.5: Hourly earnings in main job of part-time employees



Note: Hourly wages less than \$2 and more than \$600 at December 2018 prices have been excluded.

Figure 4.6: Weekly earnings in all jobs of all employees



Job separations and job mobility

Integral to understanding labour market dynamics is knowledge of the extent and nature of job separations and job changes, including how often people separate from jobs, why they leave jobs and, for those who move into another job, how their new job compares with the job they left. By its nature, the HILDA Survey is well placed to contribute useful insights into this aspect of the labour market.

Separations from jobs can occur for a wide variety of reasons, but it is useful to distinguish three categories of reasons (see Box 4.3): those initiated by the employer (dismissals and redundancies); those initiated by the employee for job-related reasons (that is, to obtain a different job); and those initiated by the employee for other reasons. Non-job-related quits are largely those involving leaving the labour force, for example to retire, study or raise children, or because of illness or disability. However, they also include leaving the job because the last job was a temporary or seasonal job, because one's partner was transferred to another location or because the individual had migrated from another country.

Figure 4.7 shows the proportion of employees separating from their job each year for each of the three reasons. In total, approximately 20% of employees experience a job separation each year. There has been some fluctuation in the rate of job separations over the period to 2018, but the composition has fluctuated considerably more. Notably, around the time of the GFC, dismissals spiked from 3% in Wave 8 to 5.6% in Wave 9, but this was more than offset by the decline in job-related quits from 11.4% to 8.3%.

Box 4.3: Classification of reasons for job separations

In each year, individuals who had left the job they were employed in at the time of last interview are asked the main reason for leaving the job or business. For employees, responses are assigned to one of the following categories:

1. Job was temporary or seasonal
2. Holiday job
3. Got laid off/No work available/Retrenched/Made redundant/Employer went out of business/Dismissed, etc.
4. Not satisfied with job (for example, unhappy with hours, pay, working conditions, boss, other workers)
5. To obtain a better job/Just wanted a change/To start a new business
6. Retired/Did not want to work any longer
7. Own sickness, disability or injury
8. Pregnancy/To have children
9. To stay at home to look after children, house or someone else
10. Travel/Have a holiday
11. Returned to study/Started study/Needed more time to study
12. Spouse/partner transferred
13. Too much travel time/Too far from public transport
14. Migrated to a new country
15. Change of lifestyle
16. Other reason

In this report, these reasons are classified into three categories:

1. Dismissed or made redundant (Category 3)
2. Quit — job-related reasons (Categories 4 and 5)
3. Quit — other reasons (all other categories)

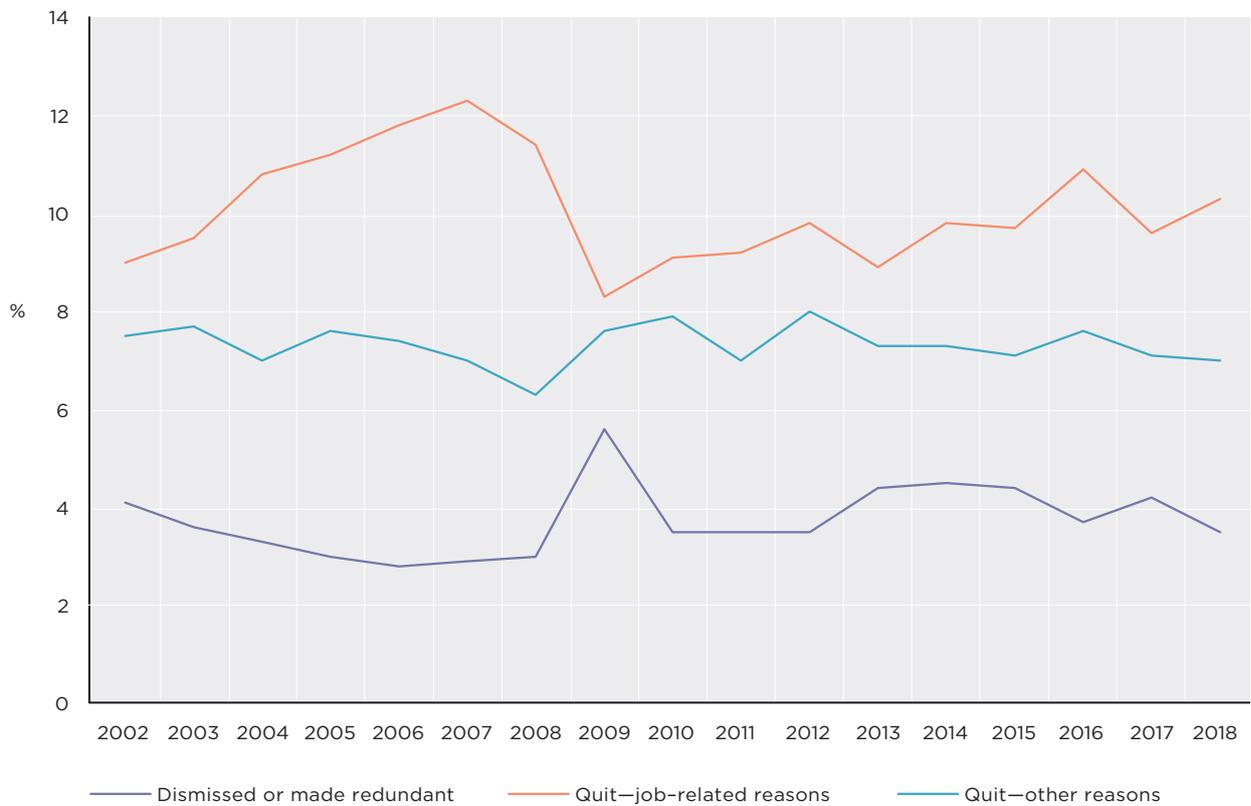


Significantly, after the GFC, the rate of job-related quits did not return to the pre-GFC level of around 12%, although it did trend slightly upwards between 2009 and 2018. Conversely, after the GFC, the rate of employer-initiated separations remained

slightly above its rate immediately prior to the GFC. Quits for non-job-related reasons have remained relatively unchanged between 2001 and 2018, with the exception of a slight uptick at the time of the GFC.



Figure 4.7: Job separations by employees over the preceding year, by reason for separation



Notes: Figure refers only to separation from the job held at the time of the previous-wave interview. It does not include any separations from jobs obtained after the previous-wave interview (that is, jobs obtained and left within the approximately one year between interviews).

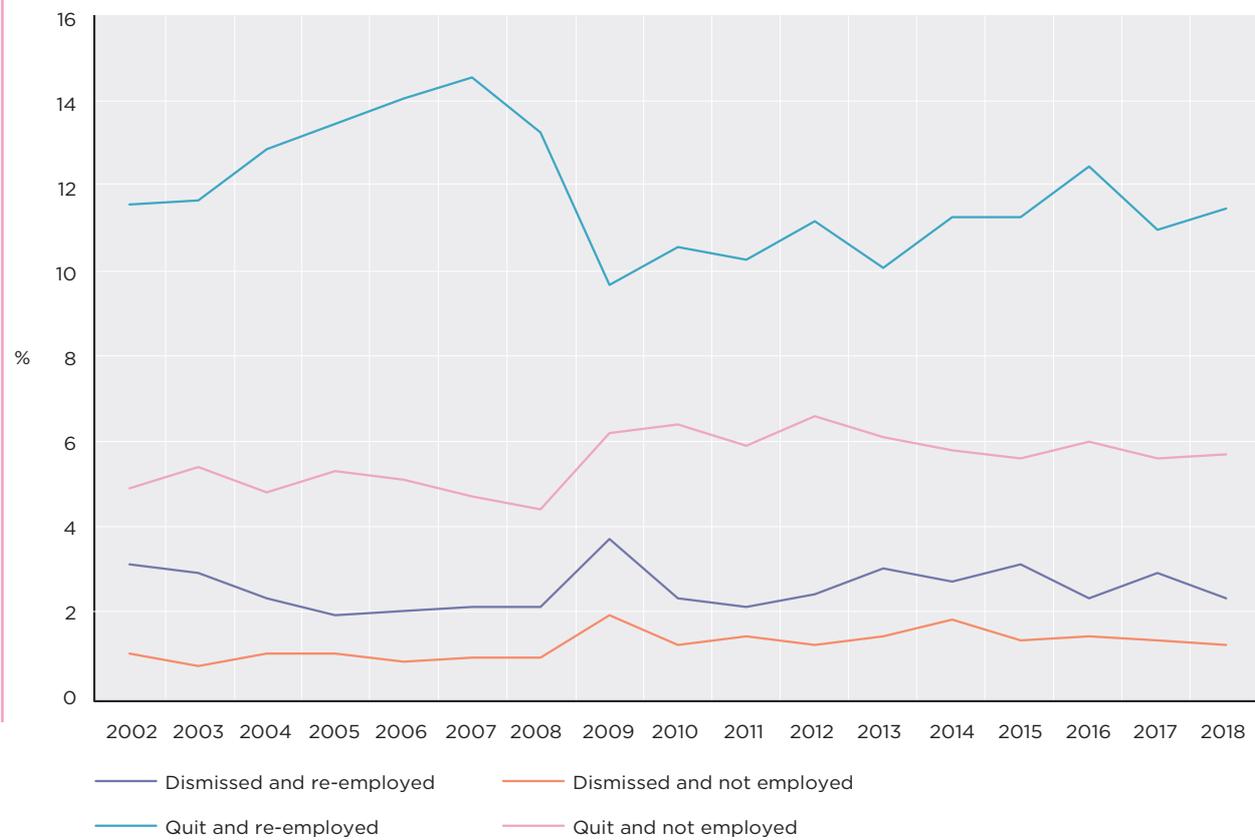
Figure 4.8 examines employment outcomes subsequent to job separation by showing the proportion of people who were employees at the time of previous interview in each of four categories: dismissed and re-employed; dismissed and not employed; quit (for job-related or other reasons) and re-employed; and quit and not employed. Notable in the figure

is that the proportion of employees who quit and were employed by the time of the next interview declined sharply between 2007 and 2009, and has only recovered very slightly since. It is therefore clear that there has been a marked and sustained decline in employee-initiated job changes in the post-GFC period compared with the pre-GFC period.

Also significant is a rise in the proportion of employees who quit and were no longer employed between 2007 and 2009, with the proportion of employees in this category remaining at this elevated level since then. The proportions being dismissed and re-employed and being dismissed and no longer employed show no clear trends other than the spike in dismissals that occurred in the GFC.



Figure 4.8: Employment outcomes subsequent to job separations



Notes: Figure refers only to separation from the job held at the time of the previous-wave interview. It does not include any separations from jobs obtained after the previous-wave interview (that is, jobs obtained and left within the approximately one year between interviews).

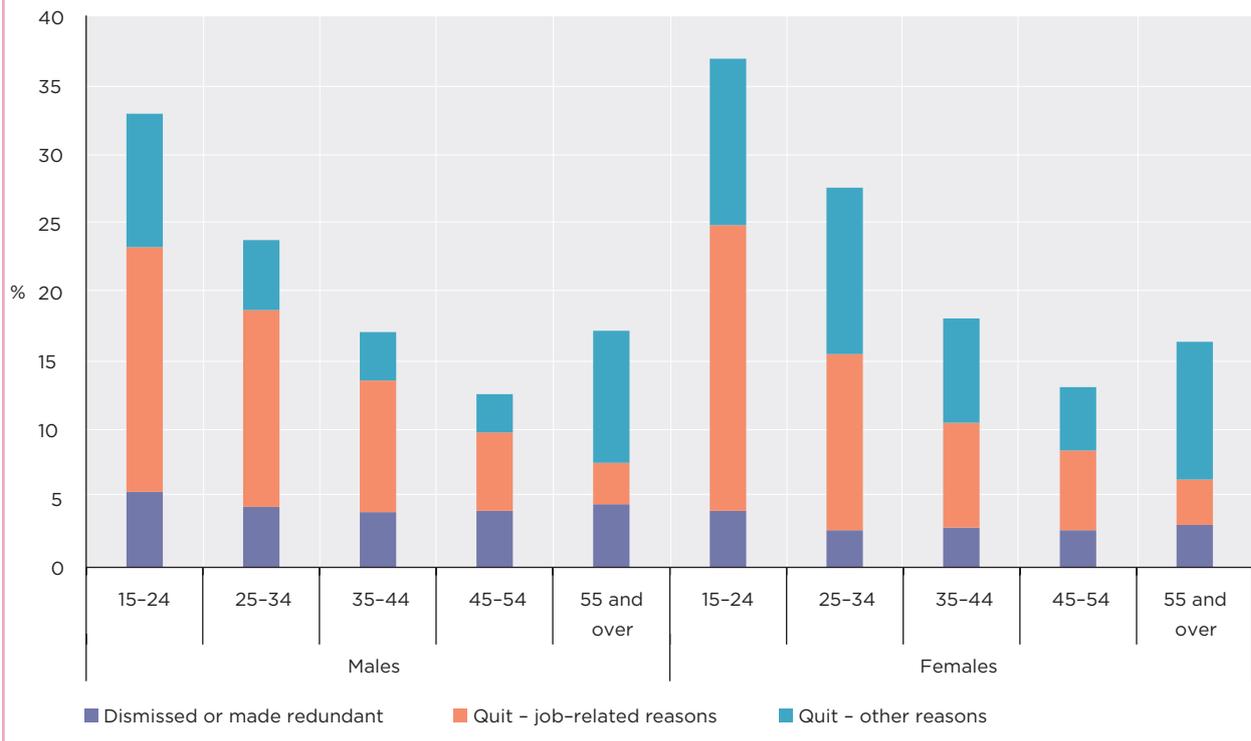
Job separation rates disaggregated by sex and age group (over the 2001 to 2018 period as a whole) are examined in Figure 4.9. Separation rates decrease with age up to the 45 to 54 years age group for both males and females. The 55 and over age group has a higher rate of job separations than the 45 to 54 age group largely because of people moving into retirement.

Nonetheless, the job separation rate among those aged 55 and over is similar to that among those aged 35 to 44.

Females have higher job separation rates than males in the three youngest age groups, which is largely due to movements out of the labour force to have or look after children. This is indicated by the

higher proportion quitting for non-job-related reasons. However, in the youngest age group it is also evident that females are more likely to quit for job-related reasons too. That aside, males have higher rates of job-related quits in the 25 to 34 and 35 to 44 age groups, and they also have somewhat higher rates of job dismissal/redundancy than females in all age groups.

Figure 4.9: Job separation rates over the 2001 to 2018 period, by type, sex and age group



Notes: Figure refers only to separation from the job held at the time of the previous-wave interview. It does not include any separations from jobs obtained after the previous-wave interview (that is, jobs obtained and left within the approximately one year since last interview are not captured).

A key question of interest is whether employees who secure employment following a job separation experience an increase or decrease in their earnings. Table 4.3 considers this question, examining changes in hourly wages for employees in each of three categories of job separation (dismissed or made redundant, quit for job-related reasons and quit for other reasons) who secured re-employment, and comparing them with employees who do not change jobs. The analysis compares the wage in the current job with the wage in the job held at the time of last interview, on average one year previously. Wages are adjusted for inflation—that is, wages are all evaluated at December 2018 prices—so a positive change

indicates the wage grew faster than the rate of inflation. The upper panel examines all employees, while the lower panel disaggregates by sex and age group.

The upper panel of Table 4.3 shows that the median wage change is highest for those who quit for job-related reasons (8.3%) and lowest for those who quit for other reasons (1.4%). Perhaps surprising is that those dismissed or made redundant have the next-highest median wage increase—thus, they did better than those who remained in the same job—although it should be noted that not all employees who were dismissed or made redundant were re-employed in the next year.

The upper panel of the table also shows the proportions for whom the real wage increased and the proportion for whom it increased by at least 10%. Consistent with the median wage changes, those who quit for job-related reasons were most likely to obtain a wage increase, but those who did not change jobs were slightly more likely to obtain a wage increase than those who were dismissed or made redundant. Employees who quit for job-related reasons were also the most likely to obtain a wage increase of 10% or more, applying to 48.1% of these employees. Notably, employees who remained in the same job were the least likely of the four groups to receive a wage rise of 10% or more, this applying to 34.1% of employees.



Table 4.3: Real hourly wage changes of employees by whether changed jobs and type of job separation, 2001 to 2018

<i>Wage changes of all employees</i>					
	Median change (%)	Proportion for whom real wage increased (%)		Proportion for whom real wage increased by at least 10% (%)	
<i>Dismissed or made redundant</i>	3.0	54.0		41.7	
Quit – job-related reasons	8.3	60.7		48.1	
Quit – other reasons	1.4	51.9		40.1	
No job change	2.1	55.4		34.1	
<i>Median wage changes of employees by sex and age group (%)</i>					
	15–24	25–34	35–44	45–54	55 and over
<i>Males</i>					
Dismissed or made redundant	10.9	1.4	1.8	0.8	–2.3
Quit – job-related reasons	10.5	8.9	6.6	6.9	3.4
Quit – other reasons	2.8	–2.2	0.4	4.0	4.5
No job change	9.4	2.5	1.5	0.8	1.2
<i>Females</i>					
Dismissed or made redundant	11.6	3.3	5.9	–1.5	–0.5
Quit – job-related reasons	12.1	9.4	6.3	2.3	0.2
Quit – other reasons	9.5	3.7	0.2	–8.9	–2.9
No job change	7.4	2.7	1.4	1.2	1.1

Note: The table compares the real wage in the current job with the real wage in the job held one year previously.

Comparisons of median wage changes by sex and age group in the lower panel of Table 4.3 show that wage changes for those who quit for non-job-related reasons are particularly poor for men aged 25 to 44 and women aged 35 and over. For all groups other than women aged 55 and over, median wage changes of those who quit for job-related reasons are greater—often substantially greater—than for employees who change jobs for other reasons or do not change jobs. Job dismissal is in general not associated with negative consequences for median wage changes for those aged under 45, but for older employees, median wage changes are weaker, and in most cases negative.

How far do people live from where they work?

Beginning in Wave 17, data on the location of where employed people work (in their main job) has been collected by the HILDA Survey. This information is used to provide researchers with a measure of the distance between home and work—specifically, the distance between the centre of the post code in which the person lives and the centre of the post code in which they work.³

Table 4.4 summarises the distribution of distance between home and work in 2017 and 2018 (pooled), distinguishing nine distance categories. It shows that

over one-quarter of employed people work in the same post code as where they reside, although it should be noted this includes the large number of people who do not have a fixed place of work, such as is often the case for tradespeople.⁴ The next most common distance between work and home is between 5 and 9 kilometres, applying to 18.2% of workers.

While the majority (67.6%) of people work within 14 kilometres of home, a significant proportion of people work a considerable distance from home, with 6.7% working between 30 and 49 kilometres from home, 3.1% working between 50 and 99 kilometres from home, and 2.3% working 100 or more

³ Data on the actual location of where the individual works is not provided to researchers to protect confidentiality of respondents.

⁴ Individuals with no fixed place of work who start or finish work at a particular location, such as a head office or depot, are recorded as working in that location. For example, for a delivery driver who travels to the truck depot to pick up the truck, the depot is recorded as the location of work.

Table 4.4: Distribution of distance between home and place of work—Employed people, 2017 and 2018 (pooled) (%)

	All employed	Males	Females
0 (same post code)	26.9	26.1	27.8
1 – 4 kilometres	9.1	8.0	10.1
5 – 9 kilometres	18.2	16.5	20.0
10 – 14 kilometres	13.4	13.8	13.0
15 – 19 kilometres	8.8	9.0	8.6
20 – 29 kilometres	11.5	11.6	11.3
30 – 49 kilometres	6.7	7.7	5.7
50 – 99 kilometres	3.1	4.0	2.2
100 or more kilometres	2.3	3.4	1.2
Total	100.0	100.0	100.0

Notes: The distance measure is the distance between the centre of the post code in which the individual lives and the centre of the post code in which the individual works, rounded to the nearest kilometre. Cells may not add up to column totals due to rounding.

kilometres from home. It is likely that many of those working 100 or more kilometres from home do not commute daily. For example, this group would include ‘fly-in, fly-out’ workers in the mining industry.

The distribution of distance between work and home is similar for males and females, but it is nonetheless clear that males tend to have greater distances to travel. For example, 15.1% of employed males work 29.5 or more kilometres from home, compared with 9.1% of employed females. Conversely, 57.9% of employed females work within 9.5 kilometres of home, compared with 50.6% of employed males.

Table 4.5 examines how the distance between work and home is related to the type of job. It shows the distribution of employed people across four categories for distance between home and work disaggregated by occupation, industry, employee status and full-time/part-time status.

Comparing across occupations (see Box 4.4, below), we see that machinery operators and drivers are the most likely to live 30 or more kilometres from their place of work, with 21.3% of workers in this occupation in this category, compared with 12.1% of all workers. Technicians and trades workers are also relatively likely to be living at least 30 kilometres

from their place of work, this applying to 17.9% of workers in this occupation.

At the other end of the spectrum, approximately 36% of sales workers and labourers live and work in the same post code, compared with 26.9% of all workers. Sales workers are also relatively more likely to work between one and nine kilometres from where they live, with 30.6% in this distance category compared with 27.3% for all workers. Interestingly, while technicians and trades workers are relatively likely to live 30 or more kilometres from their place of work, they are also more likely than the average worker to live and work in the same post code,



Box 4.4: Classification of occupations and industries

Occupation variables in this report are based on the first (2006) edition of the Australian Bureau of Statistics (ABS) ANZSCO classification system. ANZSCO stands for the Australian and New Zealand Standard Classification of Occupations. It is based on a conception of types of tasks and skill-level requirements. It has six ‘levels’, with eight occupation groups distinguished at the highest level of aggregation, known as the 1-digit level, 54 groups distinguished at the next (2-digit) level of aggregation, and so on. See ABS (2006a) for details. In this report, only the 1-digit level classification is used.

Industry variables in this report are based on the ABS ANZSIC classification system. ANZSIC is the Australia and New Zealand Standard Industry Classification. It classifies the economic activity of firms and other employers, and has a structure comprising categories at four levels: ‘divisions’ (the broadest level); ‘subdivisions’; ‘groups’; and ‘classes’ (the finest level). These levels are commonly referred to as ‘1-digit’, ‘2-digit’, ‘3-digit’ and ‘4-digit’, reflecting the number of digits used in the code to describe each category. At the 1-digit level, which is used in this report, 17 industry categories are distinguished. See ABS (2008) for details.

Table 4.5: Distribution of distance between home and work, by job characteristics, 2017 and 2018 (pooled) (%)

	<i>Distance in kilometres between work and home</i>				<i>Total</i>
	<i>0</i>	<i>1-9</i>	<i>10-29</i>	<i>30 or more</i>	
All employed	26.9	27.3	33.7	12.1	100.0
<i>Occupation</i>					
Managers	27.9	23.8	36.4	11.9	100.0
Professionals	19.9	31.3	37.2	11.6	100.0
Technicians and Trades Workers	29.2	21.1	31.8	17.9	100.0
Community and Personal Service Workers	31.1	30.3	29.4	9.3	100.0
Clerical and Administrative Workers	22.5	28.8	37.0	11.7	100.0
Sales Workers	35.8	30.6	27.7	5.9	100.0
Machinery Operators and Drivers	26.6	20.0	32.2	21.3	100.0
Labourers	35.6	23.5	29.2	11.8	100.0
<i>Industry</i>					
Agriculture, Forestry and Fishing	73.4	2.3	8.5	15.8	100.0
Mining	11.9	9.3	26.7	52.1	100.0
Manufacturing	21.9	21.7	42.2	14.2	100.0
Electricity, Gas, Water and Waste Services	23.2	12.0	29.5	35.2	100.0
Construction	34.8	17.0	30.1	18.2	100.0
Wholesale Trade	22.1	25.0	42.3	10.5	100.0
Retail Trade	33.1	31.2	28.9	6.8	100.0
Accommodation and Food Services	33.4	36.0	24.0	6.6	100.0
Transport, Postal and Warehousing	27.9	24.6	35.9	11.6	100.0
Information Media and Telecommunications	16.6	34.7	37.4	11.3	100.0
Financial and Insurance Services	13.6	29.5	44.8	12.2	100.0
Rental, Hiring and Real Estate Services	26.9	22.5	41.6	9.0	100.0
Professional, Scientific and Technical Services	20.9	34.1	34.1	10.9	100.0
Administrative and Support Services	31.8	24.2	32.7	11.3	100.0
Public Administration and Safety	14.8	26.5	41.4	17.3	100.0
Education and Training	26.8	32.5	31.4	9.2	100.0
Health Care and Social Assistance	25.4	30.1	34.7	9.8	100.0
Arts and Recreation Services	28.4	28.8	32.2	10.7	100.0
Other services	33.9	21.9	32.9	11.2	100.0
<i>Employee status</i>					
Self-employed	59.1	15.5	18.2	7.2	100.0
Other workers	22.5	28.9	35.8	12.8	100.0
<i>Full-time/part-time status</i>					
Employed full-time	22.7	26.3	36.9	14.1	100.0
Employed part-time	35.2	29.3	27.3	8.2	100.0

Note: Cells may not add up to row totals due to rounding.





this applying to 29.2% of workers in this occupation.

Professionals and clerical and administrative workers are the least likely to live and work in the same post code, and are the most likely to work between 10 and 29 kilometres from home. Managers are also relatively likely to work between 10 and 29 kilometres from home, and are relatively unlikely to work between one and nine kilometres from home.

Comparing across industries (see Box 4.4, page 73), we see considerable variation in the distribution of workers across the four distance categories. Nearly three-quarters of workers in agriculture, forestry and fishing live and work in the same post code, yet 15.8% live 30 or more kilometres from their place of work; few work between one and 29 kilometres from where they live. Over half of workers in mining and 35.2% of workers in electricity, gas, water and waste

services live 30 or more kilometres from their place of work. Relatively high proportions of workers in construction and public administration and safety also live 30 or more kilometres from their place of work.

Despite a high proportion working 30 or more kilometres from where they live, workers in construction are the most likely to nominate the place of work as in the same post code as where they live, presumably because many of them do not have a fixed place of work. Workers in retail trade, accommodation and food service, administrative and support services and other services also have a high proportion working and living in the same post code. By contrast, workers in financial and insurance services, public administration and safety, and information media and telecommunications have low proportions working in the same post code in which they live. Workers in financial and insurance services,

manufacturing, wholesale trade, rental and real estate services and public administration and safety have relatively high proportions living between 10 and 29 kilometres of where they work.

Comparing the self-employed with other workers, there is a stark difference in the propensity to work and live in the same post code, with 59.1% of the self-employed working and living in the same post code, compared with 22.5% of other workers. Comparing full-time and part-time employed workers, greater distance between home and work is clearly associated with full-time employment. For example, 35.2% of part-time workers work and live in the same post code, compared with only 22.7% of full-time workers; and 14.1% of full-time employed workers live 30 or more kilometres from their place of work, compared with only 8.2% of part-time workers.

Employees apparently paid less than the national minimum wage

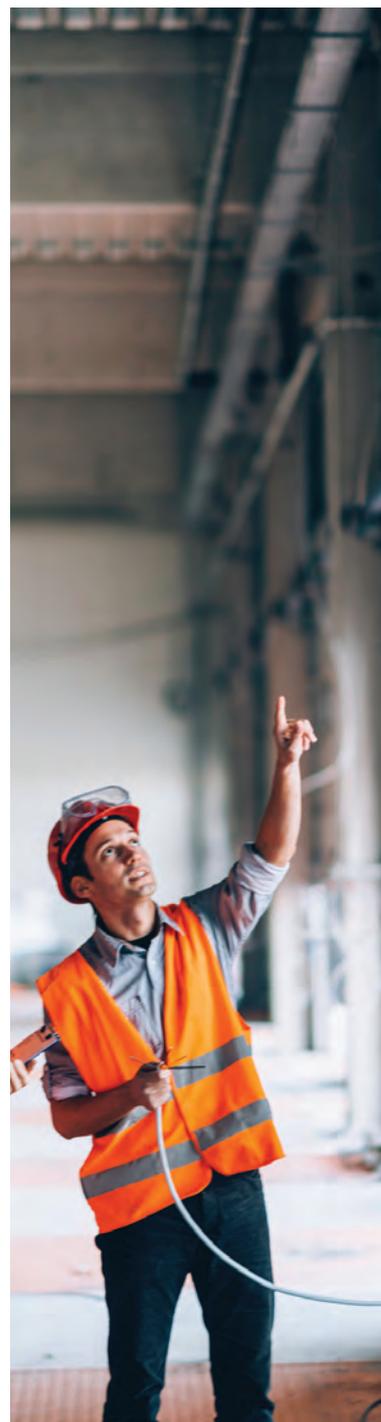
There has been growing evidence in recent years that significant numbers of employees have been paid below the applicable minimum wage for their job (for example, Fairwork Ombudsman 2020). However, there is little evidence on the broader prevalence and incidence of this phenomenon in the Australian labour market. One of the problems with attempting to identify below-minimum-wage employment is that the Fair Work Commission sets different minimums based on the occupation and/or industry of employment, and minimums also depend on various other factors, such as the day and time of day the hours were worked and whether the employee is employed on a 'permanent' or casual basis.⁵

In this section, we therefore focus on the simpler question of whether an employee is being paid below the national minimum wage, which represents a wage floor above which most adult employees should be paid. Importantly, this therefore means that we do not identify employees who, while being paid above the national minimum wage, are being paid

less than the minimum applicable to their job.

Australia has had a national minimum wage in its current form since 21 April 1997, when it was set by the Australian Industrial Relations Commission at \$359.40 per week for a full-time employee, or \$9.46 per hour based on a 38-hour week.⁶ It has since been set annually by the relevant federal body, which since 2013 has been the Fair Work Commission. As of 1 July 2018 (corresponding to Wave 18 of the HILDA Survey), the national minimum wage in Australia was \$18.93 per hour, or \$719.34 for a 38-hour week.⁷ The rate only applies to permanent employees aged 21 and over who are not trainees and excludes some categories of employees, such as agricultural workers paid on a 'piece-rate' (output-dependent) basis.

Before proceeding, it must be emphasised that there are several reasons why an employee may appear to be being paid below the national minimum wage. First is that our hourly wage measure is based on reported weekly earnings and hours of work, and people may misreport their earnings or hours of work. An employee may report receiving less in weekly earnings than actually received, or may report working more hours than actually worked. Second, an employee may be paid a salary that translates to an above-minimum wage if weekly working hours are



⁵ For example, the Restaurant Industry Award specifies that the minimum hourly wage for a 'kitchen attendant grade 1' employed on a permanent basis is (in 2019–20) \$20.06 for hours worked on weekdays between 6am and 10pm, \$22.33 for hours worked on weekdays between 10pm and 12am, and \$23.47 for hours worked on weekdays between 12am and 6am. Different minimum rates of pay are also specified in the award for weekends and public holidays and for overtime hours, and a further set of minimum rates is specified for employees employed on a casual basis. Moreover, the award distinguishes 24 separate occupations based on the tasks and skill level of the employee, each with its own set of minimums. There are 122 awards in total, many of which contain an even greater variety of minimums than the Restaurant Industry Award.

⁶ Australia has a long and complicated history of minimum wages dating back to the Harvester Judgement in 1907, but a universal national minimum has only been in continuous existence since 1997.

⁷ The national minimum wage per hour was \$10.88 in Wave 1, \$11.35 in Wave 2, \$11.80 in Wave 3, \$12.30 in Wave 4, \$12.75 in Wave 5, \$13.47 in Wave 6, \$13.74 in Wave 7, \$14.31 in Wave 8, \$14.31 in Wave 9, \$15.00 in Wave 10, \$15.51 in Wave 11, \$15.96 in Wave 12, \$16.37 in Wave 13, \$16.87 in Wave 14, \$17.29 in Wave 15, \$17.70 in Wave 16, \$18.29 in Wave 17 and \$18.93 in Wave 18. It was increased to \$19.49 on 1 July 2019. The national minimum wage typically cited is the weekly national minimum wage of a full-time employee working 38 hours per week, so this weekly minimum is obtained by multiplying the hourly minimum by 38. For example, in Wave 18, it was \$719.20 per week.

38 or less, but the employee may work more than 38 hours. Third, the national minimum wage may not apply to the employee, for example because the employee is an apprentice or trainee, or because they are paid on a piece-rate or commission basis.⁸ The fourth reason is that the employer is paying the employee less than the legal minimum wage.

Table 4.6 presents estimates of the proportion of adult employees apparently being paid below the (hourly) national

minimum wage in each year from 2001 to 2018.⁹ In 2018, 9.9% of all adult employees appeared to be receiving less than the minimum. This proportion has remained relatively stable since 2007, prior to which approximately 13% to 14% of employees had hourly wages less than the national minimum.

Hourly wages below the minimum are more common among part-time employees, which is not what we would expect if much of below-

minimum-wage employment is because of salaried full-time employees working more than 38 hours per week.¹⁰ The last column of Table 4.6 confirms long-hours work is not a big driver of apparent below-minimum-wage employment. It shows that when weekly working hours are set to 40 if the employee reports working more than 40 hours per week, only a slight decrease in below-minimum-wage employment results.

Table 4.6: Proportion of employees aged 21 and over apparently paid below the national minimum wage, 2001 to 2018 (%)

	<i>Based on hours of work as reported</i>			<i>Weekly hours of work set to 40 if reported hours exceed 40 – All employees</i>
	<i>All employees</i>	<i>Full-time employees</i>	<i>Part-time employees</i>	
2001	13.3	9.3	24.7	11.3
2002	13.6	9.6	24.9	11.3
2003	13.8	10.1	24.0	11.6
2004	12.8	9.0	23.2	11.1
2005	12.4	8.8	22.4	10.7
2006	13.4	9.2	25.1	11.3
2007	11.1	6.9	23.0	9.7
2008	11.3	7.8	21.9	9.5
2009	10.2	6.1	21.5	9.0
2010	9.0	5.6	18.8	8.1
2011	9.3	5.8	18.5	8.0
2012	8.8	5.5	17.1	7.6
2013	10.7	6.8	20.7	9.4
2014	10.6	6.6	20.1	9.4
2015	10.0	6.8	17.7	8.6
2016	9.6	6.3	18.0	8.6
2017	10.5	7.3	18.6	9.3
2018	9.9	7.1	17.1	8.4



⁸ Junior employees also can have lower minimum wages, but we restrict the analysis in this section to adults aged 21 and over.

⁹ Earnings have been reduced by 25% for casual employees to reflect the ‘casual loading’ most receive. Note, however, that the loading has been lower than 25% for some casual employees in some of the years examined in this report.

¹⁰ All subsequent references to below-minimum-wage employment refer to employees being apparently paid less per hour than the national minimum wage.

Table 4.7 examines how the incidence of below-minimum-wage employment varies across sex, age group and region. Men have somewhat higher rates of below-minimum-wage employment than women, although the gap has narrowed slightly over the 2001 to 2018 period. Below-minimum-wage employment is in evidence for all age groups, but is consistently most prevalent among employees aged 21 to 24, with around one-quarter reporting hourly

earnings less than the national minimum wage. Also evident in the table is that regions outside of the major urban areas (see Box 3.5, page 32) have slightly higher rates of below-minimum-wage employment.

Differences in rates of below-minimum-wage employment across industries are examined in Table 4.8. Agriculture, forestry and fishing has the highest rate of below-minimum-wage employment, which is consistent with the greater prevalence of

piece-rate payment in this industry. However, accommodation and food services also has a very high rate of below-minimum-wage employment—between 30.1% and 39.2% depending on the period—despite not typically employing people on a piece-rate basis. Retail trade, rental, hiring and real estate services, administrative and support services, arts and recreation services, and other services also had high rates of below-minimum-wage

Table 4.7: Rates of below-national-minimum-wage employment among employees aged 21 and over, by selected characteristics and time period (%)

	2001 to 2004	2005 to 2008	2009 to 2012	2013 to 2015	2016 to 2018
<i>Sex</i>					
Men	15.5	14.1	10.9	11.7	11.2
Women	11.5	10.2	7.9	9.2	8.9
<i>Age group</i>					
21-24	26.7	24.0	21.8	29.0	26.6
25-34	13.1	11.1	8.6	9.6	11.1
35-44	10.5	9.4	6.9	7.1	5.8
45-54	10.2	10.3	6.7	7.3	6.8
55 and over	14.6	12.1	9.8	9.3	7.9
<i>Region</i>					
Major urban	12.2	11.1	8.9	10.2	9.7
Other region	16.3	14.3	10.1	10.8	10.6



Table 4.8: Rates of below-national-minimum-wage employment by industry and time period (%)

	2001 to 2004	2005 to 2008	2009 to 2012	2013 to 2015	2016 to 2018
Agriculture, Forestry and Fishing	43.2	40.0	35.6	35.7	40.5
Mining	2.9	1.0	2.7	2.0	2.2
Manufacturing	12.0	9.6	8.5	9.8	8.3
Electricity, Gas, Water and Waste Services	2.4	5.9	0.8	2.7	2.7
Construction	10.7	10.3	8.2	9.7	11.6
Wholesale Trade	13.7	10.8	5.4	5.8	7.3
Retail Trade	20.6	20.3	16.7	18.2	16.6
Accommodation and Food Services	34.4	34.4	30.1	39.2	35.1
Transport, Postal and Warehousing	11.6	12.0	7.5	9.9	11.0
Information Media and Telecommunications	6.7	6.0	4.0	6.0	5.4
Financial and Insurance Services	3.8	3.9	1.0	2.4	1.7
Rental, Hiring and Real Estate Services	21.2	15.4	10.8	16.2	10.6
Professional, Scientific and Technical Services	7.3	8.7	4.6	6.1	4.7
Administrative and Support Services	23.8	20.7	19.2	16.4	18.3
Public Administration and Safety	3.7	5.4	3.0	1.9	2.5
Education and Training	8.0	6.8	4.7	5.8	6.3
Health Care and Social Assistance	12.0	10.7	9.0	8.3	8.1
Arts and Recreation Services	24.0	16.2	15.4	13.2	13.8
Other services	24.9	19.7	15.8	15.8	15.0

employment in the 2001 to 2004 period, but have all experienced considerable declines since then, particularly in rental, hiring and real estate, arts and recreation services, and other services.

The personal and job characteristics associated with below-minimum-wage employment are considered in more detail in Table 4.9, which presents results from regression models of the probability an employee reports hourly earnings less than the national minimum wage. Model A includes only variables capturing personal characteristics, while Model B includes additional variables capturing job characteristics.

Table 4.7 shows that the prevalence of below-minimum-wage employment is higher among men than women. However, Table 4.9 shows that, other personal factors held constant, men have a 3.5 percentage-point *lower* probability of below-minimum-wage employment than women.

This implies that the higher rate of below-minimum-wage employment among men is due to differences between men and women in other characteristics, such as educational attainment.

The estimates for age group and region confirm the findings in Table 4.7. Holding other personal characteristics constant, employees aged 21 to 24 have a 13.1 percentage-point higher probability of below-minimum-wage employment than employees aged 35 to 44. Compared with employees in major urban regions, employees in non-major urban areas have a 1.3 percentage-point higher probability of below-minimum-wage employment and employees in non-urban areas have a 2.9 percentage-point higher probability.

Table 4.9 additionally shows that, holding other personal characteristics constant, immigrants from the main English-speaking countries (see Box 4.5, page 80) have a slightly

lower probability of below-minimum-wage employment than non-Indigenous native-born Australians, while immigrants from other countries have a 5.0 percentage-point higher probability of below-minimum-wage employment. Unsurprisingly, the probability of below-minimum-wage employment is strongly ordered by educational attainment.

Estimates for the effects associated with personal characteristics are somewhat smaller once controls for job characteristics are included (Model B), but effects are qualitatively the same, with the exceptions that region of residence and being an immigrant from one of the main English-speaking countries are no longer statistically significant predictors of below-minimum-wage employment.

Considering job characteristics, part-time employment is associated with an elevated probability of below-minimum-

wage employment, but so is working 50 or more hours per week. The effect of long hours is consistent with some of the apparent below-minimum-wage employment deriving from salaried employees working long hours. Below-minimum-wage employment is strongly associated with casual employment (see Box 4.6, below), and also to some extent with fixed-term employment. Public sector employees are somewhat less likely to be classified as being paid less than the national minimum wage.

Small firm size is a strong predictor of below-minimum-wage employment, with employees of firms with fewer than 20 employees having a 5.7 percentage-point higher probability of below-minimum-wage employment, other factors held constant. No significant effects are found for weekend work, but working nights or irregular hours is

associated with a slightly lower probability of below-minimum-wage employment.

Other factors held constant, below-minimum-wage employment is considerably higher among labourers than among workers in other occupations, and considerably lower among professionals. Differences across industries are broadly in line with the evidence presented in Table 4.8, with the notable exceptions that working in retail trade, rental, hiring and real estate services, and arts and recreation services are not associated with elevated probabilities of below-minimum-wage employment once other job characteristics are controlled for. That is, it is other characteristics of these industries, such as casual employment and firm size, that account for the higher prevalence of below-minimum-wage employment found in these industries in Table 4.8.

Box 4.5: Classification of place of birth and Indigenous status

In this report, two groups of immigrants are distinguished: those born in one of the main English-speaking countries, which comprise the United Kingdom, the United States, Canada, Ireland, New Zealand and South Africa; and those born in other countries.

Among people born in Australia, in some analyses in this report a distinction is drawn between people who self-identify as Aboriginal or Torres Strait Islander (Indigenous) and other people born in Australia.

Box 4.6: Types of employment contract

Three types of employment contract are distinguished in this report:

- i) Fixed-term contracts, defined as employment contracts that end at a specified date or upon completion of a specific task.
- ii) Casual employment, which lacks a clear and agreed-upon definition, but for which the main criterion is the absence of any advance commitment on the part of the employer (and the employee) to both the continuity of employment and the number of days or hours to be worked (Creighton and Stewart, 2010). Usually, this is accompanied by the absence of paid leave entitlements (most notably, paid sick leave and annual leave) and a compensating pay loading relative to non-casual employees performing the same jobs. Note that the Australian Bureau of Statistics (ABS) has, in its publications, used the absence of any paid leave entitlements as a proxy measure for casual employment (for example, ABS, 2018), but in this report casual employment is based on self-identification of employees as being employed on a casual basis. In 2018, the HILDA Survey data show that 96% of people who identified as being employed on a casual basis did not have paid leave entitlements, while 85% of those without paid leave entitlements identified as being employed on a casual basis.
- iii) Permanent/ongoing employment. Permanent employees typically have leave and other entitlements, and usually have a guaranteed minimum number of hours per week.

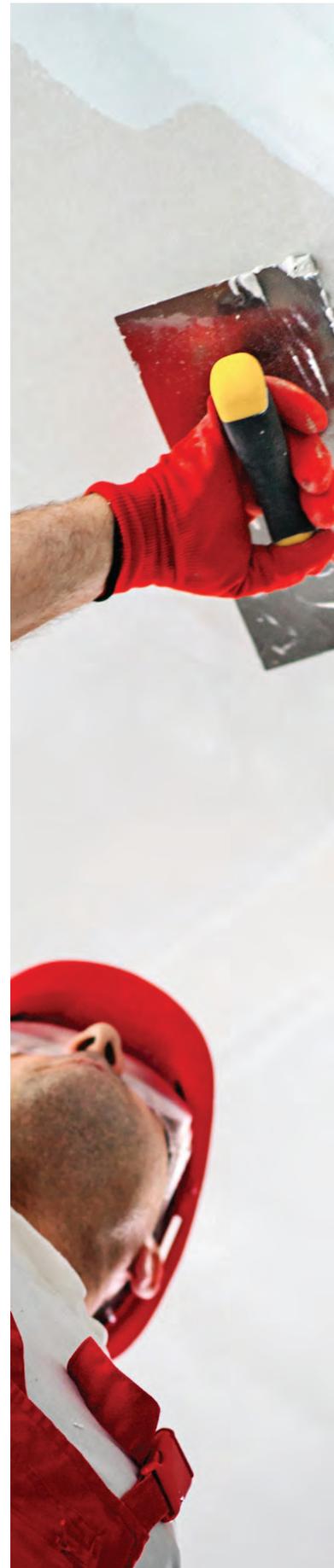


Table 4.9: Personal and job characteristics associated with below-national-minimum-wage employment –Employees aged 21 and over, 2001 to 2018

	<i>Model A</i>	<i>Model B</i>
Male	-0.035	-0.022
<i>Age group (Reference category: 35-44)</i>		
21-24	0.130	0.069
25-34	0.039	0.020
45-54	<i>ns</i>	<i>ns</i>
55 and over	0.016	0.011
<i>Region of residence (Reference category: Major urban area)</i>		
Non-major urban area	0.013	<i>ns</i>
Non-urban area	0.029	<i>ns</i>
<i>Immigrant and Indigenous status (Reference category: Non-Indigenous native-born)</i>		
Immigrant from one of the main English-speaking countries	-0.010	<i>ns</i>
Immigrant from another country	0.051	0.022
Indigenous	<i>ns</i>	<i>ns</i>
<i>Educational attainment (Reference category: Bachelor's degree or higher)</i>		
Other post-school qualification	0.060	0.014
Completed high school	0.084	0.028
Less than high school completion	0.127	0.043
<i>Weekly hours of work (Reference category: 35-49)</i>		
Less than 35		0.015
50 or more		0.067
<i>Contract type (Reference category: Permanent/ongoing)</i>		
Casual		0.127
Fixed-term		0.017
Public sector		-0.026
<i>Firm size (Reference category: 100 or more workers)</i>		
Fewer than 20 workers		0.057
20 to 99 workers		0.017
Work weekends		<i>ns</i>
Work nights or irregular hours		-0.005
<i>Occupation (Reference category: Professionals)</i>		
Managers		<i>ns</i>
Technicians and Trades Workers		0.050
Community and Personal Service Work		0.063
Clerical and Administrative Workers		0.030
Sales Workers		0.063
Machinery Operators and Drivers		0.049
Labourers		0.092
<i>Industry (Reference category: Health Care and Social Assistance)</i>		
Agriculture, Forestry and Fishing		0.063
Mining		-0.107
Manufacturing		-0.019
Electricity, Gas, Water and Waste Services		-0.081
Construction		-0.042
Wholesale Trade		-0.020
Retail Trade		<i>ns</i>
Accommodation and Food Services		0.030
Transport, Postal and Warehousing		-0.013
Information Media and Telecommunications		-0.022
Financial and Insurance Services		-0.055
Rental, Hiring and Real Estate Services		<i>ns</i>
Professional, Scientific and Technical Services		-0.017
Administrative and Support Services		0.015
Public Administration and Safety		-0.022
Education and Training		<i>ns</i>
Arts and Recreation Services		<i>ns</i>
Other services		0.026
Year	-0.001	-0.001
Number of observations	126,568	125,467

Notes: Table presents mean marginal effects estimates from Probit models of the probability of being paid below the national minimum wage. See the Technical Appendix for further details on Probit models. Sample comprises all employees over the period 2001 to 2018. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Characteristics of people likely to be experiencing the worst economic effects of COVID-19

All Australians have to some extent been adversely affected by the COVID-19 pandemic, but the economic effects have not been uniformly felt. People directly reliant on incomes from industries that have been prohibited from operating or severely constrained in their operations have been most adversely impacted, despite fiscal measures such as the broadened Jobseeker Payment, the Coronavirus Supplement and the JobKeeper Payment. In

this section, a brief analysis is presented of the characteristics and circumstances of individuals and households who are likely to have been worst hit based on industry of employment.

Note that the analysis is using 2018 data, and therefore does not tell us who was, in fact, worst affected; rather, the analysis provides information on what we know about the 2018 characteristics of people and households exposed to the industries that were worst-affected by the pandemic in 2020.

To identify the most adversely impacted industries, we draw on ABS Labour Force Survey data on employment in each two-digit ANZSIC industry (see Box 4.4, page 73) in February and May of 2020. Specifically, we examine

the industries experiencing a greater than 15% decline in employment over this period. These industries are listed in Table 4.10. The table shows that 19 industries experienced employment declines greater than 15%, with the total decline in employment in these industries equal to 643,300 people, which translates to a 26.9% decline in total employment in these industries.

Characteristics of people employed in the worst-affected industries

Table 4.11 examines the characteristics of employed people in 2018 by whether they were employed in the worst-affected industries. It shows that females are similarly exposed to the worst-affected industries as

Table 4.10: Industries experiencing a greater than 15% decline in employment between February and May 2020

	Number employed ('000)		Change in number employed ('000)	Percentage change in employment
	February	May		
Food Product Manufacturing	232.4	182.6	-49.8	-21.4
Petroleum and Coal Product Manufacturing	9.7	6.7	-2.9	-30.3
Commission-Based Wholesaling	9.1	7.5	-1.6	-17.2
Accommodation	97.7	75.2	-22.4	-23.0
Food and Beverage Services	832.9	579.1	-253.8	-30.5
Road Transport	286.0	228.9	-57.0	-19.9
Air and Space Transport	51.7	35.6	-16.1	-31.2
Other Transport	5.6	4.0	-1.6	-29.1
Transport Support Services	88.4	67.5	-20.9	-23.7
Publishing (except Internet and Music Publishing)	26.1	20.0	-6.1	-23.5
Motion Picture and Sound Recording Activities	35.0	22.1	-12.9	-36.9
Library and Other Information Services	20.6	11.0	-9.6	-46.7
Administrative Services	218.6	178.5	-40.1	-18.3
Adult, Community and Other Education	219.5	165.3	-54.2	-24.7
Heritage Activities	38.3	32.4	-5.9	-15.4
Creative and Performing Arts Activities	45.3	30.9	-14.4	-31.8
Sports and Recreation Activities	136.5	77.8	-58.6	-43.0
Gambling Activities	31.3	18.9	-12.4	-39.8
Private Households Employing Staff and Undifferentiated Goods- and Service-Producing Activities of Households for Own Use	5.5	2.8	-2.7	-48.4
Total	2,390.2	1,746.9	-643.3	-26.9

Notes: Industries are ANZSIC 2-digit level industries. Excludes mining and agriculture, forestry and fishing industries, which have relative small numbers employed and/or volatile employment levels. Source: ABS Catalogue No. 6291.0.55.003.



males, but are in fact slightly over-represented compared to their share of employment: they represent 49.5% of people employed in the worst-affected industries, but only 47.4% of people employed in other industries.

Young people are more exposed to the worst-affected industries, with people aged 15 to 24 representing 34.9% of all workers in these industries in 2018. Looking at the family situation of workers, a high proportion of those in the worst-affected industries (32.8%) are (dependent and non-dependent) children living with their parents. Single people not living with their parents are also somewhat over-represented in the worst-affected

industries, accounting for 16.4% of employment in those industries compared with 14% of employment in other industries.

Region of residence (see Box 3.5, page 32) is similarly distributed for workers in the worst-affected industries as for workers in other industries, reflecting the widespread reach of the shutdown across all of Australia. That said, workers in the worst-affected industries are slightly more likely to live in major urban areas, and slightly less likely to live in non-urban regions, than workers in other industries: 69.4% of workers in the worst-affected industries live in major urban areas and 14.2% live in non-urban regions, compared with 67.9% and 15.8%, respectively, of workers in other industries. Interestingly, despite major urban

areas on average being less socio-economically disadvantaged than non-urban regions (as measured by SEIFA decile; see Box 4.7, page 84), on average, workers in the worst-affected industries live in slightly less socio-economically advantaged regions than do workers in other industries.

Many workers in the worst-affected industries tend to have low educational attainment, in part reflecting their young age. Approximately 48% of these workers have no post-school qualifications, compared with 29% of workers in other industries. Finally, we see that workers in the worst-affected industries have considerably lower average wages than workers in other industries.

Table 4.11: Characteristics of employed people in 2018, by whether employed in the industries worst-affected by COVID-19

	<i>Employed in the most adversely affected industries</i>	<i>Employed in other industries</i>
Female (%)	49.5	47.4
<i>Age group (%)</i>		
15-24	34.9	13.7
25-34	19.7	24.8
35-44	17.4	23.5
45-54	15.6	22.0
55-66	12.3	16.1
Total	100.0	100.0
<i>Family relationship in household (%)</i>		
Couple	17.0	21.6
Couple parent	30.1	43.6
Single parent	3.8	5.4
Child (Dependent or non-dependent)	32.8	15.4
Single person (not living with parents)	16.4	14.0
Total	100.0	100.0
<i>Region of residence (%)</i>		
Major urban	69.4	67.9
Other urban	16.3	16.3
Non-urban region	14.2	15.8
Total	100.0	100.0
Mean SEIFA decile	6.0	6.1
<i>Educational attainment (%)</i>		
Bachelor's degree or higher	22.3	37.8
Other post-school qualification	29.9	33.5
Completed high school	27.0	16.2
Less than high school completion	20.8	12.4
Total	100.0	100.0
Mean weekly wage (\$, December 2018 prices)	939	1,354
Mean hourly wage (\$, December 2018 prices)	29.83	37.47

Note: Cells may not add up to column totals due to rounding.



Households exposed to the worst-affected industries

In Table 4.12, attention is switched to people who in 2018 were in the households deriving much of their income from the worst-affected industries. Under this approach, a person is in an 'exposed' household if the highest earner in the household is employed in one of the worst-affected industries. For comparison purposes, the table also presents the characteristics of individuals in households in

Box 4.7: Socio-Economic Index for Areas (SEIFA)

Constructed by the Australian Bureau of Statistics (ABS) using Census data, SEIFA is a suite of four indexes that can be used to explore different aspects of socio-economic conditions by geographic areas. For each index, every geographic area in Australia is given a SEIFA number showing how disadvantaged that area is compared with other areas in Australia. In analysis presented in this report, the SEIFA index used is the Index of Relative Socio-Economic Advantage and Disadvantage, which is derived from Census variables such as low income, low educational attainment, unemployment and dwellings without motor vehicles. For more information, see ABS (2009).

which the main earner is employed in any other industry.

Here we see that, in 2018, approximately two million people aged 15 to 66 lived in a household in which the main earner was employed in the worst-affected industries, while 12.7 million people aged 15 to 66 were in other employed households.

The characteristics of people in exposed households are somewhat different from the characteristics of people employed in the worst-affected industries. Notably, females are no more likely than males to be in exposed households. People in exposed households tend to be younger than others in employed households, but the differences are much more muted compared with the differences evident in Table 4.11. Indeed, people aged 55–66 are slightly over-represented among those in exposed households, accounting for 18.4% of people in exposed households, but only 16.5% of people in other employed households.

Similarly, differences in family type are less pronounced for household exposure than for

individual employment exposure. It is nonetheless clear that non-dependent children and single parents are over-represented in exposed households. In 2018, non-dependent children accounted for 19.8% of people in exposed households, but only 13.9% of people in other employed households, while single parents accounted for 6.5% of people in exposed households and only 4.9% of people in other employed households.

Most striking from Table 4.12 is that the defining trait of people in exposed households is that they tend to be in more socio-economically disadvantaged circumstances. They are more likely to be renting their home, and in particular renting social housing—38.2% of people in exposed households rent, compared with 30.2% of people in other employed households. They have a lower average equivalised income (\$46,470 versus \$58,020; see Box 3.2, page 28, for the definition of equivalised income), lower average wealth (\$426,348 versus \$616,070) and less cash in the bank (\$12,533 versus \$17,245). Further, they are considerably

more likely to be in relative income poverty (see Box 3.6, page 36), to experience financial stress (see Box 2.6, page 23), and to have difficulty raising \$3,000 at short notice. Also evident is that people in exposed households have somewhat higher rates of poor general health, poor mental health and disability than people in other employed households. In short, those most badly impacted by the economic shutdown are also those least able to cope with it.

To conclude, the HILDA Survey evidence is that the people employed in 2018 in the industries worst affected by COVID-19 tend to be low-wage workers and are disproportionately young. While a significant proportion of these workers are secondary earners in their households, the HILDA Survey nonetheless shows that, in 2018, approximately 2 million people aged 15 to 66 were in households that derived their main source of income from the worst-affected industries. Moreover, these households tend to have lower economic resources, and were relatively disadvantaged, even before the onset of the pandemic.



Table 4.12: Characteristics of people aged 15 to 66 in 'exposed' households, 2018

	Living in 'exposed' households	Others living in employed households
Number of people	1,978,657	12,749,192
Female (%)	49.9	50.3
<i>Age group (%)</i>		
15-24	23.6	20.0
25-34	22.0	22.6
35-44	17.8	21.3
45-54	18.3	19.6
55-66	18.4	16.5
Total	100.0	100.0
<i>Family type (%)</i>		
Couple	25.8	26.3
Couple with dependent children	38.1	43.0
Single parent	6.5	4.9
Non-dependent child	19.8	13.9
Single person (not living with parents)	9.8	11.9
Total	100.0	100.0
<i>Region of residence (%)</i>		
Major urban	67.3	67.8
Other urban	18.1	16.5
Non-urban region	14.6	15.7
Total	100.0	100.0
SEIFA decile	6.0	6.0
<i>Housing tenure type (%)</i>		
Home owner	61.8	69.8
Private rental	35.7	28.8
Social housing	2.5	1.4
Total	100.0	100.0
In poor general health (%)	21.4	17.5
In poor mental health (%)	25.7	24.0
Moderate or severe disability (%)	12.6	10.2
Mean equivalised income (\$, December 2018 prices)	46,470	58,020
Mean household net wealth (\$, December 2018 prices)	426,348	616,070
Mean household bank accounts (\$, December 2018 prices)	12,533	17,245
Mean rent or mortgage payments per week (\$, December 2018 prices)	342	370
Mean superannuation balance (\$, December 2018 prices)	101,185	150,897
In relative income poverty - Before housing costs (%)	6.5	3.6
In relative income poverty - After housing costs (%)	10.1	6.2
In financial stress (%)	24.7	18.4
Difficulty raising \$3,000 in an emergency (%)	29.8	20.0

Note: Cells may not add up to column totals due to rounding.

5

The intergenerational 'transmission' of income poverty

Esperanza Vera-Toscano



Examination of intergenerational transmission of income poverty concerns the extent to which an individual's socio-economic outcomes as an adult depend on the economic fortunes of their parents. More broadly speaking, it concerns the extent to which children who grew up in poor households perform worse in terms of educational attainment, labour market outcomes, health status or even life satisfaction and wellbeing compared to those who grew up in better-off households. Key among the reasons for interest in this topic is the argument (for example, Corcoran and Adams, 1997; Corcoran, 2001) that early poverty can follow children throughout their lives. For any society that wishes to improve the living conditions of its population and to increase social cohesion, obtaining better knowledge of the intergenerational transmission of poverty becomes an important endeavour.

With 18 years of rich longitudinal data now available, the HILDA Survey is a unique dataset that is well suited to the study of transmission of poverty across generations in Australia because it allows data about parents to be successfully matched to data from their children.

This chapter provides greater insights into the intergenerational transmission of income poverty in the Australian community. First, we focus on the extent to which children growing up in income-poor households remain income poor as young adults. Next, we examine how childhood poverty (measured as income poor) is associated with broader socio-economic outcomes later in life, including young adults' educational attainment, health and labour market outcomes. Finally, additional evidence is provided on the influence that growing up income poor as a child may have on the life satisfaction and wellbeing of these children as they reach adulthood.

Does income poverty in childhood beget income poverty in adulthood?

There is widespread concern that poverty is transmitted across generations from parents to children. In the 'career' of life, we each start from a different socio-economic position, and personal and family characteristics place us more or less ahead of the starting line. Early poverty can follow children throughout their lives. Poor families often lack the resources to adequately invest in their children's education. Poor

educational opportunities are likely to relate to poor skills, limited employment prospects later in life, low job quality, and even poorer health outcomes or greater exposure to environmental hazards and crime.

This section examines exposure to poverty during childhood of children aged nine to 15 between 2001 and 2009 and relates it to the risk of poverty as these children become adults (from 18 up to 32 years of age). Consistent with Chapter 3 of this report, poverty is defined in terms of inadequacy of income. That is, an individual is 'income poor' if household income is below 50% of median income (see Box 3.6, page 36, for further details).

Given the longitudinal nature of the HILDA Survey, we are also able to classify children by the number of years they have been income poor during childhood,¹ namely: (1) Never income poor as a child; (2) Income poor in only one year as a child; (3) Income poor as a child for two years; and (4) Income poor as a child for three years or more. We follow children for a minimum of three years—that is, a child must be observed when aged 15 or younger in order to observe them for three years before reaching adulthood (age 18). Consequently, this categorisation can be seen as

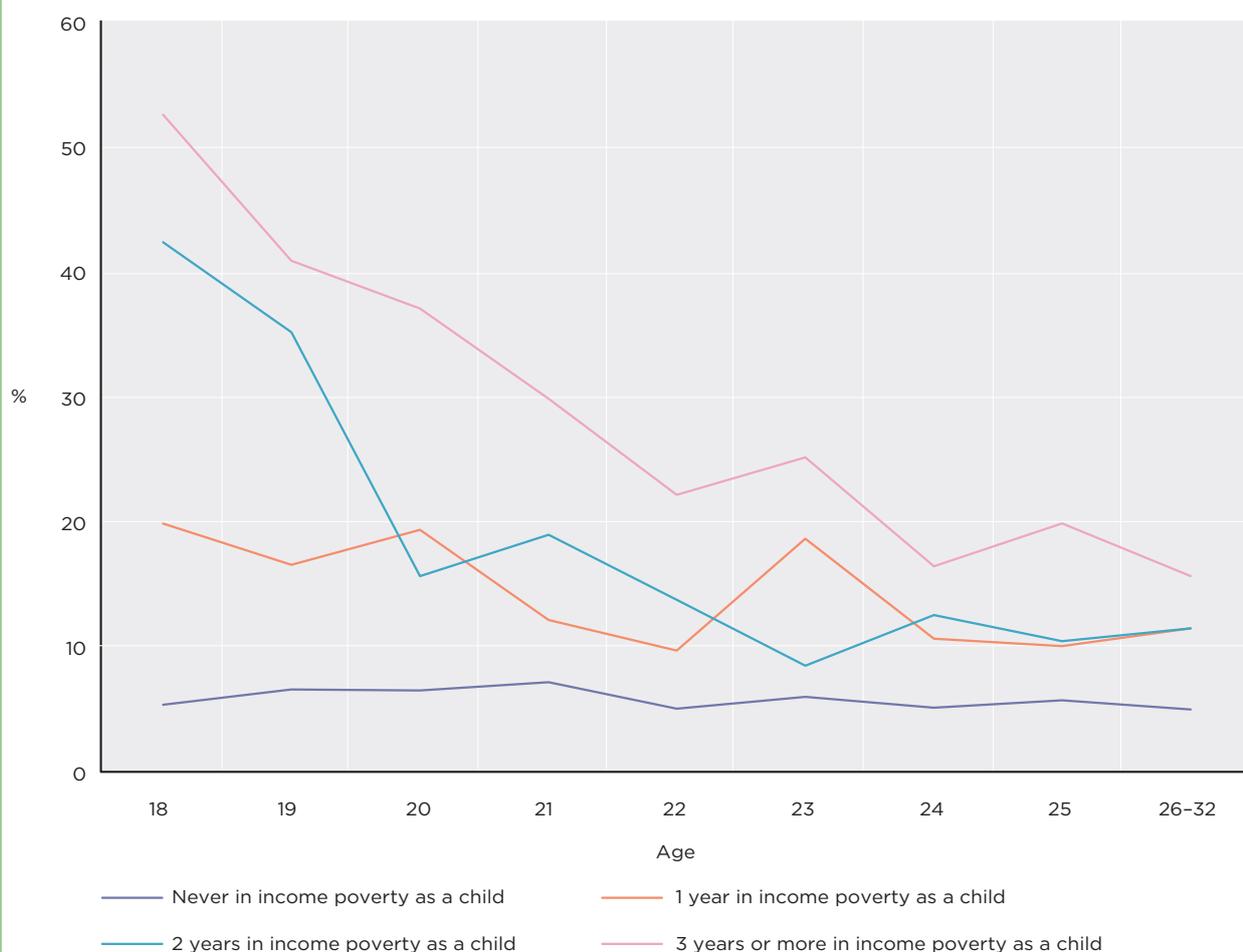
a good representation of the exposure to income poverty during childhood (from low to severe exposure to income poverty).

Figure 5.1 compares the percentage of individuals aged 18 to 32 in income poverty by the number of years they are classified as income poor during their childhood. For example, the figure shows that, of those individuals who were never income poor as children, approximately 5.5% are income poor when they are aged 18 years. This percentage is 6.6% when they are aged 19, 7.21% when they are aged 19, 7.21%

when they are 21 and 5.03% when they are above 25 years of age.² Overall, despite small fluctuations among the different age groups considered, results indicate that the risk of income poverty is low and relatively stable for this group of individuals as they enter adulthood.

The picture is very different for individuals who were income poor for three or more years during their childhood. We observe that approximately 52.6% of them are income poor when they are aged 18, while the proportion goes slightly down to

Figure 5.1: Percentage of individuals in income poverty in early adulthood, by number of years in income poverty as children



¹ Notice that the degree of severity is measured for the time the children are observed in our sample. That is, we follow individuals aged nine years up to when they are 17 years old and we estimate the poverty status during childhood for these children, dividing the number of years the child has been poor by the total number of years the child has been present in the sample. Thus, we do not have information about the income poverty situation at ages younger than nine.

² Ages 26 to 32 are grouped together because the number of observations over this age range is relatively limited—for example, only those aged 15 in 2001 are observed when aged 32 (in 2018).

40.9% when they are 19, and 37.1% when they are 20. Interestingly, this percentage significantly decreases to 15.7% when severely income poor children are between 26 and 32 years of age. It is evident that the intergenerational transmission of income poverty is strong when individuals have been exposed to severe income poverty as children (income poor for three years or more as children), but also among those moderately exposed (income poor for two years) compared to the group of children who were never poor. However, as they grow older and depart from the parental home to become financially independent, the risk of income poverty seems to diminish. Yet, the percentage of income-poor adults (aged 26 to 32) among those severely

income poor as children is three times larger than that for those who have never been exposed to poverty as children.

Another way to investigate the intergenerational transmission of income poverty is to produce poverty transition tables which allow us to compare the chances of being poor and also its severity when an adult for those individuals who experienced various degrees of poverty during childhood. Table 5.1 examines individuals aged nine to 15 years in 2001 and compares the status and severity of their poverty as children with their poverty status and its severity when they were aged 26 to 32.

The top row of the table examines those who were never poor as children, and shows that

only 2.6% were severely poor when aged 26 to 32, while 63.4% were never poor as young adults. By contrast, the bottom row shows that, for those who were severely poor as children, only 12.2% remained severely poor as adults, while 20.9% were never poor. While there are clear indications of a positive correlation between income poverty status during childhood and the income poverty of children in later life, the results in Table 5.1 further prove some degree of upward mobility from severe income poverty to better-off situations in early adulthood, as more than 50% from this group move to be never poor as an adult (20.9%) or poor for one-quarter of the time observed in the sample (41.1%).

Table 5.1: Income poverty status when an adult, by income poverty status when a child

Income poverty status during childhood ^a	Early adulthood income poverty outcome				Total
	Never poor	Poor in up to 1/4 of years	Poor 1/4 to 1/2 of years	Poor more than 1/2 of years	
<i>(Sample size: 1,158)</i>					
Never poor	63.4	26.3	7.6	2.6	100.0
Poor in up to 1/4 of years	41.3	35.2	17.4	6.1	100.0
Poor 1/4 to 1/2 of years	40.2	32.9	20.2	6.8	100.0
Poor more than 1/2 years	20.9	41.1	25.9	12.2	100.0

Notes: ^a Percent years poor = 100 x (number of years poor as a child or adult)/(number of years observed as a child or adult). Cells may not add up to row totals due to rounding." to the end of the table notes.



Childhood income poverty and socio-economic outcomes later in life

In this section, we explore the extent to which childhood poverty is associated with a number of socio-economic outcomes later in life, including educational attainment, labour market outcomes and health. As mentioned above, income-poor households typically have limited economic resources to sufficiently invest in their children's education and health. This may result in less healthy young adults who are poorly prepared for the labour market with limited employment prospects and low earnings in low-quality jobs. Results provided here will help us better understand the potential poverty trajectories for those growing up in income-poor households.

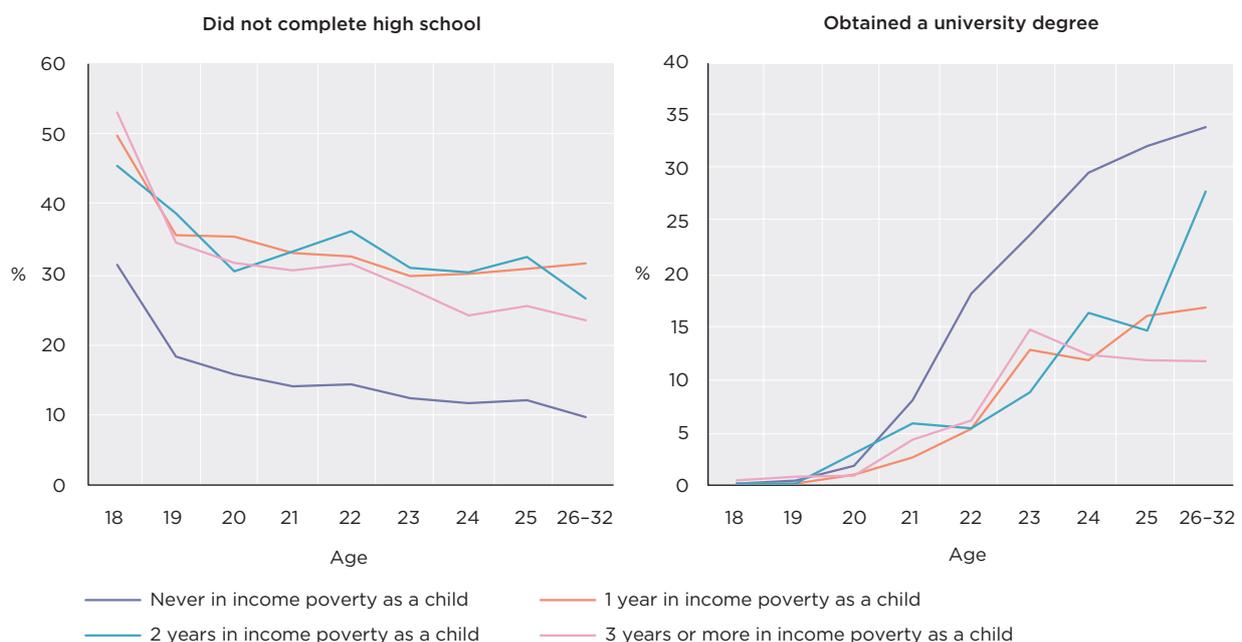
Educational attainment of young adults

Figure 5.2 shows the proportion of individuals aged 18 to 32 who did not complete high school (left figure) and who obtained a university degree (right figure) disaggregated by the number of years they were classified as income poor during their childhood.

Thus, regarding the completion of a university degree (right panel), we observe that for younger adults (aged 18 to 21) the proportion of individuals who completed a university degree is very low (below 5%) independently of whether they were poor or not as children. This result is reasonable as many of them will still be in the education system. However, if we focus on those individuals aged 26 to 32, almost 34% of those who were never income poor as children successfully completed a university degree, while the proportion drops down to only 11.6% for those young adults who were severely poor as children (that is, three years or more in income poverty during



Figure 5.2: Educational attainment by age and number of years in income poverty as children



childhood). Conversely, if we look at those who had not completed high school when aged 26 to 32 (left panel), we see this applied to less than 10% of those who were never poor during childhood, but 23.4 % of those who were severely poor as children. Education is widely considered to be one of the primary drivers of labour market success. Results

here show a strong correlation between parental income poverty and poor educational performance of their offspring.

Labour market outcomes of young adults

In addition to investigating the educational outcomes of children growing up in income

poor households, research on the links between childhood poverty and labour market outcomes later in life is equally important. This section looks at the intergenerational transmission of income poverty studying occupational status and earnings of young adults depending on their parental poverty background.

Figure 5.3: Labour force status of individuals aged 26–32, by number of years in income poverty as a child

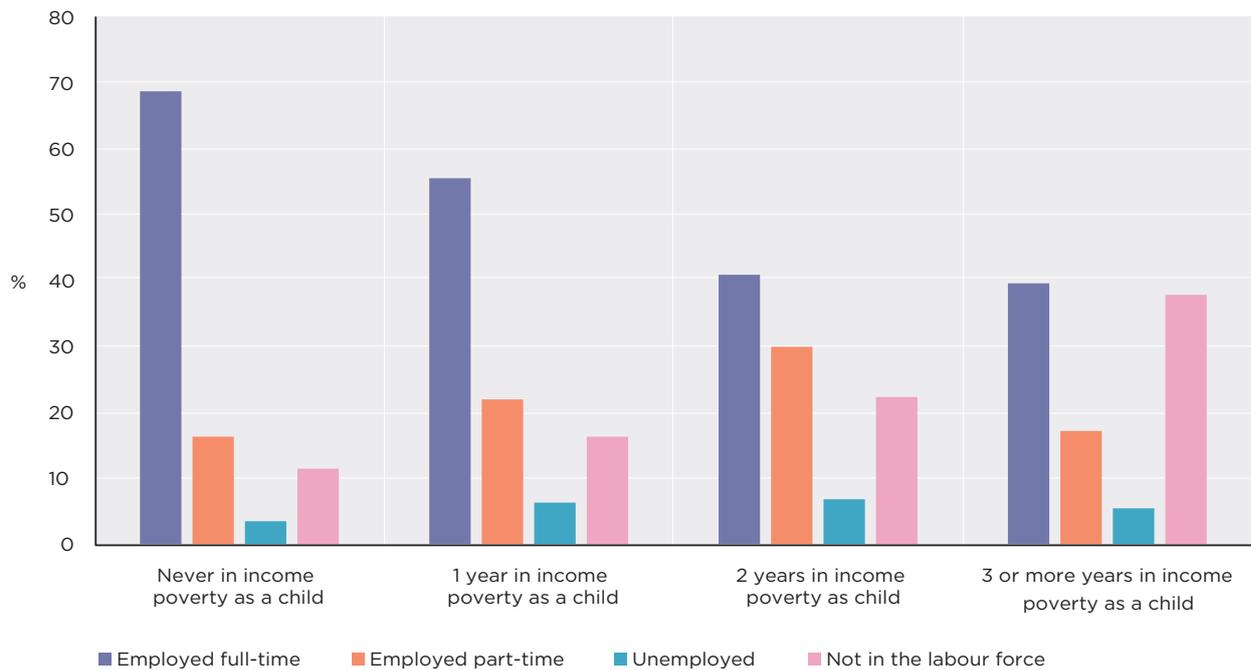


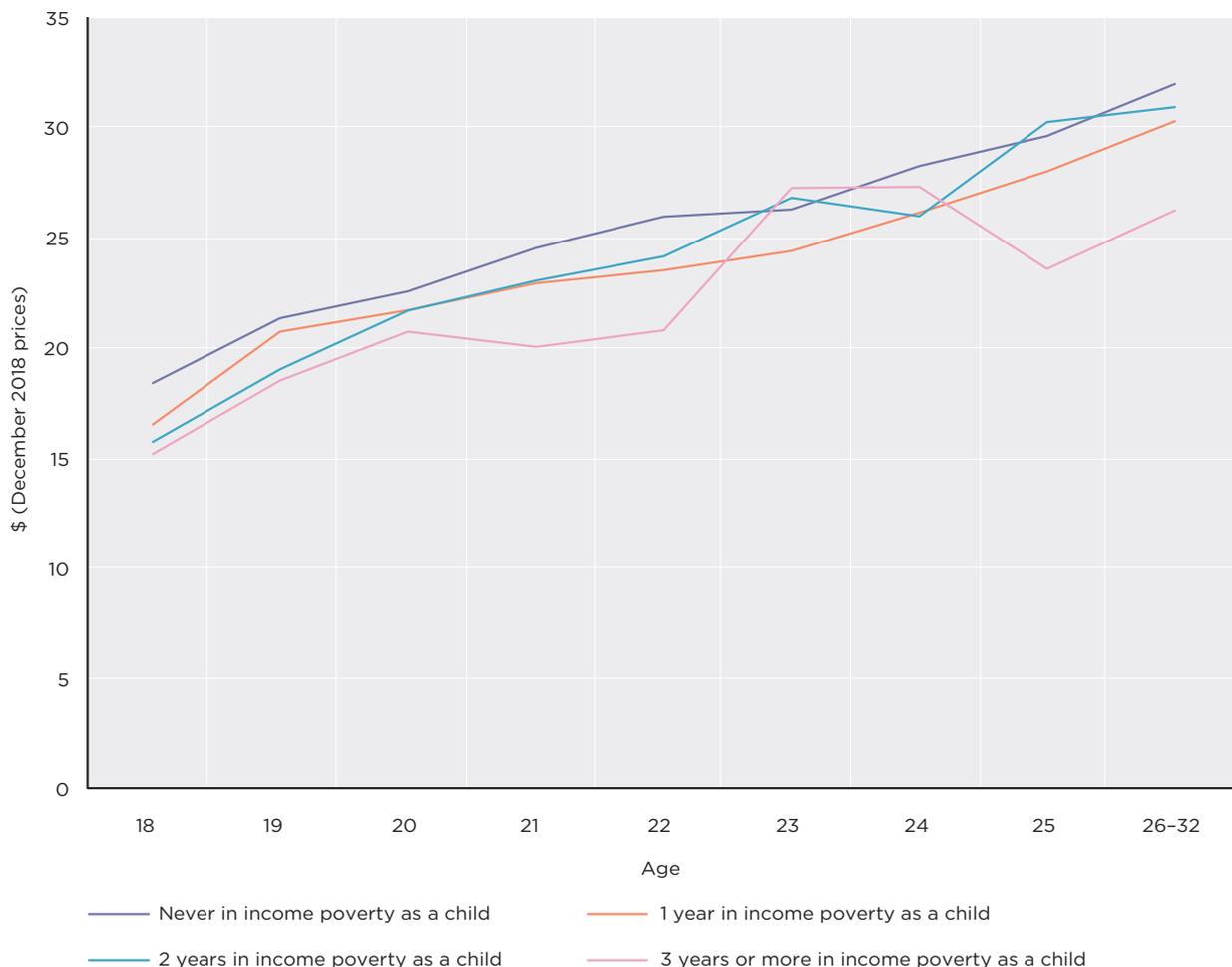


Figure 5.3 shows the distribution of labour force status of young adults aged 26 to 32 distinguished by number of years in income poverty as children (see Box 4.1, page 59, for an explanation of labour force status categories). Overall, full-time employment is the most prevalent labour force status, applying to approximately 69% of those who grew up in non-poor households, compared with approximately 40% of their severely poor counterparts (that is, three or more years in income poverty). Despite its prevalence, we observe a 29 percentage-point decrease in the rate of full-time employment as we move from those never poor as children to those severely poor as children.

Of the four groups examined in Figure 5.3, part-time employment is most common among young adults who experienced one or two years of income poverty as children. Interestingly, while no big differences are found in the proportion of young adults unemployed, the proportion of individuals not in the labour force is strongly ordered by poverty experience as a child, rising from approximately 11% of those never poor to almost 38% for those individuals who were severely poor during their childhood.

Figure 5.4 presents the mean hourly earnings (in all jobs) of young employees from age 18. Overall, we observe an increase in hourly earnings as individuals get older. This is expected as individuals gain greater work

Figure 5.4: Mean hourly earnings (in all jobs) of individuals aged 18 and over, by number of years in income poverty as a child



experience. However, if we focus on the 26 to 32 age group, we observe that for those who have never been in poverty as children, their average hourly earnings are \$31.99 which is \$5.74 more than for those who were severely poor as children (\$26.25).

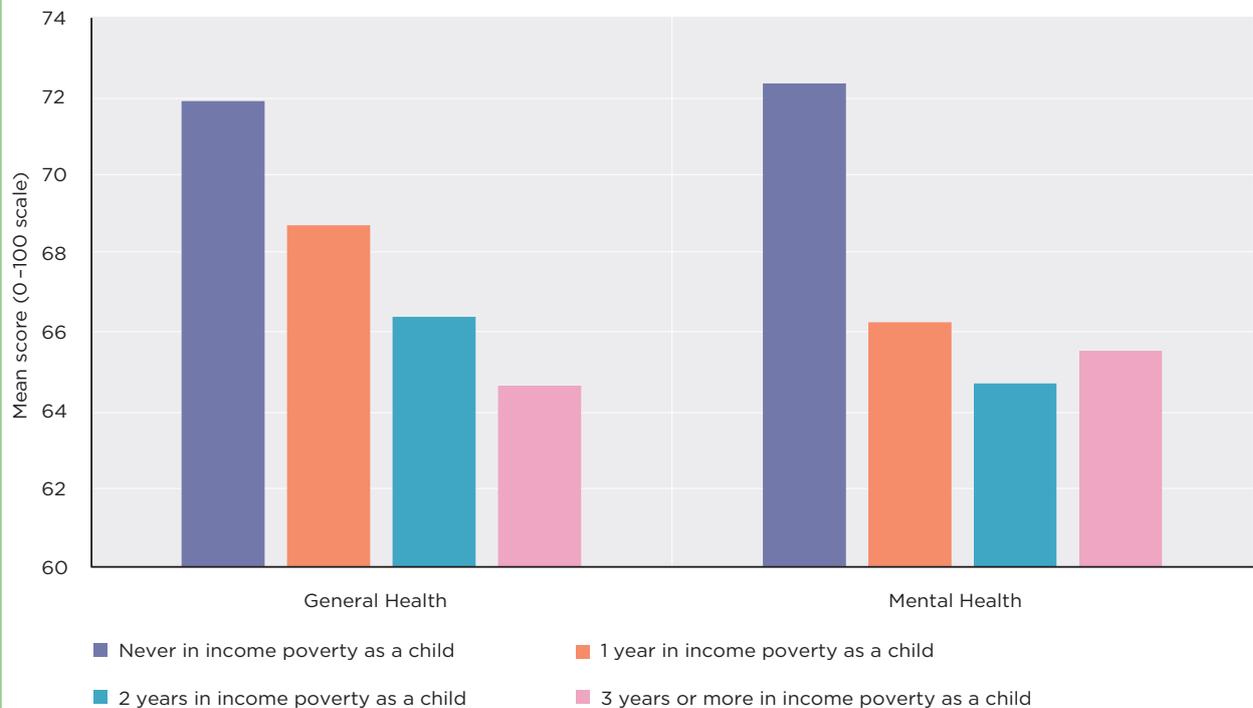
In summary, the descriptive analysis provided in this section confirms previous evidence and shows that childhood poverty is correlated with a lower labour supply (greater economic inactivity), more part-time employment and lower hourly earnings as a young adult.

Health outcomes of young adults

There is a strong correlation between health and success in the labour market. We therefore also consider whether childhood poverty is associated with poorer health in early adulthood. Figure 5.5 examines the SF-36 measures of general health and mental health (see Box 5.1, below) of individuals aged 26 to 32 disaggregated by the number of years they were income poor as children.

The figure indeed shows a strong relationship between the extent of poverty experienced as a child and health as a young adult. The association is stronger for general health than mental health. General health is on average lower the greater the experience of childhood poverty, whereas for mental health, the main difference is between those with no experience of childhood poverty and those with some experience of childhood poverty (that is, at least one year of childhood poverty).

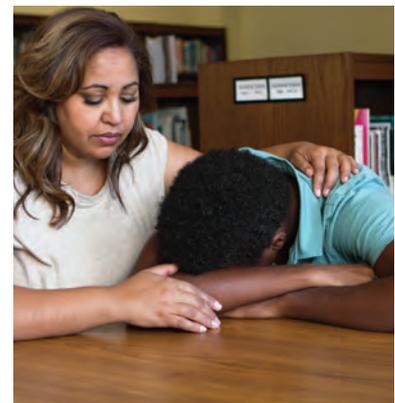
Figure 5.5: Mean SF-36 general health and mental health scores for individuals aged 26-32, by number of years in income poverty as a child



Box 5.1: SF-36 measures of health

The SF-36 Health Survey is a 36-item questionnaire that is intended to measure health outcomes (functioning and wellbeing) from a patient point of view. It was specifically developed as an instrument to be completed by patients or the general public rather than by medical practitioners, and is widely regarded as one of the most valid instruments of its type. See <http://www.sf-36.org/> for further details.

The SF-36 measures of general health and mental health are used in this report. The scores for both measures potentially range from 0 to 100. For some analyses in this report, indicator variables are created for poor general health and poor mental health. There are no universally accepted threshold scores for defining poor general and mental health, but for the purposes of this report, poor general health is defined as a score less than or equal to 37, on the basis that approximately 10% of the population is at or below this threshold. Similarly, poor mental health is defined as a score less than or equal to 52, on the basis that approximately 10% of the population is at or below this threshold.



6

Working on the weekend

Esperanza Vera-Toscano and Mark Wooden

To meet the demand of consumers for 24/7 access to certain services, employers use a wide range of work schedules, including regular daytime but also nine-day fortnight schedules, evening, night or rotating shifts, and call jobs, among other options (Presser, 2003). A substantial share of the workforce is engaged in employment during the weekend, on both Saturdays and Sundays. This chapter explores weekend work in the Australian context, documenting its levels, trends and persistence over the past 14 years. Of particular interest is to illustrate individuals' characteristics associated with weekend work.

Prevalence of weekend work

Since 2004 the HILDA Survey has been asking individuals in paid employment on which days of the week they usually work in their main job. According to these data, in 2018, 32% of employed Australians usually worked at least some hours in their main job on the weekend (4,027,654 individuals; 2,147,919 males and 1,879,735 females).

Of course, some Australian workers have more than one job—7.8% of all employed people in 2018—and it is very likely that weekend work is especially common in second jobs. Thus 32% will be an underestimate of the level of weekend work in the Australian workforce. Data from the Characteristics of Employment Survey conducted each year by the Australian Bureau of Statistics (ABS), for example, indicate that, in August 2019, 34.8% of workers usually worked at least some hours on the weekend in any of their jobs (ABS, 2019).

For many it might come as a surprise to learn that the incidence of weekend work has not been rising. As shown in Figure 6.1, the proportion of

employed people who worked at least some hours on the weekend in 2018 (32%) was actually lower than the proportion working on the weekends in 2004 (34%). Indeed, the trend was distinctly downwards during the first decade of this century, with the weekend worker fraction reaching just 30.6% in 2008. In the wake of, and almost certainly a direct consequence of, the GFC, it then rose to around 32% in 2012 and has remained relatively stable at around that level since.

Figure 6.1 further shows substantial differences in the way the incidence of weekend work has evolved by sex. The proportion of females engaged in weekend work is below that of males. However, their respective trends clearly converge, and are mainly driven by the increase in weekend work participation of females. Despite the slight decline in 2007 which lasted until 2010, the proportion of females working on the weekend has been growing over time. In 2010, 27.9% of females were working on the weekend while in 2018 that proportion increased to 31.5%. On the contrary, male participation in weekend work dropped more sharply at first but has remained at around 32% since 2007.

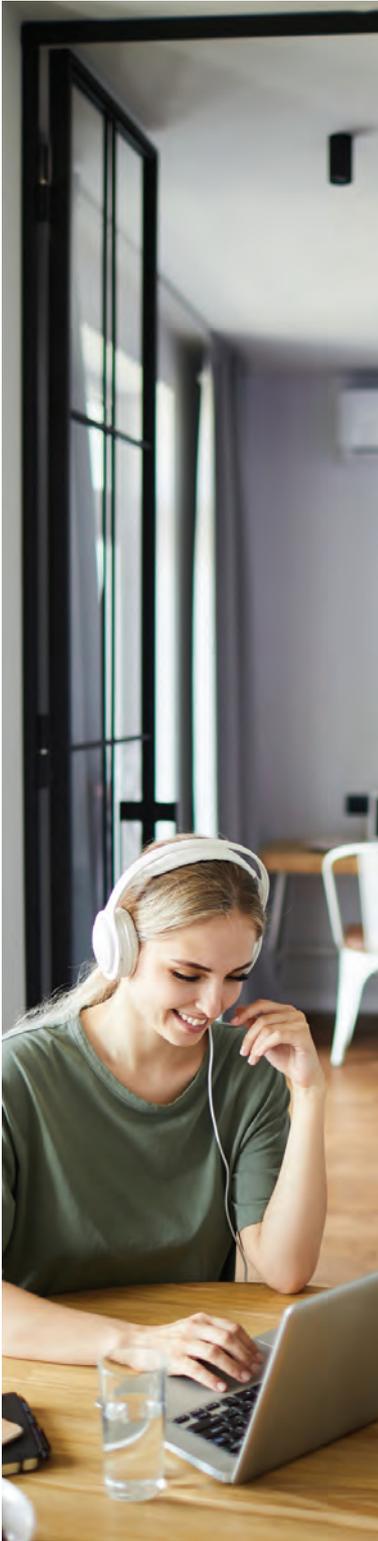


Figure 6.2 shows the trends by age group. The trend of prime-age workers (those aged 25 to 54) follows very closely the trend of the entire population of workers. Prime-age workers are, however, on average, about four percentage points less likely to work on the weekend. This means that weekend work is more common among younger and older Australians, which is not surprising since many younger and semi-retired Australians work

part-time. Weekend work is a popular arrangement for part-time workers with obligations that prevent them from working during the week, such as tertiary education.

According to Figure 6.2, around one half of workers aged 15 to 24 work on the weekend. This proportion fell slightly at first until 2010, trending upward thereafter and reaching levels of more than 50% in recent years (51% in 2018). By contrast, the

proportion among workers aged 65 and over fell from 47% in 2004 to 33% in 2018. This drop, while quite steep, is unlikely to have had a substantial impact on the general trend, given the low number of Australians in that age group who still work. The incidence of weekend work among workers aged 55 to 64 is like that of prime-age workers. The trend is about the same, the level, on average, slightly above that of prime-age workers.

Figure 6.1: Proportion of workers working on the weekend, by sex

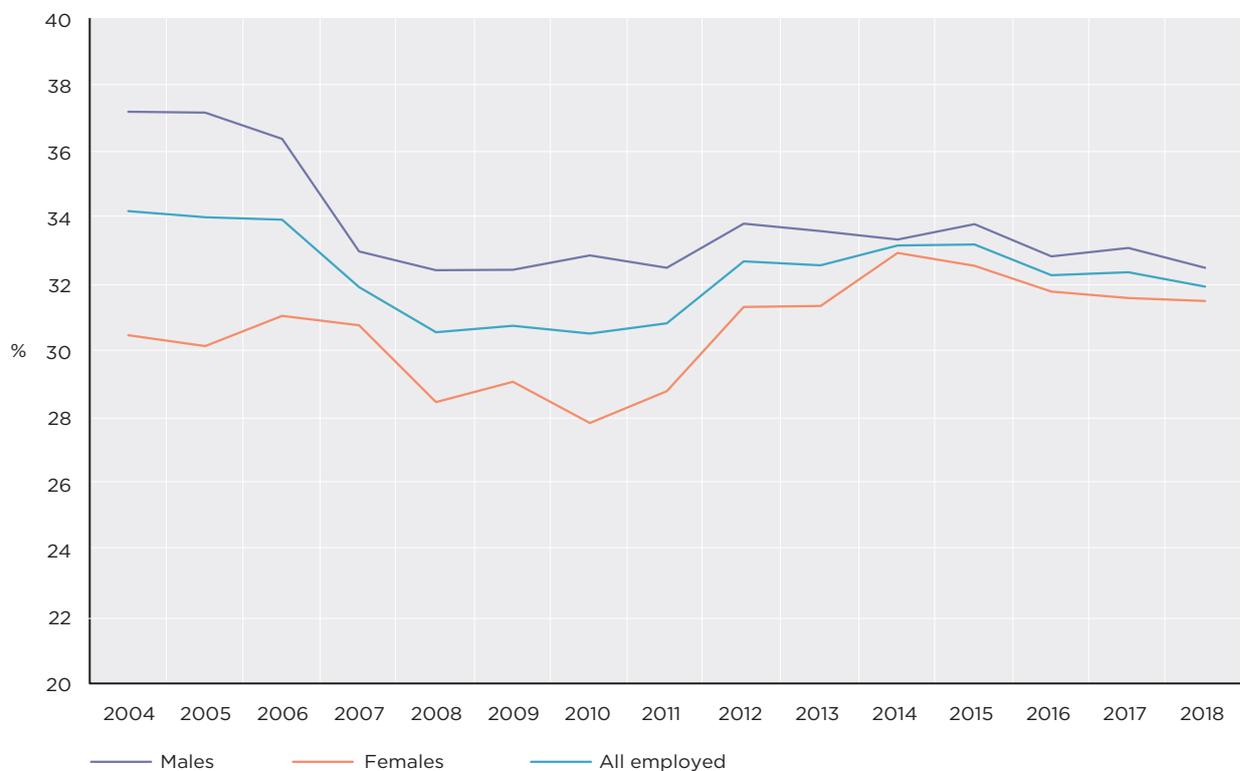
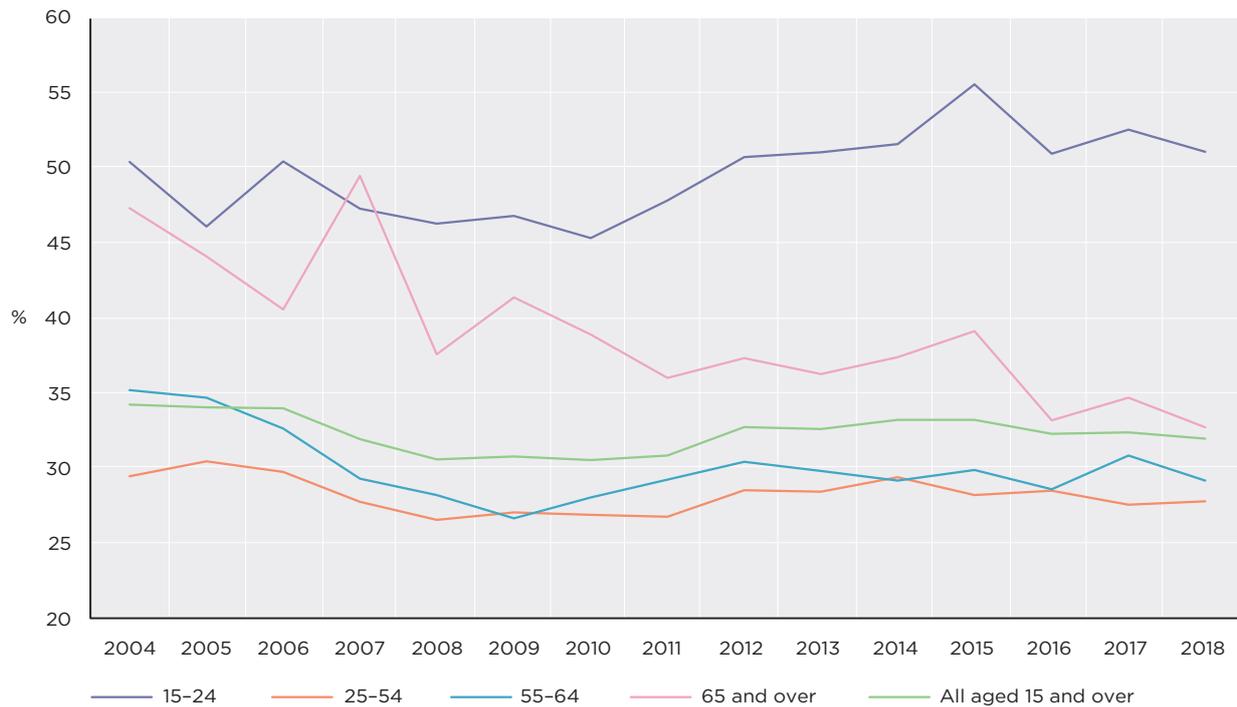


Figure 6.2: Proportion of workers working on the weekend, by age group



Number of hours worked on the weekend

While many Australians undertake at least some paid work on weekends, the number of hours involved may still be relatively small. Until recently, this was something that the HILDA Survey could not say anything about, and nor can the cross-sectional ABS Surveys. In 2017, however, new questions were added to the HILDA Survey seeking information on the number of hours usually worked on a Saturday and on a Sunday (but again just restricted to work in the main job).

Figure 6.3 shows the distribution of workers by number of hours worked either during a normal weekday or on the weekend. Overall, among people working any hours on the weekend, the mean number of hours worked on the weekend in 2018 was 10.8–6.2 on Saturdays and 4.6 on Sundays. This compares with a

mean number of weekday hours (among people reporting positive weekday hours) of 32.8.

In total, paid work on weekends represents just fewer than 10% of all hours worked by employed people in their main job. And while this proportion is far less than the proportion of employed people that work any hours on the weekend, it is nevertheless considerable.

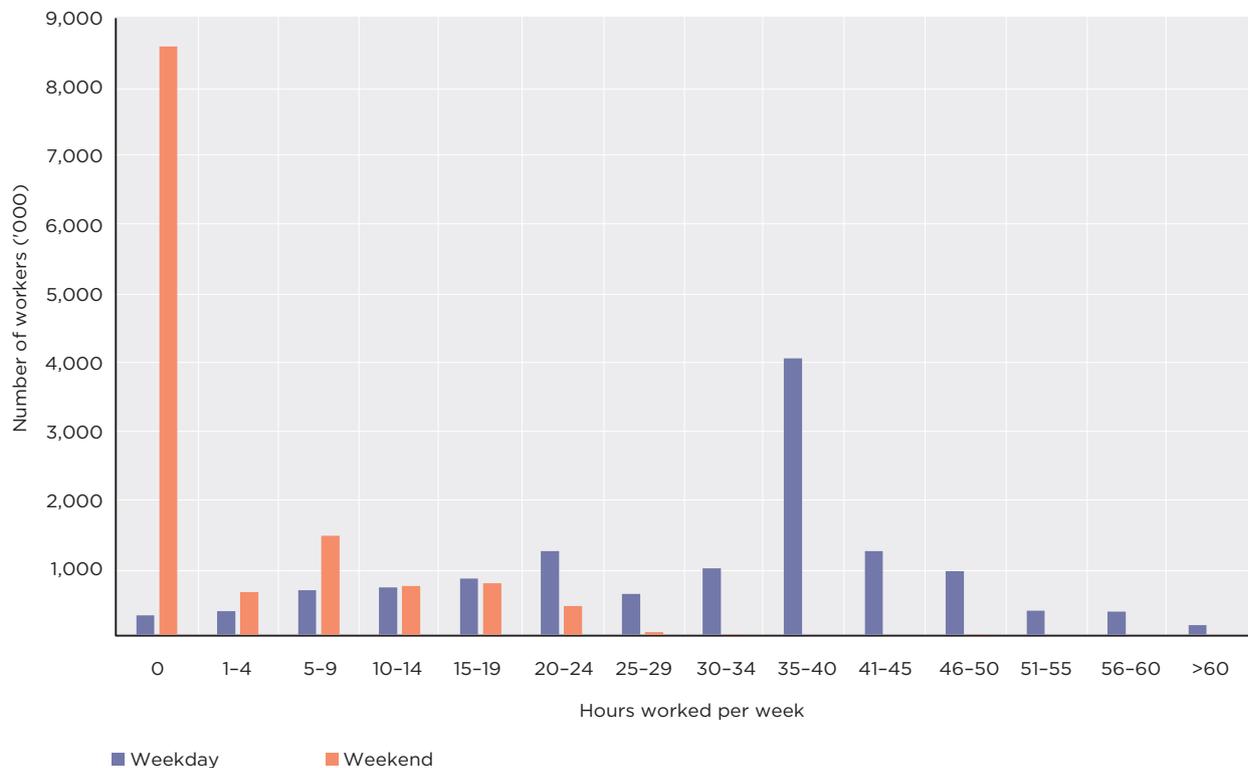
To better understand the extent of weekend work, it may help to compare workers' overall hours per week to their hours worked on the weekend. We distinguish between three groups: (1) workers who do not work on the weekend; (2) workers who work some (less than 50%) of their weekly hours on the weekend; and (3) workers who work most (50% or more) of their weekly hours on the weekend. These three groups are defined by their weekday and weekend hours in their main job only.

Figure 6.4 presents the share of workers who work no, some or most hours on the weekend by





Figure 6.3: Distribution of workers by hours worked on weekdays and by hours worked on weekends, 2018



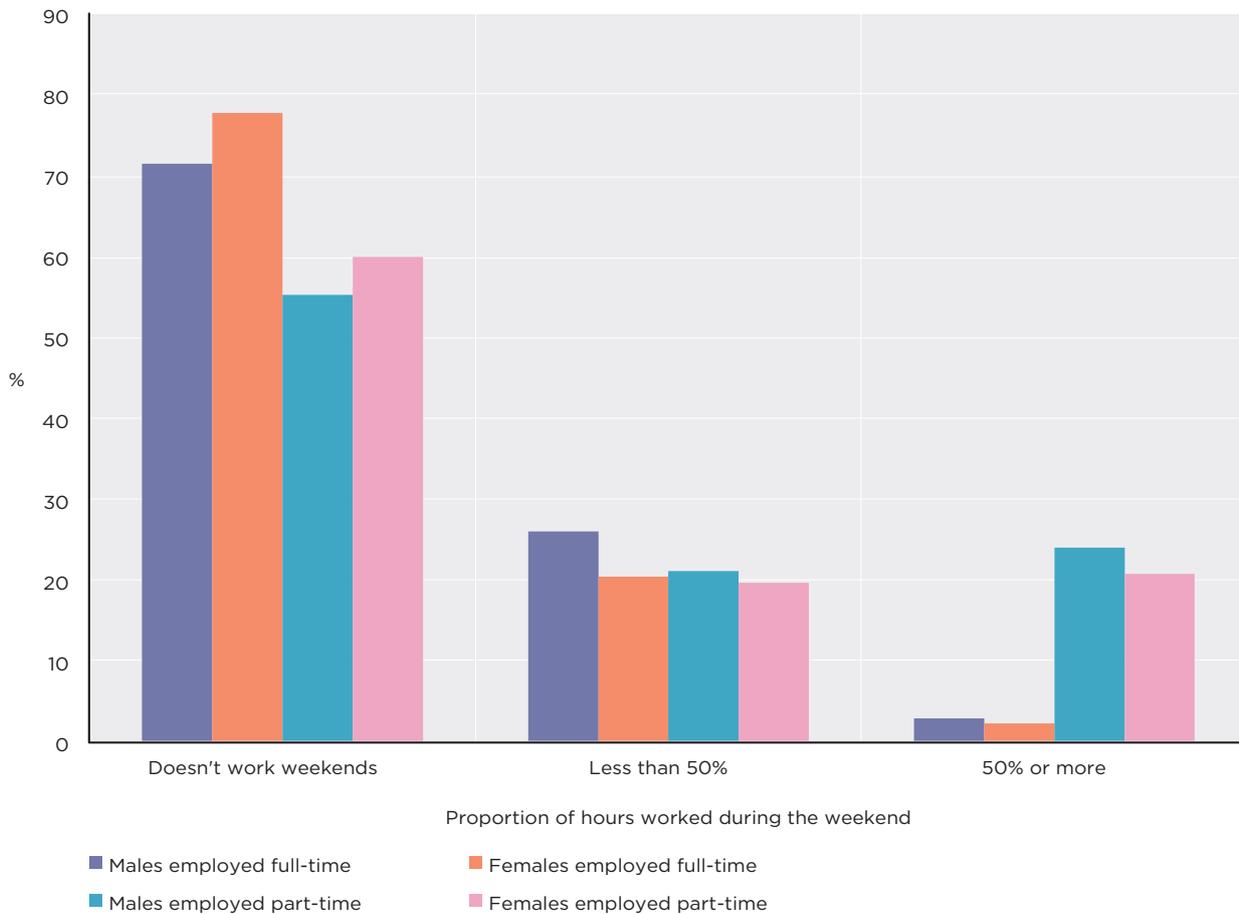
sex and by whether they worked full-time or part-time in their main job in 2018. As we saw earlier, about two-thirds of all workers do not work weekends. We now see from Figure 6.4 that this proportion is much higher among full-time workers, especially among females: 71.3% of males employed full-time and 77.5% of females employed full-time do not work weekends. Of

those full-time workers who do work weekends, over 90% only work some hours, that is, no more than half of their weekly total, on the weekend. Full-time workers who work most of their weekly hours on the weekend are quite rare: the incidence is 2.8% for males and 2.1% for females.

Weekend work is much more common among part-time

workers. About a fifth (21% of males; 19.5% of females) work some, and an even larger percentage (23.9% of males; 20.6% of females) most, of their hours on the weekend. In other words, not only do part-timers work more often on the weekend than full-timers, but also, when they do, the majority work more weekend than weekday hours.

Figure 6.4: Proportion of employees by share of hours worked on the weekend and whether employed full-time or part-time, 2018



Characteristics of people who work on weekends

The demands of operating in a 24/7 globalised society are to a great extent met by work patterns that go beyond the five-day work week to include work on Saturdays and Sundays. To learn more about the characteristics of workers with different work patterns, Table 6.1 presents an analysis of key socio-demographics of workers by sex and by the proportion of weekly working hours worked on the weekend.

Female workers work less often on weekends than male workers, albeit only slightly (about 1% less). That said, female and male workers differ more substantially

with respect to how much they work on weekends, with 11.4% of female, but only 7.4% of male, workers working most of their weekly hours on the weekend.

As expected, we find that the mean age of those working most of their hours on the weekend is the lowest compared to the other work pattern groups, equal to around 32 years for both males and females. We also find that workers in that particular group are mostly single (56.2% of males and 49.6% of females) whereas the majority of workers in the other work pattern groups are either married or in a de facto relationship. In particular, 66.9% of females and 68.2% of males who do not work on the weekend at all are married or in a de facto relationship.

Both male and female workers with children aged under five are less likely to work on the weekend than other workers. However, relatively high proportions of workers with a youngest child aged five to 14 work most of their hours on the weekend.

We observe a higher concentration of less educated males and females among those working most of their hours on the weekend (around 27% for both males and females). At least some of this is due to workers pursuing further education: they have not yet completed their higher qualification, and they may prefer working weekends rather than weekdays because of study commitments.

Table 6.1: Characteristics of male and female workers, by proportion of hours worked on the weekend, 2018

	Males			Females		
	None	Some (< 50%)	Most (>= 50%)	None	Some (< 50%)	Most (>= 50%)
Proportion in each category (%)	67.9	24.6	7.4	68.7	19.9	11.4
Mean age (years)	41.0	40.2	32.9	41.1	38.1	32.0
Marital status (%)						
Single	25.6	29.3	56.2	22.8	31.5	49.6
Married or de facto	68.2	63.6	39.0	66.9	56.8	43.7
Separated, divorced or widowed	6.2	7.1	4.7	10.2	11.8	6.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Age of youngest child (%)						
No children aged under 15	64.0	68.8	66.3	62.6	67.1	66.0
0-4	17.2	15.0	11.8	15.6	10.2	10.7
5-14	18.9	16.2	21.9	21.8	22.7	23.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Educational attainment (%)						
Bachelor's degree or higher	36.4	23.1	15.0	43.8	27.9	30.2
Other post-school qualification	34.7	43.0	29.2	29.6	33.3	18.8
Completed high school	16.2	19.7	29.3	15.4	21.8	23.8
Less than high school completion	12.8	14.3	26.5	11.2	17.0	27.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Occupation skill level ^a (%)						
High	44.0	31.1	9.5	46.8	31.0	21.0
Intermediate	36.7	41.8	61.2	47.4	58.8	68.6
Low	19.2	27.0	29.3	5.8	10.2	10.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Has more than one job (%)	6.5	6.6	10.3	7.8	8.0	16.3
Employment type (%)						
Permanent/ongoing employee	64.6	50.0	35.8	64.2	48.9	38.2
Fixed-term employee	8.9	6.5	3.3	10.9	6.3	4.4
Casual employee	11.9	16.8	52.5	15.9	28.7	51.3
Self-employed	14.6	26.3	8.3	8.6	15.7	5.1
Other employed	0.0	0.5	0.1	0.5	0.4	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: ^a High-skill occupations comprise the following 2006 ANSCO one-digit occupations (see Box 4.4, page 73): Managers; and Professionals. Intermediate-skill occupations comprise: Technicians and trades workers; Community and personal service workers; Clerical and administrative workers; and Sales workers. Low-skill occupations comprise: Machinery operators and drivers; and Labourers. Column totals may not add up to 100 due to rounding.



When we divide occupations into three skill levels, we see it is the intermediate occupations (neither high- nor low-skill) that make up the majority of those working weekends. These occupations constitute an even larger share among those working most of their hours on the weekend (61.2% for males and 68.6% for females). Low-skill occupations are also quite common among males working weekends, accounting for 27.0% of those working some hours on the weekend and 29.3% of those working most of their hours on the weekend. For females, low-

skill workers are a relatively small proportion of all workers, but are still relatively more common among weekend workers.

Multiple-job holding is relatively more common among workers who work most of their hours on the weekend: 10.3% of males and 16.3% of females who work most of their hours on the weekend are multiple job holders, compared with approximately 7% of males and 8% of females who work most or all of their hours on weekdays. More than one half of males and females who work most of their hours on the

weekend are casual employees, compared with 16.8% of males and 28.7% of females who work some of their hours on the weekend, and 11.9% of males and 15.9% of females who only work on weekdays.

As shown in Table 6.2, the four most common industry subdivisions for weekend workers are Food and Beverage Services, Food Retailing, Other Store-Based Retailing and Hospitals. These industries employ 30% of those working some but more than 54% of those working most of their hours on the weekend.

Table 6.2: Top 10 industries for weekend work, 2017 and 2018 (pooled) (%)

<i>Industry's share of workers working some of their hours (less than 50%) on the weekend (%)</i>		<i>Industry's share of workers working most of their hours (50% or more) on the weekend (%)</i>	
Food and Beverage Services	9.2	Food and Beverage Services	22.8
Other Store-Based Retailing	8.6	Other Store-Based Retailing	12.6
Food Retailing	6.1	Hospitals	10.5
Hospitals	6.0	Food Retailing	8.2
Construction Services	6.0	Residential Care Services	7.0
Agriculture	5.2	Public Order, Safety and Regulatory Services	2.9
Residential Care Services	4.3	Sports and Recreation Activities	2.9
Medical and Other Health Care Services	4.0	Social Assistance Services	2.3
Personal and Other Services	3.8	Coal Mining	2.3
Professional, Scientific and Technical Services ^a	3.1	Preschool and School Education	1.7
Remaining 76 industries	43.7	Remaining 76 industries	26.9
Total	100.0	Total	100.0

Notes: Industries are 2006 Australia and New Zealand Standard Industrial Classification (ANZSIC) industry subdivisions (see Box 4.4, page 73). ^a Except Computer System Design and Related Services.





In summary, the share of male and female workers engaged in weekend employment is roughly equal—just under a third each—though females tend to work most, and males some, of their weekly hours on the weekend. Weekend workers are younger, mostly single and childless, poorer, less educated and mainly employed in intermediate occupations compared to non-weekend workers. They predominantly work in restaurants, bars, retailing and hospitals. Many are casual workers. Those who work mostly on weekends hold a part-time job and are, more often than not, casually employed. A considerable proportion pursues secondary employment during the week.

Job satisfaction of weekend workers

Working time arrangements are an important working condition. They determine the extent to which workers can balance work with their other life spheres, affecting their level of wellbeing and overall happiness. Table 6.3 examines workers' health status, their level of satisfaction with different aspects of their job and their level of satisfaction with their own financial situation, focusing on weekend workers by

the amount of time worked during the weekend.

The results show that female workers report slightly worse health—both general and mental—when working on the weekend. Working most hours on the weekend is associated with particularly worse mental health. The results for males are mixed. Male workers report slightly worse general health when they work some, but better general health when they work most, of their hours on weekends. The mental health of males working weekends is worse, regardless of number of hours worked, and worse still for those who work mostly on weekends.

Table 6.3 also shows that satisfaction with job aspects that are broadly related to the nature and security of the job (work itself, job overall, job security) vary little across the three work pattern groups. (An exception is males working some hours who report a low score on satisfaction with work itself.) Job aspects that are broadly related to hours and compensation seem to matter more. Nevertheless, differences in satisfaction scores are modest at best.

We observe the largest differences in satisfaction with working hours. Weekend workers, regardless of whether they work some or most of their hours on the weekend, report lower scores than non-weekend workers. That said, males (but not females) who

work some weekend hours are most dissatisfied with their working hours. Perhaps these are full-time workers who work extra hours on the weekend, and they do not like working long hours. Likewise, weekend workers are less satisfied with their job flexibility than non-weekend workers (especially females). Again, it is those who work some weekend hours who report the lowest scores. On the flipside, those who work most of their hours on the weekend seem to enjoy better job flexibility, but no more than the non-weekend workers.

Weekend workers report lower total pay satisfaction, with those working some weekend hours again reporting the lowest scores. They also report lower satisfaction with their financial situation. Surprisingly, males who work most of their hours on the weekend are somewhat more satisfied with their pay than males who do not work weekends. Mostly part-timers, these males seem to receive sufficient compensation for their weekend work, ameliorating some of the negatives associated with such work.

According to these self-reports, the job conditions of weekend workers tend to be worse than those of non-weekend workers, and compensation in terms of increased flexibility or higher pay is either unavailable or insufficient at best.

Table 6.3: Health status, job satisfaction and financial satisfaction by sex and fraction of hours worked on weekends, 2018

Fraction of hours worked on weekends	Males			Females		
	0	1-49%	50-100%	0	1-49%	50-100%
General health ^a	70.4	69.0	71.3	70.9	69.1	69.1
Mental health ^a	74.9	74.1	73.0	73.0	70.3	69.7
<i>Satisfaction with job aspects (0-10 scale)</i>						
Total pay	7.2	7.0	7.3	7.3	6.9	7.1
Job security	7.9	7.9	7.8	7.9	8.1	8.0
Work itself	7.6	7.7	7.4	7.7	7.7	7.6
Working hours	7.5	6.8	7.1	7.5	7.2	7.0
Job flexibility	7.8	7.1	7.5	7.7	7.4	7.7
Job overall	7.7	7.5	7.6	7.8	7.6	7.6
Satisfaction with financial situation (0-10 scale)	6.9	6.6	6.8	6.9	6.6	6.5

Note: ^a See Box 5.1, page 93, for more information on how these measures are calculated.

Weekend work and family life

One of the critical characteristics of weekend work is that it is out of sync with the working schedules of most other individuals in the household (including partner and relatives), as well as with the operating hours of school and child-care facilities. Thus, weekend workers will often be at work when other family members are free, making them unable to spend as much time with their family as compared with people working Monday to Friday. This situation creates the potential for serious work-family conflicts (WFC) within families of weekend workers.

Based on the work of Marshall and Barnett (1993), the HILDA Survey collects information on four items that measure work-family strains and work-parenting strains on a scale from 1 (strongly disagree) to 7 (strongly agree), namely:

- i. Because of the requirements of my job, I miss out on home or family activities that I would prefer to participate in.
- ii. Because of the requirements of my job, my family time is



less enjoyable and more pressured.

- iii. Working leaves me with too little time or energy to be the kind of parent I want to be.
- iv. Working causes me to miss out on some of the rewarding aspects of being a parent.

Results in Table 6.4 show that both mothers and fathers report higher levels of WFC for any of

the items considered if they work weekends. Fathers, for example, report an average score of 4.06 on 'miss out on home/family activities' if they only work weekdays while that score goes up to 4.76 if they also work on weekends. Interestingly, fathers experience larger increases in strain for all WFC items if they work weekends than do mothers.



Table 6.4: Scores of work-family conflict (WFC) items by sex and whether works weekends, 2004 to 2017 (mean values)

	Mothers			Fathers		
	Weekday only	Weekend	Difference	Weekday only	Weekend	Difference
Miss out on home/family activities	3.64	4.14	0.50	4.02	4.73	0.71
Family time less enjoyable/more pressured	3.10	3.24	0.14	3.20	3.50	0.30
Too little time or energy to be aspirational parent	3.61	3.69	0.08	3.67	3.92	0.25
Miss out on rewarding aspects of being parent	3.93	4.04	0.11	4.24	4.69	0.45

Notes: WFC items were not collected in Wave 18. In this table, the sample is restricted to workers who: (i) are aged between 18 and 64 years; (ii) have parenting responsibilities for children aged 17 or less; (iii) are living with their children; and (iv) provided information on both their working schedule and their level of WFC. This results in a working sample of 3,839 fathers (contributing 20,722 observations) and 3,914 mothers (contributing 19,494 observations).

Persistence of weekend work

Table 6.5 examines how the work patterns of workers change over one year, distinguishing between part-time and full-time workers, and between those who work no, some or most of their hours on the weekend.

The vast majority of workers who only work weekdays continue to only work weekdays one year later. That proportion is 86.1% for

full-timers and 69.5% for part-timers. A further 5.4% of full-timers and 15.4% of part-timers switch to part-time and full-time status but continue to work weekdays only. In other words, 92% of full-timers and 85% of part-timers do not take up weekend work.

Persistence among weekend workers is somewhat lower. Still, roughly two thirds of full-time workers who work some weekend hours remain in that category the following year. More

than 75% of that group continue to work weekends in some capacity.

Persistence among part-time workers is lower still. From Table 6.5, we see that part-timers are only loosely attached to a particular state and often switch to other work-pattern categories. Regardless, 66% of those who work some, and 79.2% of those who work most, of their hours on the weekend end up working weekends the following year, in some way or another.

Table 6.5: Part-time/full-time status and weekend work pattern in 2018, by part-time/full-time status and weekend work pattern in 2017

Status/pattern in 2018	Part-time			Full-time			Total
	<i>None</i>	<i>Some hours</i>	<i>Most hours</i>	<i>None</i>	<i>Some hours</i>	<i>Most hours</i>	
Status/pattern in 2017							
<i>Part-time</i>							
None	69.5	7.3	5.0	15.4	2.7	*0.0	100.0
Some hours	24.1	37.2	13.6	9.9	14.8	*0.4	100.0
Most hours	13.1	19.8	48.6	7.7	9.1	*1.7	100.0
<i>Full-time</i>							
None	5.4	1.1	*0.4	86.1	6.7	*0.2	100.0
Some hours	3.1	4.4	3.0	20.3	66.2	3.1	100.0
Most hours	*2.1	*1.3	*7.0	*11.7	19.7	58.2	100.0

Notes: *Some hours*—Less than 50% of hours in main job worked on the weekend; *Most hours*—50% or more hours in main job worked on the weekend. * Estimate not reliable.

We have seen that short-term persistence of weekend work is relatively high. However, the data we have examined so far cover the period from 2017 to 2018 only. We now investigate whether this persistence has changed over time.

Table 6.6 shows the persistence of weekend work in the short- (one year), medium- (three years) and medium-to-long-term (five years). As we saw earlier, short-term persistence of weekend work is quite high. Of those who worked weekends in 2004 to 2007, 73.5% still worked weekends one year later (if they worked at all).

The medium- and long-term measures indicate somewhat lower but still relatively high persistence, with 61.7% and 56.8% of workers continuing to work weekends three and five years later, respectively. Perhaps counterintuitively, persistence of

weekend work increased in the wake of the GFC, while, at the same time, the incidence of weekend work actually decreased. Short-term persistence went from 73.5% in 2004 to 2007 to 75.5% in 2008 to 2011. Likewise, medium- and medium-to-long-term persistence increased as well (61.7% to 65.7% and 56.8% to 59.9%, respectively).

A possible explanation is that the GFC may have disproportionately decreased the incidence of weekend work among low-persistence workers, which in turn would have increased the average persistence of weekend work. We know that the GFC not only led to higher unemployment but also to a reduction in average hours worked per week. Part-timers who only work some weekend hours have lower short-term persistence than other weekend workers (66%, see Table 6.5).



Table 6.6: Proportion of weekend workers still working on weekends one, three and five years later, by time period (%)

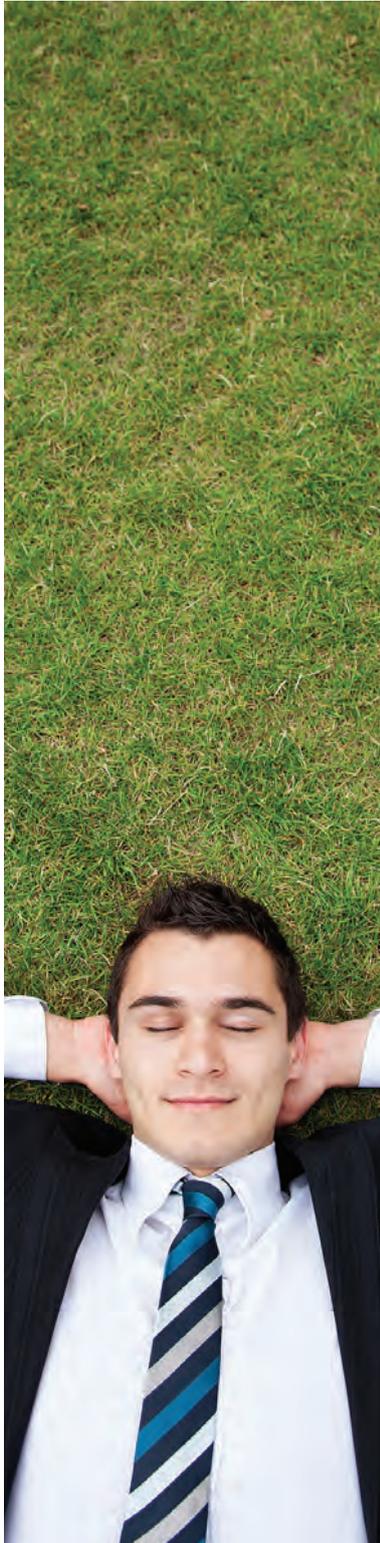
	<i>One year later</i>	<i>Three years later</i>	<i>Five years later</i>
2004 to 2007	73.5	61.7	56.8
2008 to 2011	75.5	65.7	59.9
2012 to 2015 ^a	75.6	64.8	60.2
2016 to 2017	75.5	–	–

Note: ^a 2012 and 2013 for 'Five years later'.

7

Subjective wellbeing

Ferdi Botha



In addition to studying the economic wellbeing of individuals, it is also important to understand other aspects of wellbeing. One main such aspect is subjective wellbeing, which is an umbrella term that generally refers to the concepts of positive and negative affect (with 'affect' including mood and emotions such as happiness), domain satisfactions and life satisfaction. Although some studies consider 'happiness' and 'life satisfaction' as synonymous, they are distinct concepts. Whereas happiness tends to be more volatile and dependent on current mood, life satisfaction is generally more stable with respondents taking more long-term considerations into account when making such judgements. (See Diener et al., 1999 and Dolan et al., 2008 for a detailed discussion of subjective wellbeing and research related to the concept.)

This chapter focuses primarily on life satisfaction and how it has changed for different groups over time. It also examines the determinants of life satisfaction, focusing on the key factors identified in previous studies, as well as how specific domain satisfactions are related to overall life satisfaction. The domains considered are deemed as most important in previous studies, and include satisfaction with job, finances, housing, safety, leisure and health.

Box 7.1: HILDA Survey measures of subjective wellbeing

The HILDA Survey has asked Australians to report on life satisfaction as well as satisfaction in various areas or domains of life in every wave since 2001. Life satisfaction is measured by asking respondents *All things considered, how satisfied are you with your life overall?*, with responses ranging from 0 (completely dissatisfied) to 10 (completely satisfied).

Questions on domain satisfactions are asked in a similar manner, such as *All things considered, how satisfied are you with your financial situation?* These domain satisfactions are also ranked from 0 (completely dissatisfied) to 10 (completely satisfied).

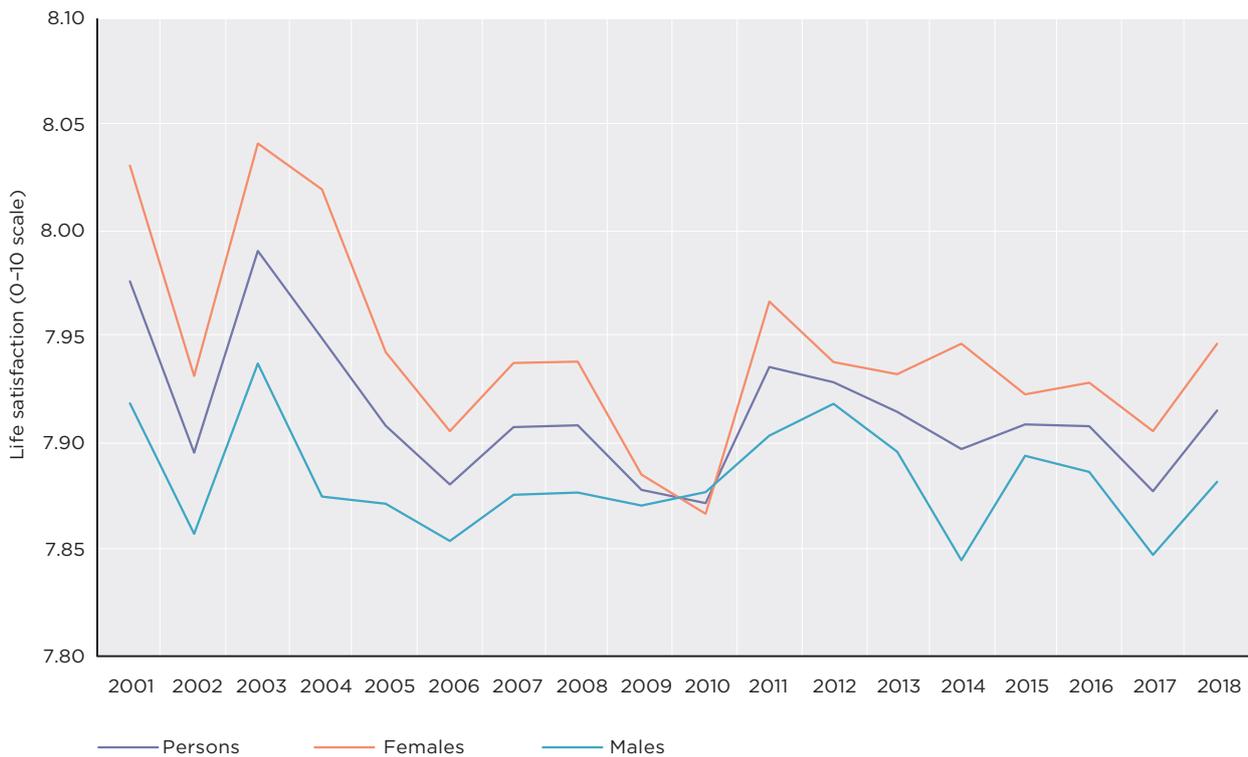
Changes in life satisfaction from 2001 to 2018

Figure 7.1 shows the trends in average life satisfaction (see Box 7.1, above) since 2001 for all people and disaggregated by sex. In all years except 2010, females' life satisfaction has been significantly higher than that of males'. Mean reported life satisfaction has remained relatively stable since 2001, always remaining between 7.85 and 8.05 for both males and females. Also noteworthy is that

there has been a slight downward trend in satisfaction with life, and for all groups mean life satisfaction was lower in 2018 than in 2001.

Changes in average life satisfaction are depicted for the different age groups in Figure 7.2. Mean life satisfaction is highest for the 65 and over sample over the entire period, even though life satisfaction has declined slightly for this age group since 2001. Individuals aged 15 to 24 have reported the second-highest mean life satisfaction since 2003, with a slight upward trend over time. People in the 25 to 34, 35 to

Figure 7.1: Mean life satisfaction for all persons and by sex



44 and 45 to 54 age groups have the lowest satisfaction with life compared to other age groups, although the averages have remained relatively constant over the 18-year period.

In Figure 7.3, changes in average levels of the principal domain satisfactions are presented by sex. In most years, males and females reported the same relative ranking of domains in relation to mean satisfaction levels. For instance, with few exceptions, the highest mean satisfaction is with safety, followed by housing satisfaction and job satisfaction.

Health satisfaction is ranked fourth in terms of average satisfaction, with the lowest average satisfaction levels being for the leisure and finances domains. For males especially, mean satisfaction with finances is substantially lower than the other domains and, although financial satisfaction has risen for males since 2001, it remains the domain





Figure 7.2: Mean life satisfaction by age group

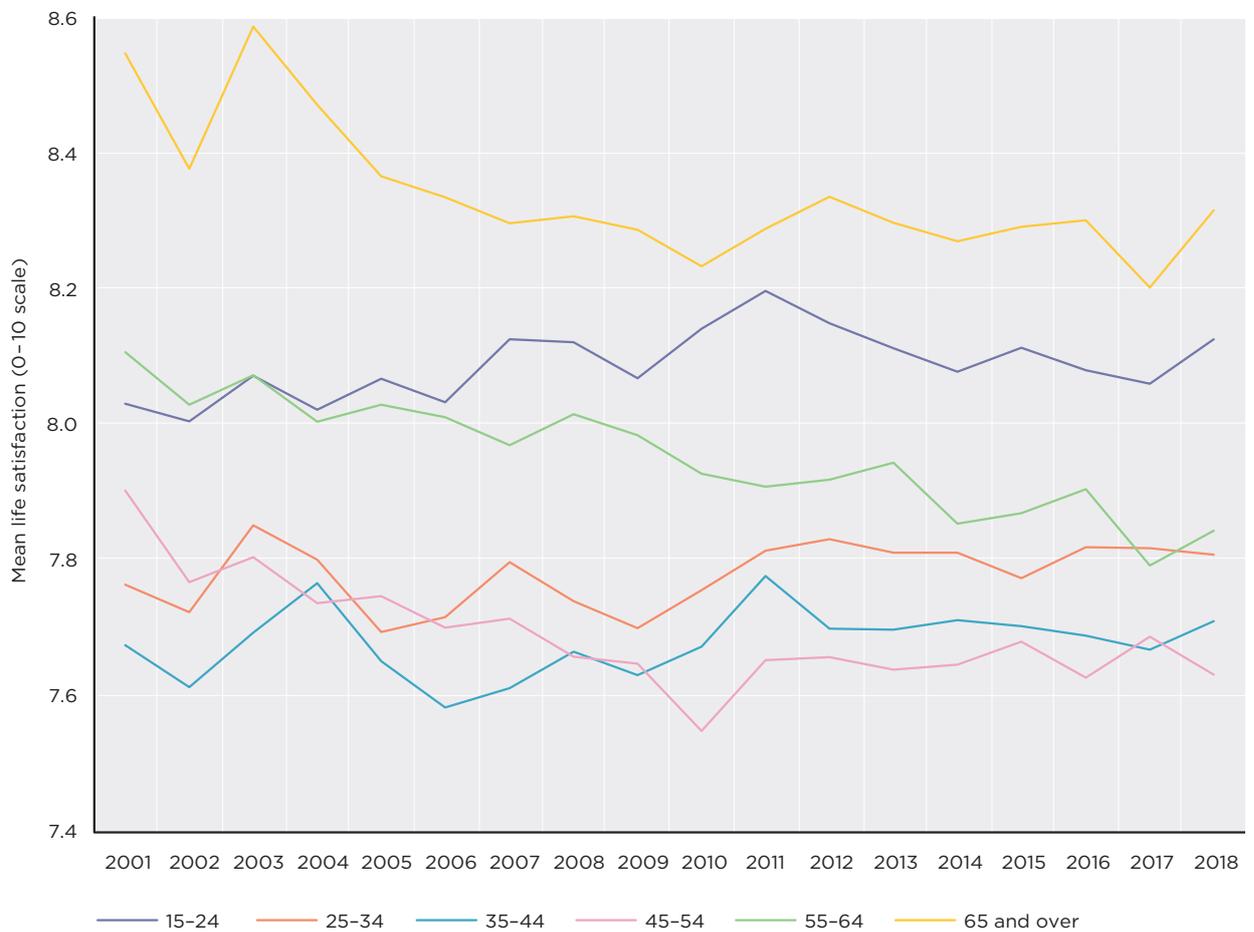
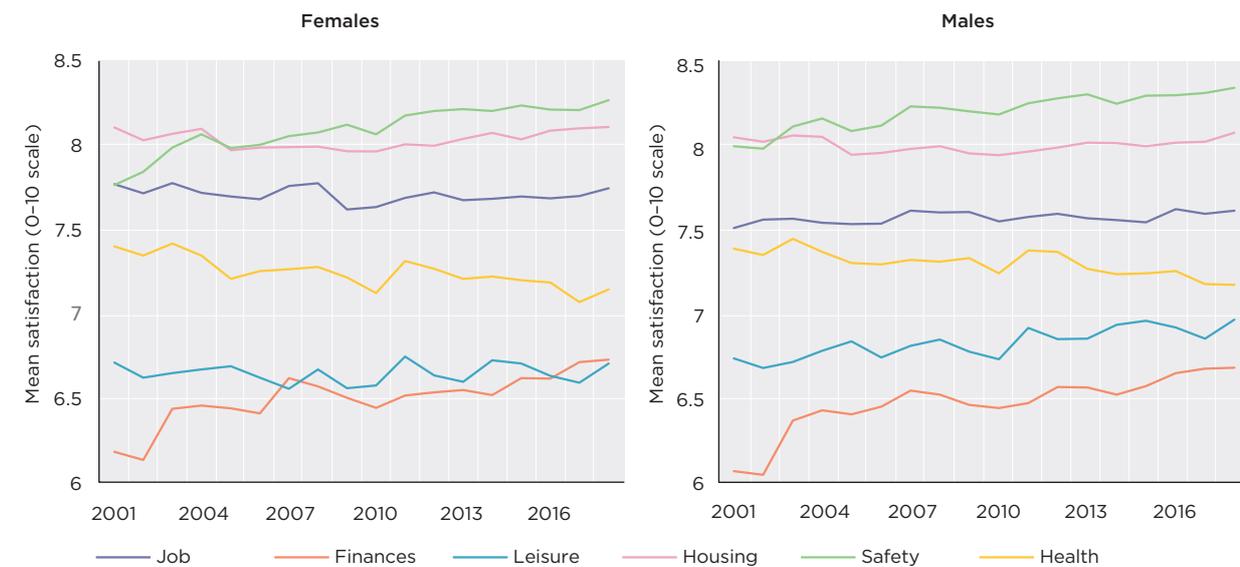


Figure 7.3: Mean satisfaction with each life domain, by sex



Box 7.2: Definition and classification of disability

The International Classification of Functioning, Disability and Health (ICF), produced by the World Health Organisation, defines disability as an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual's health conditions and the various contextual (environmental and personal) factors of that individual. In this report, a person is defined as having a disability if they have any long-term health condition, impairment or disability that restricts the individual in everyday activities and which has lasted, or is likely to last, for six months or more. This is an 'operational' definition of disability which is very similar to that used in many household surveys, such as the Australian Bureau of Statistics (ABS) Survey of Disability, Ageing and Carers.

Disability severity is typically defined in terms of restrictions in the core activities of self-care, communication and mobility. The HILDA Survey does not collect information in each wave on core-activity restrictions, but does collect information on the extent to which health conditions limit the amount of work an individual can do (on a 0 to 10 scale, where 0 equals 'not at all' and 10 equals 'unable to do any work'). In this report, we use a measure of disability severity based on this information, defining three levels of severity: no work restriction (0); moderate work restriction (1 to 7); and severe work restriction (8 to 10). The latter two categories are respectively referred to as 'moderate disability' and 'severe disability'.

Box 7.3: HILDA Survey measure of frequency of social contact

In every wave of the HILDA Survey, a question has been included in the self-completion questionnaire ascertaining the frequency of in-person contact with friends or relatives not living with the respondent. The question reads

In general, about how often do you get together socially with friends or relatives not living with you?

Response options are *every day, several times a week, about once a week, 2 or 3 times a month, about once a month, one or twice every 3 months, less often than once every 3 months.*

In this report, responses are combined into four categories: (1) Every day; (2) Less often than every day but at least weekly; (3) Less often than weekly but at least monthly; and (4) Less often than monthly.

with which they are the least satisfied. Job satisfaction has remained relatively stable over time. While satisfaction with safety and finances displays an upward trend over the past 18 years, mean health satisfaction has declined somewhat over time for both males and females.

To provide some description of differences in subjective wellbeing across people with varying individual characteristics, Table 7.1 reports average levels of satisfaction with life and with each domain for all respondents in wave 18. People aged 65 or over have the highest mean satisfaction with life, job, finances, housing and leisure, which for most of these domains is not too surprising. The 15 to 24 age group has the highest satisfaction with safety and with health. There are few sex differences in average subjective wellbeing, but females (6.7) are less satisfied with their leisure time than are males (7.0).

Lower levels of education tend to be associated with higher levels of average satisfaction with life, job, housing and leisure. People with at least a bachelor's degree have a mean satisfaction with finances of 7.1 compared to 6.6 for those with Year 12 or below. Satisfaction with life (6.9) and with finances (5.5) is especially low for people who are separated. Health satisfaction is also quite low for the separated and divorced. Compared to people without children, people with children report higher mean satisfaction with finances, housing and leisure, but lower health satisfaction.

As expected, there is a strong relationship between subjective wellbeing and health. (See Box 5.1, page 93, for an explanation of the health measures, and Box 7.2,

page 108, for an explanation of the measure of disability.) People in poor general or mental health or with a moderate or severe disability have substantially lower average satisfaction in all domains when compared to people who do not have poor health or do not have a disability. The only exception is slightly higher leisure satisfaction among people with a disability relative to other people.

A greater frequency of social contact (see Box 7.3, page 108) is related to higher mean satisfaction with life, job, housing, safety, leisure and health. Satisfaction with life and with finances is lowest among the unemployed, whereas employed people report the lowest leisure satisfaction. In general, household equivalised income (see Box 3.2,

page 28) is positively related to average satisfaction with life, finances, housing, safety and health, and negatively related to leisure satisfaction.

There are no major differences across regions of residence, but people in major urban areas report the lowest mean levels of satisfaction with life, job, housing, safety and leisure. There are some differences in relation to Indigenous status, with Indigenous people reporting lower satisfaction with finances, housing, safety, leisure and health as compared to non-Indigenous individuals. Finally, immigrants from countries other than the main English-speaking countries report lower satisfaction levels in all domains other than health, relative to other people.



Table 71: Mean satisfaction with life domains and life overall, 2018 (0–10 scale)

	Job	Finances	Housing	Safety	Leisure	Health	Life overall
<i>Age category</i>							
15–24	7.8	6.6	8.4	8.7	7.0	7.9	8.1
25–34	7.6	6.4	7.8	8.3	6.2	7.5	7.8
35–44	7.6	6.5	7.7	8.2	5.9	7.2	7.7
45–54	7.6	6.5	7.8	8.1	6.4	6.9	7.6
55–64	7.7	6.7	8.2	8.1	7.1	6.8	7.8
65 and over	8.4	7.4	8.6	8.4	8.3	6.9	8.3
<i>Sex</i>							
Female	7.7	6.7	8.1	8.3	6.7	7.1	7.9
Male	7.6	6.7	8.1	8.4	7.0	7.2	7.9
<i>Educational attainment</i>							
Bachelor's degree or higher	7.6	7.1	8.0	8.3	6.4	7.4	7.9
Other post-school qualification	7.7	6.5	8.1	8.3	6.8	7.0	7.8
Completed high school	7.8	6.6	8.1	8.4	6.8	7.3	7.9
Less than high school completion	7.8	6.6	8.3	8.3	7.4	7.0	8.1
<i>Marital status</i>							
Married	7.7	7.1	8.1	8.3	6.8	7.2	8.1
De facto relationship	7.6	6.4	7.9	8.4	6.4	7.2	7.9
Separated	7.6	5.5	7.5	7.7	6.3	6.1	6.9
Divorced	7.6	6.0	7.9	7.9	7.1	6.3	7.5
Widowed	8.3	7.4	8.5	8.3	8.2	6.8	8.1
Never married and not in de facto relationship	7.7	6.3	8.2	8.4	6.9	7.4	7.8
<i>Has any dependent children</i>							
Yes	7.7	6.8	8.2	8.3	7.2	7.1	7.9
No	7.7	6.5	7.8	8.3	6.0	7.4	7.9
<i>General health status (SF-36)</i>							
In poor general health	7.0	5.6	7.7	7.7	6.7	4.3	6.8
Not in poor general health	7.7	6.9	8.2	8.4	6.9	7.5	8.1
<i>Mental health status (SF-36)</i>							
In poor mental health	7.0	5.5	7.5	7.6	6.1	5.7	6.6
Not in poor mental health	7.8	7.0	8.2	8.5	7.0	7.4	8.2
<i>Disability status</i>							
Moderate or severe disability	7.4	6.1	7.9	7.9	7.2	5.3	7.4
No disability	7.7	6.9	8.1	8.4	6.8	7.6	8.0
<i>Frequency of social contact</i>							
Less often than monthly	7.5	6.0	7.8	7.9	6.5	6.4	7.3
Less often than weekly but at least monthly	7.6	6.7	8.0	8.3	6.7	7.1	7.8
Less often than every day but at least weekly	7.8	6.9	8.2	8.5	7.0	7.4	8.1
Every day	7.8	6.7	8.5	8.5	7.4	7.6	8.3
<i>Labour force status</i>							
Unemployed	–	4.8	8.0	8.1	7.5	7.0	7.3
Employed	7.7	6.8	8.0	8.3	6.4	7.6	7.9
Not in the labour force	–	6.7	8.3	8.3	7.7	6.7	8.0
<i>Quintile of the distribution of household equivalised income</i>							
Bottom quintile	7.7	6.1	8.0	8.1	7.3	6.6	7.8
2 nd quintile	7.6	6.3	8.0	8.3	6.8	7.0	7.8
Middle quintile	7.7	6.7	8.1	8.3	6.7	7.3	7.9
4 th quintile	7.7	7.0	8.2	8.4	6.6	7.4	8.0
Top quintile	7.8	7.5	8.3	8.6	6.8	7.6	8.1
<i>Region of residence</i>							
Major urban	7.7	6.7	8.1	8.3	6.8	7.2	7.9
Other urban	7.8	6.7	8.2	8.5	7.1	7.0	8.0
Non-urban	7.8	6.8	8.2	8.4	7.1	7.0	8.1
<i>Indigenous status</i>							
Indigenous	7.8	5.7	7.9	8.2	6.7	6.7	7.9
Non-Indigenous	7.7	6.7	8.1	8.3	6.8	7.2	7.9
<i>Immigrant from country other than the main English-speaking countries</i>							
Yes	7.5	6.5	7.9	8.0	6.5	7.1	7.7
No	7.7	6.8	8.1	8.4	6.9	7.1	8.0

What factors determine life satisfaction?

This section looks at the determinants of life satisfaction. In other words, what factors are associated with higher and lower life satisfaction among Australian residents? We first consider the more general variables that have been shown in previous studies as potentially the most important variables that can explain changes in life satisfaction. We then also consider how specific domain satisfactions are related to overall life satisfaction and rank each domain's relative importance for satisfaction with life as a whole.

Demographic and individual characteristics

Table 7.2 reports the results from fixed-effects models for females' and males' life satisfaction, with a range of variables generally identified in the subjective wellbeing literature as important determinants of how satisfied people are with their lives. For each indicator variable, the coefficient is interpreted as the change in life satisfaction (on the 0-10 scale) for a specific category relative to the reference category. For continuous variables such as general health and household equalised income, the coefficient is interpreted as a change in the life satisfaction score for each one-unit increase in the variable.

The findings are mainly consistent between males and females, with only some differences related to marital status, having children and region of residence. In terms of age, life satisfaction is lower for people aged 25 to 34, 35 to 44 and 45 to 54, when compared to those in the 15 to 24 age group. However, there is no significant difference in life satisfaction between the 15 to 24



and 55 to 64 age groups, and people aged 65 and over have significantly higher life satisfaction than those aged 15 to 24. These results for age are reflected in Figure 7.2 and are also consistent with the common finding in studies around the world of a 'U-shaped' relationship between life satisfaction and age: life satisfaction declines with age up to a certain point (usually ranging between 30 and 50), after which life satisfaction starts increasing again.

For both males and females, higher education is associated with *lower* satisfaction with life.

For example, among males, those with at least a bachelor's degree report on average 0.36 points (on the 0-10 scale) lower life satisfaction relative to people with Year 11 or below. This is a somewhat surprising result, but possible explanations include that higher educated people may have higher aspirations and job expectations, which may be detrimental to life satisfaction if these are not met. It is also possible that the higher educated compare themselves to similarly educated people but with higher earnings, and such relative comparisons may negatively

affect the life satisfaction of those making the comparisons (see, for example, Clark and Oswald, 1994; Ferrante, 2009).

Regarding marital status, for males and females, the married are more satisfied with life compared to those who are separated, divorced, widowed or never married. Reported life satisfaction is, however, slightly higher for women in de facto relationships relative to married women. Another interesting observation is that, compared to the married, separated people are less satisfied with life than are divorced people, which may indicate that separation is more detrimental to wellbeing than divorce—possibly because it is closer in time to the relationship breakdown. There is no significant association between life satisfaction and children for women, but for men, those with children are more satisfied with

life than those who do not have any children.

As expected, individuals with higher SF-36 general health scores report significantly higher life satisfaction, while people with a disability report lower life satisfaction compared to the non-disabled. The frequency of social contact with friends or family is clearly an important component of life satisfaction. For example, males and females who have social contact with others every day are roughly 0.23 points more satisfied with life than those who only have such contact every three months or longer. Often related to social contact is being a member of a sporting or community club, and people who are active members of such clubs are significantly more satisfied with their lives than non-members.

Labour force status is an important determinant of life

satisfaction, with the unemployed being less satisfied with life compared to those in employment and not in the labour force. On average, employed females have a 0.16-point higher life satisfaction score than unemployed females, while employed males are about 0.23 points more satisfied with life relative to unemployed males. Household income is positively related to life satisfaction, although the effect is reasonably small: for males and females, each additional \$100,000 of household equivalised income per year (see Box 3.2, page 28) is associated with a 0.01-point increase in life satisfaction on the 0–10 scale. Lastly, there is no relationship between region of residence and life satisfaction for females. For males, those living in major urban areas are on average 0.11 points less satisfied with life as compared to those living in non-urban areas.





Table 7.2: Determinants of life satisfaction

	<i>Females</i>	<i>Males</i>
<i>Age category (Reference category: 15–24)</i>		
25–34	–0.114	–0.175
35–44	–0.154	–0.180
45–54	–0.103	–0.102
55–64	<i>ns</i>	<i>ns</i>
65 and over	0.156	0.307
<i>Educational attainment (Reference category: Less than high school completion)</i>		
Bachelor’s degree or higher	–0.204	–0.360
Other post-school qualification	–0.176	–0.275
Completed high school	–0.204	–0.287
<i>Marital status (Reference category: Married)</i>		
De facto	0.055	<i>ns</i>
Separated	–0.543	–0.705
Divorced	–0.267	–0.430
Widowed	–0.315	–0.507
Never married and not in de facto relationship	–0.180	–0.256
Has children	<i>ns</i>	0.031
General health (SF–36)	0.016	0.016
Moderate or severe disability	–0.145	–0.144
<i>Social contact (Reference category: Once every 3 months or longer)</i>		
At least once a month	0.117	0.113
At least once a week	0.199	0.158
Every day	0.229	0.234
Active member of sporting or community club	0.062	0.063
<i>Employment status (Reference category: Unemployed)</i>		
Employed	0.159	0.225
Not in the labour force	0.194	0.173
Household equivalised income (\$ '00,000, December 2018 prices)	0.010	0.010
<i>Region of residence (Reference category: Non-urban)</i>		
Major urban	<i>ns</i>	–0.106
Other urban	<i>ns</i>	<i>ns</i>
Number of observations	124,104	109,632

Notes: Table presents results from fixed-effects panel regression models of the determinants of reported life satisfaction. See the Technical Appendix for an explanation of these models. Wave indicators are included but not reported. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Which life domains explain overall life satisfaction?

Table 7.3 reports regression results for how satisfaction in different life domains explains overall satisfaction with life. Separate models are estimated for males and females (aged 15 and over), and for each of the four birth cohorts (for males and females combined). This approach is consistent with the ‘bottom-up’ view, in which individual domain satisfactions determine life satisfaction.¹ Note that the results in Table 7.3 are from regressions that omit other explanatory variables and are presented as indicative of how

each domain is associated with life satisfaction, without making any conclusions as to causality. The approach taken here is similar to, but more simplified than, that of Van Praag and Ferrer-i-Carbonell (2004) in the aggregation of domain satisfactions as components of life satisfaction.

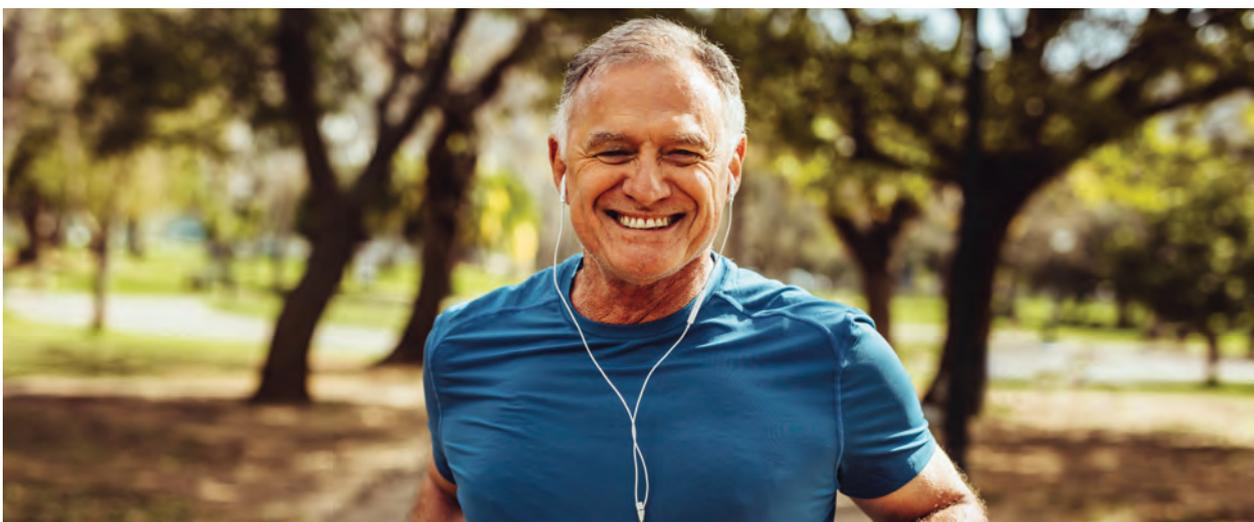
Firstly, all coefficients are significant, which suggests that each domain is important in explaining satisfaction with life as a whole. Interestingly, differences in health satisfaction are associated with the largest differences in life satisfaction, regardless of the sample considered. For example, for

females a one-point increase (on the 0–10 scale) in health satisfaction is associated with an increase in life satisfaction of approximately 0.17 points. Similar magnitudes of effects of health satisfaction are observed for the 1965 to 1979 and 1980 and later cohorts. Satisfaction with safety also adds a lot to life satisfaction relative to other domains, with a one-point increase in safety satisfaction associated with an increase in life satisfaction of between 0.12 and 0.13 points. Satisfaction with one’s job and housing is more important to older cohorts, whereas health satisfaction is more important to younger cohorts.

Table 7.3: Domain satisfactions as determinants of life satisfaction

	Females	Males	Birth cohort			
			Pre-1950	1950–1964	1965–1979	1980 and later
<i>Satisfaction with:</i>						
Job	0.091	0.106	0.114	0.108	0.101	0.084
Finances	0.090	0.101	0.076	0.107	0.106	0.081
Housing	0.097	0.101	0.111	0.112	0.091	0.096
Safety	0.131	0.121	0.121	0.128	0.124	0.128
Leisure	0.088	0.082	0.093	0.089	0.078	0.085
Health	0.167	0.157	0.122	0.154	0.168	0.173
Number of observations	74,928	78,744	12,732	47,111	47,407	45,702

Notes: Table presents results from fixed-effects regression models of the determinants of reported life satisfaction. See the Technical Appendix for an explanation of these models.



¹ An alternative view is the ‘top-down’ approach, which posits that life satisfaction and individual personality traits determine satisfaction in the different domains.

8

Household wealth

Roger Wilkins



Household wealth data were collected for the fifth time in Wave 18, having previously been collected in Waves 2, 6, 10 and 14. Household wealth is an important determinant of economic wellbeing, affecting the ability of individuals to maintain living standards in the face of adverse events such as job loss, and being particularly important to the living standards of people in retirement. Wealth also affects households' incomes, either through financial returns such as dividends, or through 'in-kind' benefits such as those provided by owner-occupied housing. An individual's household wealth is also potentially an important determinant of many economic and social decisions, including the timing of retirement.

In this chapter, the overall distribution of wealth, its composition and its dynamics over the 2002 to 2018 period is examined. As in earlier chapters of this report, monetary values are converted to December 2018 prices to remove the effects of inflation. In practical terms, this involves increasing the wealth figures reported by respondents by 47.4% for the 2002 data, by 31.6% for the 2006 data, by 18.0% for the 2010 data and by 7.1% for the 2014 data.

Box 8.1: Measurement of household wealth in the HILDA Survey

The HILDA Survey obtains a measure of household wealth by asking a detailed set of questions on most financial assets, non-financial assets and debts. Total wealth—or net wealth—is equal to total financial and non-financial assets of all members of the household, minus total debts of all members of the household.

The questions employed to measure wealth have remained very similar across the five waves that have specifically collected wealth data, ensuring a high degree of comparability of wealth estimates. In all five waves, the following financial asset components were measured: bank accounts; superannuation; cash investments; equity investments (shares); trust funds; and the cash-in value of life insurance policies. In respect of non-financial assets, wealth data were sought for: the home; other property; business assets; collectables; and vehicles. In Wave 2, the debt components measured comprised: home debt; other property debt; unpaid credit card debt; HECS debt; other personal debt (including car loans, investment loans, hire purchase agreements and loans from friends or relatives not living in the household); and business debt. Very similar information on debts was collected in 2006, 2010, 2014 and 2018, but in these four waves, the value of overdue household bills was also collected, and 'other personal debt' was disaggregated into six components: car loans; hire-purchase loans or agreements; investment loans; other personal loans from financial institutions; loans from other types of lenders such as solicitors, pawn brokers and welfare agencies; and loans from friends and relatives not living in the household.

The only significant component omitted from the HILDA Survey measure of household wealth is 'dwelling contents' (other than collectables), such as furniture and appliances. Estimates from the Australian Bureau of Statistics (ABS) Survey of Income and Housing presented in ABS (2019) indicate that the mean value of household contents, including collectables, was \$70,512 in 2017–18 (at December 2018 prices). The mean value of collectables in Wave 18 of the HILDA Survey was \$4,189, implying dwelling contents not measured by the HILDA Survey in 2018 averaged \$66,323 across all households.

The distribution of wealth

Table 8.1 presents summary statistics of the distribution of

household net wealth in Australia in each year in which wealth data have been collected. Over the full 2002 to 2018 period, there have been large gains in the wealth of

Australian households. Mean wealth of households increased by 58.0% in real terms to \$934,025 in 2018, while median wealth increased by 56.8%, to \$503,563. However, it has not been a constantly upward trajectory. Mean wealth declined between 2006 and 2014, and median wealth declined between 2010 and 2014. Most of the growth in the mean and median occurred between 2002 and 2006 and between 2014 and 2018. Between 2006 and 2014, the mean decreased by 2.3% and the median decreased by 1.6%. Between 2002 and 2006, when mean wealth grew strongly, wealth inequality (as measured

by the Gini coefficient) also grew, largely because the very wealthiest became much richer. This is indicated by the 99th percentile—the household with net wealth higher than 99% of households—which increased by 123.4% between 2002 and 2006. However, since 2006, there has been no trend change in the Gini coefficient, which declined to 0.625 in 2010, rose to 0.630 in 2014, and then declined again to 0.625 in 2018. The decline between 2014 and 2018 is perhaps unusual in the context of the strong growth in mean wealth over the period, but we can see in the bottom row of Table 8.1 that

growth was 38.0% for the 10th percentile, 17.4% for the median, 18.1% for the 90th percentile and only 3.9% for the 99th percentile. Table 8.1 also presents estimates of total household wealth (exclusive of household contents) over the five waves in which wealth data have been collected. This is estimated to have been \$8.9 trillion in 2018, up from \$7.0 trillion in 2014 and \$4.3 trillion in 2002 (all expressed at December 2018 prices). Aggregate household wealth experienced sustained growth between 2002 and 2018, with population growth more than offsetting the decline in mean wealth between 2006 and 2014.

Table 8.1: Distribution of net wealth across households, 2002 to 2018 (December 2018 prices)

	Mean (\$)	10th percentile (\$)	Median (\$)	90th percentile (\$)	99th percentile (\$)	Gini coefficient	Aggregate wealth (\$ billion)
2002	590,992	5,926	321,072	1,349,255	4,351,721	0.623	4,348
2006	806,512	9,541	435,830	1,794,077	9,720,746	0.631	6,199
2010	800,555	10,324	454,394	1,799,408	9,527,802	0.625	6,644
2014	788,018	10,170	428,973	1,901,619	9,102,699	0.630	7,010
2018	934,025	14,037	503,563	2,246,178	9,459,131	0.625	8,919
Percentage change 2002 to 2018	58.0	136.9	56.8	66.5	117.4	0.3	105.1
Percentage change 2014 to 2018	18.5	38.0	17.4	18.1	3.9	-0.7	27.2





Table 8.2 examines the composition of household wealth, presenting statistics for eight asset components and six debt components of household net wealth. For each component, it shows the proportion of households holding the component, and the mean value of the component across all households.

The family home is clearly the most important asset component, and debt on the family home is clearly the most important debt component. Approximately two-thirds of households are home-owner households, although this proportion has been declining over most of the 12-year period. The mean value of owner-occupied housing, evaluated over all households, was \$304,699 in 2002, \$406,980 in 2006, \$442,432 in 2010, \$418,287 in 2014 and \$508,758 in 2018. It bears noting that, had the proportion of home-owning

households not declined between 2002 and 2018, the mean value of home assets would have grown more strongly. For example, holding constant the mean home value among home-owning households at its 2018 level, if the 2002 home-ownership rate of 68.4% applied in 2018 (instead of 64.3%), the mean value of home assets across all households would have been \$541,199.¹

Despite the fall in home ownership, mean home debt among all households rose in a sustained fashion between 2002 and 2018, reaching \$124,030 in 2018, well over double its 2002 level. Nonetheless, net of home debt, home wealth remains the biggest contributor to household wealth.

Superannuation is the second-most important asset class in households' wealth portfolios. Held by 84.7% of households, in 2018 the mean value across all

households was \$240,060, up from \$121,638 in 2002, when 76.8% of households had superannuation.

The importance of housing in household wealth is further reinforced by the large share of household wealth accounted for by investment housing and holiday homes. The proportion of households holding other property grew strongly between 2002 and 2006, rising from 16.6% to 20.6%, since when it has edged upwards to 20.9% in 2018. The mean value of other housing across all households rose dramatically between 2002 and 2006, from \$72,818 to \$170,242, but declined between 2006 and 2014, since when there has been a partial recovery to \$161,323 in 2018. In common with home debt, debt on other housing rose in a sustained fashion between 2002 and 2018, with mean debt across all households rising from \$17,452 in 2002 to \$51,571 in 2018.

¹ The mean value of home assets among home-owner households in 2018 was \$791,226 (\$508,758/0.643). If the home-ownership rate was instead 68.4%, while the mean value among home-owner households remained unchanged at \$791,226, then the mean value of home assets across all households would have been $0.684 * \$791,226 = \$541,199$.



Table 8.2: Composition of household wealth, 2002 to 2018

Assets									
	Home	Other property	Super-annuation	Equities	Bank accounts	Business	Vehicles	Other assets	All assets
<i>Proportion of households with each asset type (%)</i>									
2002	68.4	16.6	76.8	41.0	97.5	12.7	87.7	26.7	99.8
2006	67.6	20.6	80.7	38.1	97.7	13.0	90.0	24.2	99.8
2010	66.5	20.7	83.6	34.8	98.1	12.5	90.5	22.3	99.8
2014	64.2	20.8	84.2	30.5	98.0	10.4	91.6	22.4	99.7
2018	64.3	20.9	84.7	29.3	98.0	9.9	92.6	23.1	99.8
<i>Mean value of each asset type across all households (\$, December 2018 prices)</i>									
2002	304,699	72,818	121,638	46,725	35,221	59,623	27,784	22,440	690,948
2006	406,980	170,242	159,270	61,242	39,053	64,727	30,702	28,558	960,775
2010	442,432	150,161	177,176	44,525	47,530	58,733	30,671	33,368	984,597
2014	418,287	146,157	201,593	46,182	54,909	40,973	28,640	36,305	973,045
2018	508,758	161,323	240,060	43,960	69,947	44,359	31,017	38,096	1,137,521
Debts									
	Home	Other property	Business	Credit cards	HECS / HELP	Other	All debts		
<i>Proportion of households with each debt type (%)</i>									
2002	33.8	7.7	5.1	31.4	14.3	32.5	66.3		
2006	35.8	10.0	4.6	29.7	14.3	36.2	70.4		
2010	37.5	10.2	4.1	29.0	16.2	35.6	70.8		
2014	35.8	10.7	2.8	23.9	19.3	34.1	69.3		
2018	36.3	11.0	2.4	20.8	21.5	32.3	69.3		
<i>Mean value of each debt type across all households (\$, December 2018 prices)</i>									
2002	57,862	17,452	9,570	1,595	2,213	11,262	99,956		
2006	85,311	34,331	11,466	2,091	2,615	18,359	154,263		
2010	106,125	41,326	10,760	2,358	3,358	19,976	184,042		
2014	108,364	44,370	8,672	1,749	4,623	17,119	185,027		
2018	124,030	51,571	7,339	1,500	6,107	12,804	203,496		

Equity investments are also a sizeable component of assets, but the proportion of households directly holding equities steadily declined between 2002 and 2018, falling from 41.0% in 2002 to 29.3% in 2018. In part, this may reflect a shift from directly holding equities to holding them in superannuation funds. Notwithstanding the trend decline in direct ownership of equities, changes in the mean value of equities across all households to a significant extent reflect movements in share prices. The mean peaked in 2006 at \$61,242, declined to \$44,525 in 2010, rose again to \$46,182 in 2014 and then fell again to \$43,960 in 2018.

The HILDA Survey data show that the share of wealth in bank accounts has risen slightly since 2002. In 2002, bank accounts accounted for 6% of net wealth, and in 2018 they accounted for 7.5% of net wealth. Ownership of businesses declined between

2006 and 2018, with 13.0% of households owning businesses in 2006 and 9.9% owning businesses in 2018. Moreover, the mean value of business wealth declined over this period, from \$64,727 in 2006 to \$44,359 in 2018. The mean value of business debt did decline over this period, however, from \$11,466 in 2006 to \$7,339 in 2018.

Over the full period between 2002 and 2018, the total value of household debt has risen at a faster rate than the value of household assets. The mean value of assets grew by 65% over this period, while the mean value of debt grew by 104%.

Table 8.3 examines differences in median household wealth by family type, age group and location of residence. For this analysis, the population examined comprises all people aged 30 and over plus people aged 18 to 29 who are not living with their parents.

Large differences in median wealth are evident across family types. Single parents have the lowest average wealth levels, at approximately \$85,000 in 2002 and approximately \$103,000 in 2018. Single non-elderly men and women also have comparatively low median wealth. In 2002 and 2006, non-elderly couples without dependent children had the highest median wealth of the family types, but older couples experienced very strong growth in median wealth between 2002 and 2018, and in 2018 median wealth of over \$1 million, compared with \$682,255 for non-elderly couples. Single older women have also experienced relatively strong growth in median wealth since 2002. Single parents experienced the weakest growth in median wealth (which is consistent with the relatively disadvantaged economic circumstances of many single parents found in Chapter 3), followed by single non-elderly men and non-elderly couples without dependent children.



Table 8.3: Median household wealth by personal characteristics, 2002 to 2018 (\$, December 2018 prices)

	2002	2006	2010	2014	2018	Percentage change 2002 to 2018
All people	380,554	505,728	518,368	489,184	570,600	49.9
<i>Family type</i>						
Non-elderly couple	529,144	670,669	669,733	622,788	682,255	28.9
Couple with dependent children	436,315	565,038	571,863	529,949	644,194	47.6
Single parent	85,501	124,144	118,301	105,743	103,180	20.7
Single non-elderly male	166,580	195,062	184,542	198,441	207,345	24.5
Single non-elderly female	145,500	236,886	185,958	172,168	218,575	50.2
Older couple	454,557	647,231	776,405	791,736	1,015,334	123.4
Single older male	346,428	450,478	476,702	461,971	503,325	45.3
Single older female	330,233	438,239	474,964	469,832	562,980	70.5
<i>Age group</i>						
18-34	124,714	136,078	140,768	118,627	137,862	10.5
35-44	374,437	473,154	493,710	380,419	500,015	33.5
45-54	612,026	721,975	686,784	648,174	739,194	20.8
55-64	649,534	842,444	930,523	899,228	1,015,476	56.3
65-74	484,726	655,338	768,857	809,949	960,464	98.1
75 and over	374,289	517,251	545,223	580,678	686,428	83.4
<i>Region of residence</i>						
Sydney	542,262	559,714	525,417	534,883	636,491	17.4
Other urban New South Wales	378,342	502,143	434,871	510,612	532,901	40.9
Melbourne	471,366	520,379	636,046	559,251	798,600	69.4
Other urban Victoria	240,724	378,741	357,167	371,700	359,537	49.4
Brisbane	321,809	473,772	550,363	419,546	483,020	50.1
Other urban Queensland	248,838	427,216	405,883	329,037	380,651	53.0
Adelaide	264,419	352,697	422,460	445,311	459,207	73.7
Other urban South Australia	108,756	284,131	257,372	205,701	162,427	49.3
Perth	334,929	684,995	637,167	559,251	616,709	84.1
Other urban Western Australia	189,577	626,276	495,574	473,638	442,664	133.5
Urban Tasmania	154,492	257,548	289,127	325,158	308,509	99.7
Urban Northern Territory and Australian Capital Territory	524,801	656,700	766,823	700,365	693,730	32.2
Non-urban Australia	420,481	576,133	551,849	496,328	600,249	42.8

Notes: The population examined comprises all people aged 30 years and over, plus people aged 18 to 29 not living with a parent or guardian. The proportion of people aged 18 to 29 not living with a parent or guardian was 59% in 2002, 55% in 2006, 55% in 2010, 53% in 2014 and 51% in 2018.



Wealth typically accumulates over the lifecycle (at least up until retirement), so it is unsurprising that there are large differences in median wealth by age group. In all five years in which wealth data have been collected, median wealth is lowest for the youngest age group, and increases in age up to the 55 to 64 age group. Prior to 2010, the median wealth of people aged 65 to 74 was less than that of those aged 45 to 54, but by 2010 the median wealth of the 65 to 74 age group had overtaken the median wealth of those aged 45 to 54. This reflects the very strong growth in median wealth between 2002 and 2018 for the 65 to 74 age group, with the median increasing by 98.1%. Growth was also strong for the oldest age group, increasing by 83.4% between 2002 and 2018.

Median wealth by region of residence is examined in the

bottom panel of Table 8.3. It shows Melbourne had the highest median wealth level in 2018, followed by the combined region of urban Northern Territory and the Australian Capital Territory. Sydney, Perth and non-urban Australia also had relatively high median wealth in 2018 of approximately \$600,000 to \$636,000. Median wealth levels were lowest in urban South Australia outside of Adelaide, followed by urban Tasmania and then urban Queensland outside of Brisbane.

Between 2002 and 2018, urban Western Australia outside of Perth experienced the biggest growth in median wealth, followed by Perth and then Adelaide. Sydney experienced the lowest growth in median wealth, followed by urban Northern Territory and the Australian Capital Territory.



Dynamics of household wealth

While Tables 8.1 to 8.3 present cross-sectional information on the distribution of household wealth, the unique contribution of the HILDA Survey data on Australian household wealth is that it permits examination of changes over time—or dynamics—of individuals' household wealth.

Table 8.4 examines the distribution of changes in individuals' household wealth over each four-year period between wealth collection waves. For this analysis, the individual is the 'unit of analysis', meaning that, while we are examining *household* wealth, we 'follow' *individuals*. This is more natural than attempting to follow households. If we take, for example, the case of a married couple who separate, a household-based analysis would either have to follow only one member of the couple, or treat the household as having 'died'; an individual-based analysis allows us to follow both members of the couple—although the household wealth of each member would, naturally, change as a result of the separation. As in Table 8.3, the population examined comprises all people aged 30 and over plus people aged 18 to 29 years who are not living with their parents.

Consistent with the evidence presented in Tables 8.1 to 8.3, both the mean and median changes in household wealth were highest between 2002 and 2006, and were lowest between 2006 and 2010. Increases in mean and median wealth were also relatively small between 2010 and 2014, while the increases between 2014 and 2018 were not far short of the increases between 2002 and 2006.

Table 8.4: Distribution of individual changes in household net wealth (\$, December 2018 prices)

	<i>Net wealth increased (%)</i>	<i>Mean change (\$)</i>	<i>Median change (\$)</i>	<i>10th percentile change (\$)</i>	<i>90th percentile change (\$)</i>
2002 to 2006	73.1	261,374	109,936	-192,880	743,012
2006 to 2010	60.2	40,045	32,854	-461,180	558,989
2010 to 2014	59.4	66,614	30,308	-411,474	564,457
2014 to 2018	69.1	203,121	91,491	-257,929	803,347

Note: Population comprises all people aged 30 and over and people aged 18 to 29 not living with a parent.

There is considerable variation across individuals in the changes in household wealth. Even when wealth grew strongly between 2002 and 2006, only 73.1% of people experienced a real increase in household wealth, implying approximately 27% experienced a decline in real wealth. Moreover, the 10th percentile of changes was negative over all four periods, while the 90th percentile of changes was in excess of half a million dollars over all four periods.

Table 8.5 compares median net wealth changes across age

groups and across groups defined by partner status in the start and end years. Median wealth growth between 2002 and 2018 was highest for those aged 35 to 44 in 2002, although the median growth of those aged 18 to 34 in 2002 and those aged 45 to 54 in 2002 was not far behind. Growth was lowest for those aged 65 to 74 in 2002, and was also relatively low for those aged 55 to 64 in 2002, but was still positive for both age groups.² This is perhaps somewhat surprising, particularly for those aged 65 to 74 in 2002, since most were retired over the entire 2002

to 2018 period and might have been expected to be 'running down' their wealth.

The lower panel of Table 8.5 shows that partner status is clearly important to wealth changes. Being partnered in both the start and end years, or being initially single and becoming partnered are associated with the largest increases in wealth. The median increase is relatively small for single people, while the median change for partnered people who become single is negative, except when the period examined is the full 2002 to 2018 period.

Table 8.5: Median household net wealth changes by initial age group and by partner status (\$, December 2018 prices)

	<i>2002 to 2006</i>	<i>2006 to 2010</i>	<i>2010 to 2014</i>	<i>2014 to 2018</i>	<i>2002 to 2018</i>
<i>Age group in base year</i>					
18-34	85,980	66,417	56,768	89,126	392,556
35-44	148,070	64,542	55,741	145,204	468,807
45-54	156,692	65,394	57,884	162,106	368,583
55-64	133,182	3,155	8,563	103,508	126,328
65-74	63,003	-17,412	-10,656	5,559	45,502
75 and over	64,165	2,859	-2,334	-470	-
<i>Partner status</i>					
Single in both start and end years	32,332	9,054	5,468	30,236	156,359
Partnered in both start and end years	167,982	58,466	53,222	144,093	377,006
Single in start year and partnered in end year	129,016	71,989	79,081	120,102	466,085
Partnered in start year and single in end year	-8,150	-37,702	-62,158	-13,664	154,198

Note: Population comprises people who, in the initial year, were aged 30 and over or were aged 18 to 29 and not living with a parent.



² The median change in net wealth over the 2002 to 2018 period is not shown for those aged 75 and over in 2002 because over 70% of people in this group died between 2002 and 2018.

Housing wealth

As shown in Table 8.2, the single most important asset component in household wealth portfolios is the family home, accounting for 45% of the value of household assets in 2018. Further reinforcing the importance of housing is that holdings of investment properties and holiday homes accounted for 14% of the value of assets, taking the total share of housing to 59%. Understanding the distribution and dynamics of housing wealth is therefore important to understanding household wealth more generally.

Home ownership

Table 8.6 presents alternative measures of home-ownership rates over the 2002 to 2018 period. The first column reports the percentage of households living in owner-occupied housing. It shows a slow but steady decline in the proportion of households that are home-owner households up until 2014. In 2002, 68.1% of households were owner-occupied, while in 2014 63.8% of households were owner-occupied, a fall of 4.3 percentage points. Between 2014 and 2018, there was essentially no change in the proportion of households that were owner-occupied.

The second column of Table 8.6 presents estimates of the proportion of individuals aged 18 and over who are *legal* home owners. The household members who are legal owners of the home are explicitly identified in wealth collection years, allowing accurate measurement of the proportion of the adult population that are home owners. In 2002, 56.8% of adults were home owners, and this proportion fell by 5.2 percentage points by 2014, to be 51.6%. Between 2014 and 2018, there was a slight increase in home ownership to 51.9%.

Table 8.6: Home-ownership rates, 2002 to 2018 (%)

	<i>Proportion of households</i>	<i>Proportion of individuals aged 18 and over</i>
2002	68.1	56.8
2006	67.5	55.7
2010	66.0	54.2
2014	63.8	51.6
2018	63.9	51.9
Change 2002 to 2018	-4.2	-4.9



Table 8.7 presents home-ownership rates of birth cohorts in each year in which wealth data have been collected. Reading across the table, we see how home ownership changes as the cohort has aged, while reading down the table, we see how home ownership differs across birth cohorts when at the same age. For example, the table shows that, for the cohort born between 1970 and 1973, 40.4% were home owners when aged 29 to 32 (in 2002), while 61.6% were home owners when aged 45 to 48 (in 2018). We can also see that when the cohort born between 1986 and 1989 was aged 29 to 32

(in 2018), 33.5% were home owners, which was 6.9 percentage points lower than the home-ownership rate the 1970 to 1973 birth cohort had when in the same age group.

The table shows considerable decline in home-ownership rates across birth cohorts, summarised in the bottom row of the table, which presents the difference in home-ownership rates between the earliest and most recent cohorts observed in the age group. For all but two of the 12 age groups—53 to 56 and 65 to 68—the rate of home ownership is markedly lower for the cohorts born more recently.

Table 8.7: Home ownership of birth cohorts at each age (%)

	25-28	29-32	33-36	37-40	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72
1930-1933												78.1
1934-1937											76.7	78.7
1938-1941										80.5	80.5	80.0
1942-1945									75.0	73.1	72.6	71.7
1946-1949								73.1	76.1	74.9	75.3	74.8
1950-1953							76.8	77.6	75.8	75.4	76.8	
1954-1957						74.1	71.5	72.1	71.9	69.5		
1958-1961					66.1	67.3	68.1	69.1	70.1			
1962-1965				61.2	65.9	68.3	67.1	73.5				
1966-1969			54.5	62.1	63.6	67.0	66.9					
1970-1973		40.4	50.8	54.2	56.5	61.6						
1974-1977	26.5	40.6	51.3	53.1	62.0							
1978-1981	23.8	41.4	43.6	50.6								
1982-1985	24.8	33.9	46.8									
1986-1989	18.6	33.5										
1990-1993	15.7											
Difference ^a	10.8	6.9	7.7	10.6	4.1	12.5	9.9	-0.4	4.9	11.0	-0.1	3.3

Notes: Table shows the proportion of people who are legal owners of the home in which they live. ^a Difference between the home-ownership rate of the oldest and youngest birth cohorts observed in the age group (that is, the difference between the uppermost estimate in the column and the bottom estimate in the column).



Table 8.8: Rates of home ownership by region—People aged 18 and over, 2002 to 2018 (%)

	2002	2006	2010	2014	2018	Change 2002 to 2018
Sydney	48.2	48.2	48.4	41.6	43.4	-4.8
Melbourne	53.4	53.4	54.5	52.1	50.5	-2.9
Brisbane	61.2	58.5	57.7	55.4	57.8	-3.4
Adelaide	61.0	60.8	57.1	55.5	53.2	-7.8
Perth	51.9	55.3	50.5	46.5	50.8	-1.1
Other urban New South Wales	58.2	54.5	52.8	49.1	50.7	-7.5
Other urban Victoria	59.3	56.0	53.5	56.0	56.0	-3.3
Other urban Queensland	61.1	57.8	55.6	55.4	55.1	-6.0
Other urban South Australia	55.2	54.4	54.1	48.4	49.7	-5.5
Other urban Western Australia	48.5	59.9	49.5	52.2	54.1	5.6
Urban Tasmania	55.5	57.5	54.3	56.9	51.5	-4.0
Urban Northern Territory and Australian Capital Territory	59.5	53.5	54.2	60.6	57.3	-2.2
Non-urban Australia	65.9	67.6	61.7	61.7	59.5	-6.4

Differences across regions in rates of home ownership are examined in Table 8.8. Rates of home ownership have tended to decline in all parts of Australia, but the extent of decline varies. The decline was greatest in Adelaide (7.8 percentage-point decline) and urban New South Wales outside of Sydney (7.5 percentage points), while Perth experienced the smallest decline (1.1 percentage points). Nonetheless, Sydney maintained the lowest rate of home ownership across the entire 2002 to 2018 period.

Home wealth

Table 8.9 examines the distribution of home values and home equity over the 2002 to 2018 period. Expressed at December 2018 prices, the mean home value increased rapidly between 2002 and 2010, reaching \$665,243 in 2010. Between 2010 and 2014, the mean declined to \$651,226, but then rose strongly again to \$791,041 in 2018. The median home value has followed a similar path. Indeed, over the full 2002 to 2018 period, both the mean and median increased by approximately 77%.

The 10th and 90th percentiles presented in Table 8.9 provide an indication of the distribution of



Table 8.9: Distribution of home values and home equity among home-owner households, 2002 to 2018
(\$, December 2018 prices)

	2002	2006	2010	2014	2018	Change 2002 to 2018
<i>Home value</i>						
Mean	445,622	601,634	665,243	651,226	791,041	77.5
10th percentile	147,416	263,206	294,985	283,911	300,791	104.0
Median	368,540	500,092	554,571	535,681	651,714	76.8
90th percentile	766,563	1,052,826	1,115,217	1,071,362	1,503,954	96.2
<i>Home equity</i>						
Mean	360,999	475,520	505,673	482,515	598,194	65.7
10th percentile	71,887	105,283	99,115	74,995	91,240	26.9
Median	280,090	393,738	412,978	391,047	451,186	61.1
90th percentile	707,597	921,223	943,950	964,225	1,273,348	80.0
Proportion with negative equity (%)	1.3	1.8	2.2	2.9	2.8	115.4

home values in each year. In 2018, the 90th percentile was just over \$1.5 million, while the 10th percentile was \$300,791. Interestingly, both the 10th percentile and 90th percentile grew more strongly between 2002 and 2018 than the median, the 10th percentile rising by 104.0% and the 90th percentile rising by 96.2%. This means that house prices have become more 'compressed' at the lower end of the housing market, but more dispersed at the upper end of the market. Importantly, the growth at the 10th percentile indicates that it has become harder to find 'affordable' housing for first-home buyers.

A household's net home wealth, otherwise known as home equity, is the difference between the value of the home and debt owed on the home. This is examined in the lower panel of Table 8.9. Naturally, the mean of home equity is lower than the mean of home value. In 2018, mean home equity was \$598,194, compared with the mean home value of \$791,041. Thus, mean home debt in 2018 was \$192,847.

Growth in home equity is lower than the growth in home values. Mean home equity grew by 65.7%, whereas the mean home value grew by 77.5%. More striking is that home equity at the 10th percentile grew by 26.9%, compared with growth in the

mean home value at the 10th percentile of 104%. Of particular concern is the rise in the proportion of households with negative equity—that is, owing more than the home is worth—between 2002 and 2014. In 2002, this applied to 1.3% of households, but rose to 2.9% in 2014, and was still at 2.8% in 2018, despite very strong growth in home values between 2014 and 2018.

Ownership of investment properties and holiday homes

Ownership of residential investment properties has been the subject of a great deal of public discussion in recent years, with much debate about the tax treatment of these properties and the characteristics of the owners of these properties. The HILDA Survey is well placed to shed light on this topic, in each wealth year collecting information on the number of properties held, their value, the debt owed on them, and the income derived from them.

Table 8.10 presents descriptive statistics on ownership of non-home housing—that is, housing which is not the primary residence of the owner—in each of the wealth years since 2006.³ The top row shows the proportion of households owning non-home housing. A rise in the proportion of households owning

non-home housing between 2006 and 2018 is evident, with most of the increase occurring between 2010 and 2014. The proportion owning non-home housing was 16.8% in 2006 and 17.9% in 2018. This is consistent with the finding in Table 8.6 of a decline in home-owner households—and hence an increase in renting.

The remaining rows of Table 8.10 focus on households with non-home housing, presenting the proportion with one property and the proportion with more than one property, the mean value of non-home properties and the mean debt on those properties.

Approximately two-thirds of households with non-home housing own one property, and this has remained relatively stable over the 2006 to 2018 period. Remarkably, the mean value of non-home property among owners of non-home housing was at its highest in 2006, when it was \$835,324. The mean value of non-home property declined between 2006 and 2014, and then partially recovered in the period to 2018. Mean debt on non-home property, however, steadily increased over the 2006 to 2018 period. Mean debt rose from \$176,033 in 2006 to \$271,615 in 2018, a 54.3% increase. Consequently, mean equity fell from \$659,291 in 2006 to \$542,019 in 2018.



³ The median change in net wealth over the 2002 to 2018 period is not shown for those aged 75 and over in 2002 because over 70% of people in this group died between 2002 and 2018.



Table 8.10: Ownership of non-home housing, 2006 to 2018

	2006	2010	2014	2018	Percentage change 2006 to 2018
Household owns any non-home housing (%)	16.8	17.1	17.7	17.9	6.5
<i>Owners of non-home housing</i>					
Own one property (%)	64.4	66.1	65.2	64.5	0.2
Own more than one property ^a (%)	35.6	33.9	34.8	35.5	-0.3
Mean value of non-home property ^a (\$)	835,324	757,634	732,442	813,634	-2.6
Mean value of debt on non-home property ^a (\$)	176,033	220,136	232,629	271,615	54.3

Note: ^a May include non-housing property such as farms and commercial premises.

The age, income and wealth of owners of residential investment properties are examined in Table 8.11. The table shows owners are mostly in the 35 to 64 age range, and are relatively evenly distributed across the 35 to 44, 45 to 54 and 55 to 64 age groups. There is some degree of ageing of owners between 2006 and 2018, with the proportion aged 65 and over increasing from 10.6% to 15.2%, the proportion aged 55 to 64 increasing from 20.5% to 23.5%, the proportion aged 45 to 54 declining from

26.9% to 23.2%, the proportion aged 35 to 44 declining from 24.9% to 22.6%, and the proportion aged 18 to 34 declining from 17.1% to 15.6%.

The second panel of Table 8.11 shows that owners of non-home housing are predominately in the top two income quintiles (where, for the purposes of this analysis, income is equalised disposable income exclusive of rental losses). In 2006, 64.7% of owners were in the top two quintiles and a further 14.5% were in the middle quintile. In 2018, 67.7% were in the

top two income quintiles and 16.3% were in the middle quintile.

The bottom panel of the table shows the locations of owners in the wealth distribution. Here we see that they are very heavily concentrated at the upper end of the distribution. Approximately 50% of owners are in the top wealth quintile, and over three-quarters are in the top two quintiles. Thus, the evidence from the HILDA Survey is that owners of investment housing are relatively affluent from both an income and a wealth perspective.

Table 8.11: Characteristics of owners of non-home housing (%)

	2006	2010	2014	2018
<i>Age group</i>				
18-34	17.1	16.5	16.6	15.6
35-44	24.9	22.5	21.1	22.6
45-54	26.9	27.7	25.2	23.2
55-64	20.5	21.3	21.8	23.5
65 and over	10.6	12.0	15.4	15.2
Total	100.0	100.0	100.0	100.0
<i>Income quintile</i>				
Bottom	8.8	8.3	7.6	7.1
2nd	12.0	11.5	9.4	8.9
Middle	14.5	15.4	16.0	16.3
4th	23.9	22.6	25.4	27.7
Top	40.8	42.2	41.6	40.0
Total	100.0	100.0	100.0	100.0
<i>Wealth quintile</i>				
Bottom	1.0	2.6	2.0	2.0
2nd	7.4	7.6	8.1	6.1
Middle	12.4	14.5	14.7	15.1
4th	27.4	25.0	25.7	25.1
Top	51.7	50.2	49.5	51.7
Total	100.0	100.0	100.0	100.0

Notes: Rental losses are excluded from income in constructing income quintiles and identifying the income quintile to which an individual belongs. Population comprises all people in households that own non-home property who are aged 30 and over or are aged 18 to 29 and not living with a parent. Cells may not add up to column totals due to rounding.



Superannuation balances of males and females

As shown in Table 8.2, superannuation is becoming an increasingly important asset in households' wealth portfolios. This reflects the increases in the minimum contribution rate since the introduction of the Superannuation Guarantee in 1992, which started at 3% of earnings, and was increased in steps over the subsequent 22 years to its current level of 9.5%. It also reflects maturation of the system—increasingly more people have been contributing to superannuation funds for much of their working lives—as well as periodic policy changes, such as the Howard Government's

decision in 2006 to exempt from income tax all superannuation earnings and drawdowns in retirement, thereby increasing incentives to increase superannuation holdings.

A key feature of the superannuation system (when mature) is that balances at retirement will be largely a reflection of lifetime earnings. This has raised concerns about the implications of the system for gender equity in the context of the gender wage gap and the propensity for women to reduce their extent of employment participation once they have children. This can make women more vulnerable in retirement, particularly in the event of marriage dissolution prior to retirement.

In this section, we consider how males and females are faring in respect of superannuation and the extent to which the gap in superannuation wealth has narrowed (if at all) since 2002. Figures 8.1 and 8.2 present, for males and females respectively, mean superannuation balances by age group in each year in which wealth data have been collected in the HILDA Survey.

For all age groups over 35 years of age, there has been considerable increase in the mean superannuation balance between 2002 and 2018, for both males and females. However, for males

and females aged under 35, there has been very little change in the mean superannuation balance.

In all age groups other than the 15 to 24 age group, males have substantially higher mean superannuation balances than females in all years. However, the two figures suggest the gap between males and females has closed somewhat between 2002 and 2018, with females experiencing stronger growth in superannuation balances than males.

The reduction in the gender gap in superannuation balances is confirmed by Figure 8.3, which

shows the gap between males and females in mean superannuation balance in 2002 and 2018 for each age group. The gender superannuation gap is here defined as the difference in mean superannuation balance between males and females as a proportion of the female mean balance.

The figure shows that, while there is still a substantial gender superannuation gap in 2018, it has reduced considerably since 2002 in all age groups other than the 35 to 44 age group. Overall, the gender gap has narrowed from 109% in 2002 to 50% in 2018.



Figure 8.1: Mean superannuation balance by age group—Males

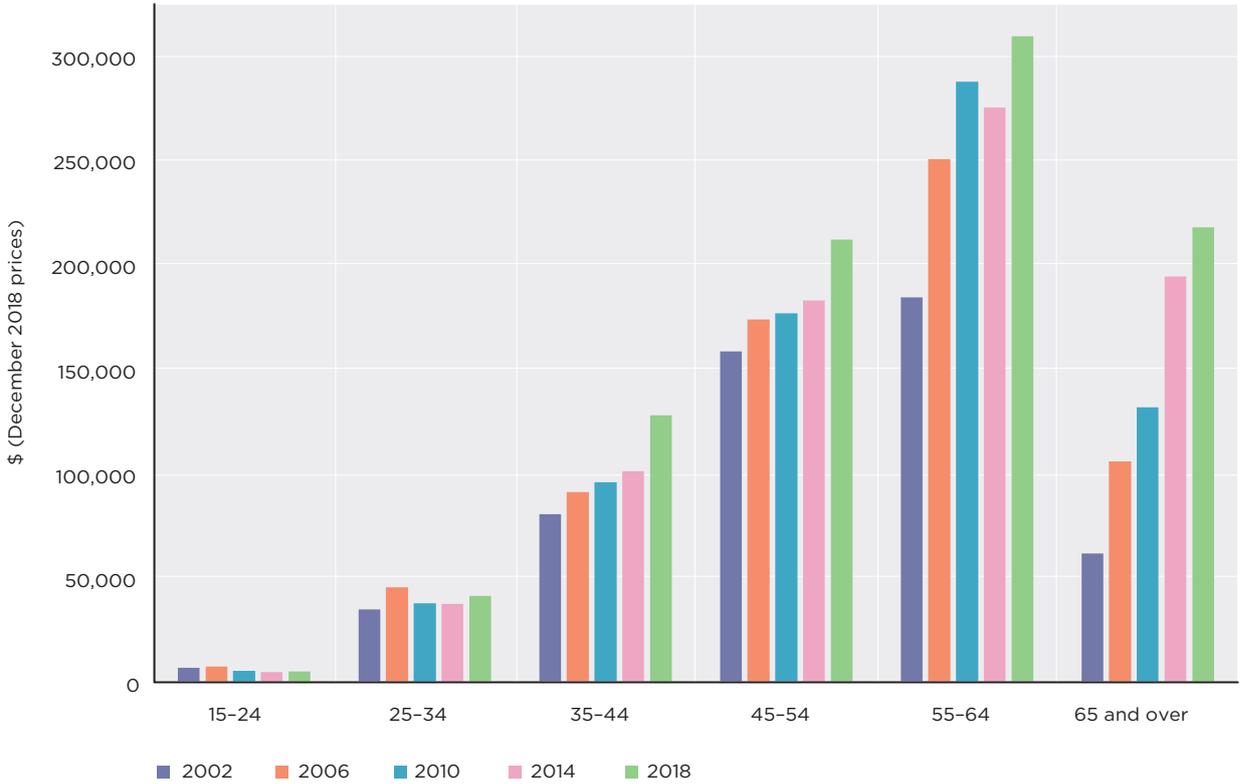


Figure 8.2: Mean superannuation balance by age group—Females

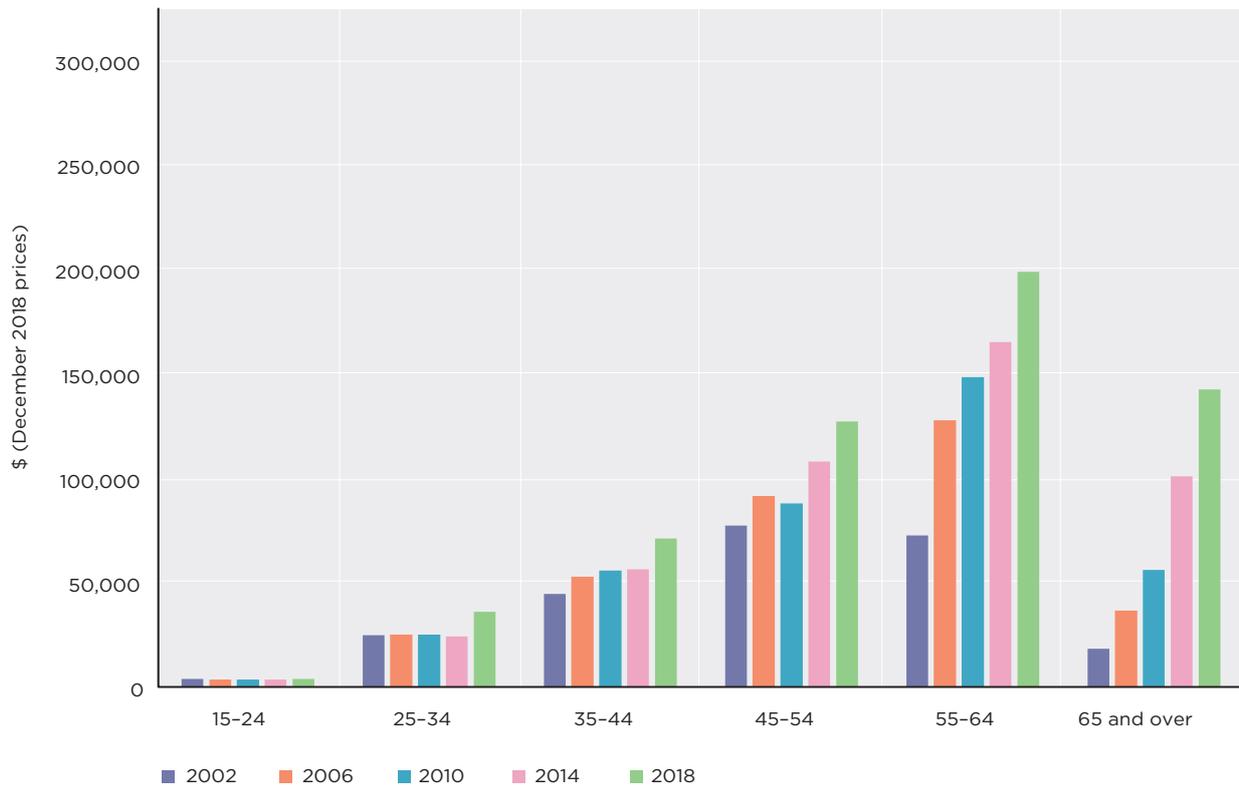
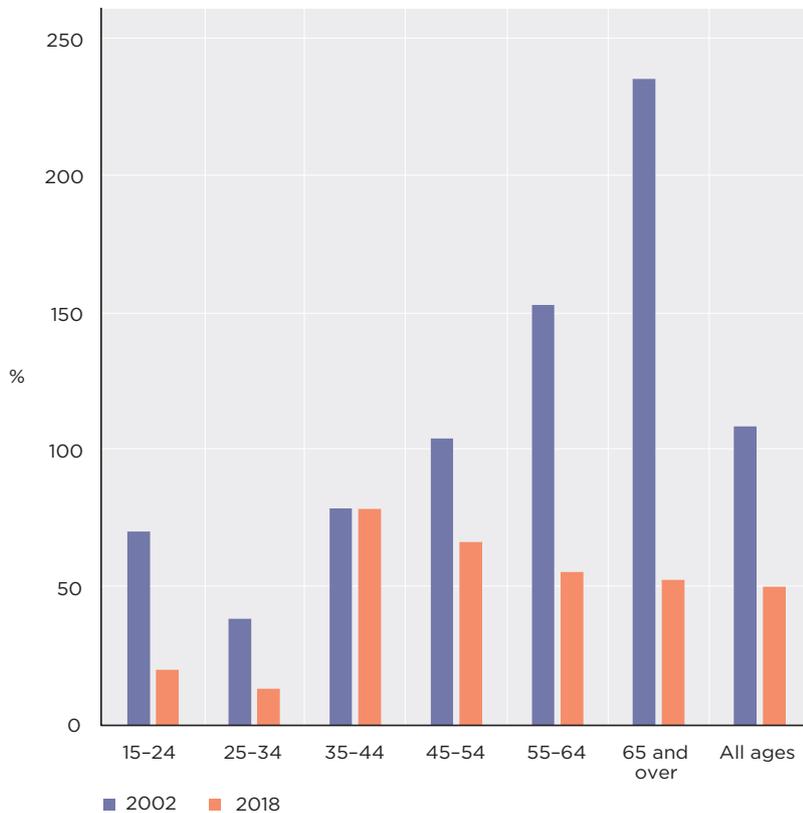


Figure 8.3: Gender gap in mean superannuation balance by age group



9

The economic wellbeing of retirees

Roger Wilkins



The Age Pension has traditionally been the main source of income for retirees, and this has continued to be the case throughout the HILDA Survey period. It provides for a modest standard of living, and has been indexed to male total average weekly earnings since 1997, ensuring it maintains its level relative to a measure of average community living standards.¹

One might therefore be led to believe that there has been relatively little change in retirees' economic wellbeing over the HILDA Survey period. There have, however, been changes made to the Age Pension over time, including increasing the single pension rate in 2009, and adjusting the assets test in 2007 and 2017. More importantly, as shown in Figures 8.1 and 8.2, the period has seen growth in superannuation balances. While the Age Pension remains the dominant income source for retirees, the growth in superannuation since 2001—along with changes in home ownership and possibly other forms of wealth—creates considerable potential for changes in the level and distribution of economic wellbeing among retirees.

In this chapter, we examine how retirees' economic fortunes have changed since 2002, looking at both income and wealth, as well as other indicators of economic wellbeing.

The retiree population

To place the analysis in context, it is important to recognise the substantial changes in the timing of retirement that have occurred since 2001. Figure 9.1 presents the proportion of people retired in each of seven age groups over the period from 2001 to 2018 (see Box 9.1, page 132 for an explanation of how retirement status is determined in the HILDA Survey).² It shows a trend

towards later retirement as evidenced by the decline in the proportion retired in every age group other than the 75 and over age group. The declines were most pronounced for men aged 60 to 64 and women aged 55 to 59 and 60 to 64, with most of the declines occurring between 2002 and 2013. Thus, for example, while in 2002 49% of men aged 60 to 64 were retired, in 2012 only 29% of men in this age range were retired. Over the same period, the proportion of

¹ Since September 2009, the Age Pension has actually been indexed twice annually (in March and September) to the higher of the Consumer Price Index and the Pensioner and Beneficiary Living Cost Index produced by the Australian Bureau of Statistics. However, if the resulting pension for a couple is lower than 41.76% of male total average weekly earnings (27.7% for the single pension), it is increased up to that level. The indexation of the Age Pension has resulted in its real value (excluding supplements) increasing by approximately 27% for couples over the 21 years from September 1997 (when this approach to indexation was introduced) to September 2018. For singles, the real value of the Age Pension has increased by even more—41%—because in September 2009 the maximum base rate was increased from 60% to 66.33% of the couple pension rate.

² Figure 9.1 excludes 2004 data for women because retirement status was measured differently in that year and caused a spurious decline in female retirement, particularly among women aged 70 and over.

women aged 60 to 64 who were retired fell from 70% to 47%.

An implication of this trend to later retirement is that retirees in 2018 were on average older than retirees in 2001. Moreover, increases in life expectancy over this period further increased the average age of retirees in 2018 compared with retirees in 2001. Indeed, further analysis, not shown in

Figure 9.1, reveals that the mean age of retirees increased from 68.2 years in 2001 to 70.8 years in 2018. This also means that, despite increased life expectancy, the proportion of the Australian population that is retired did not increase between 2001 and 2018, remaining at approximately 21% (although it did fall as low as 20% in the intervening period).

Changes in economic wellbeing of retirees since 2002

Table 9.1 examines various measures of the economic wellbeing of retirees in 2002, 2006, 2010, 2014 and 2018. To aid interpretation, comparisons are made with the (entire) non-retired population.

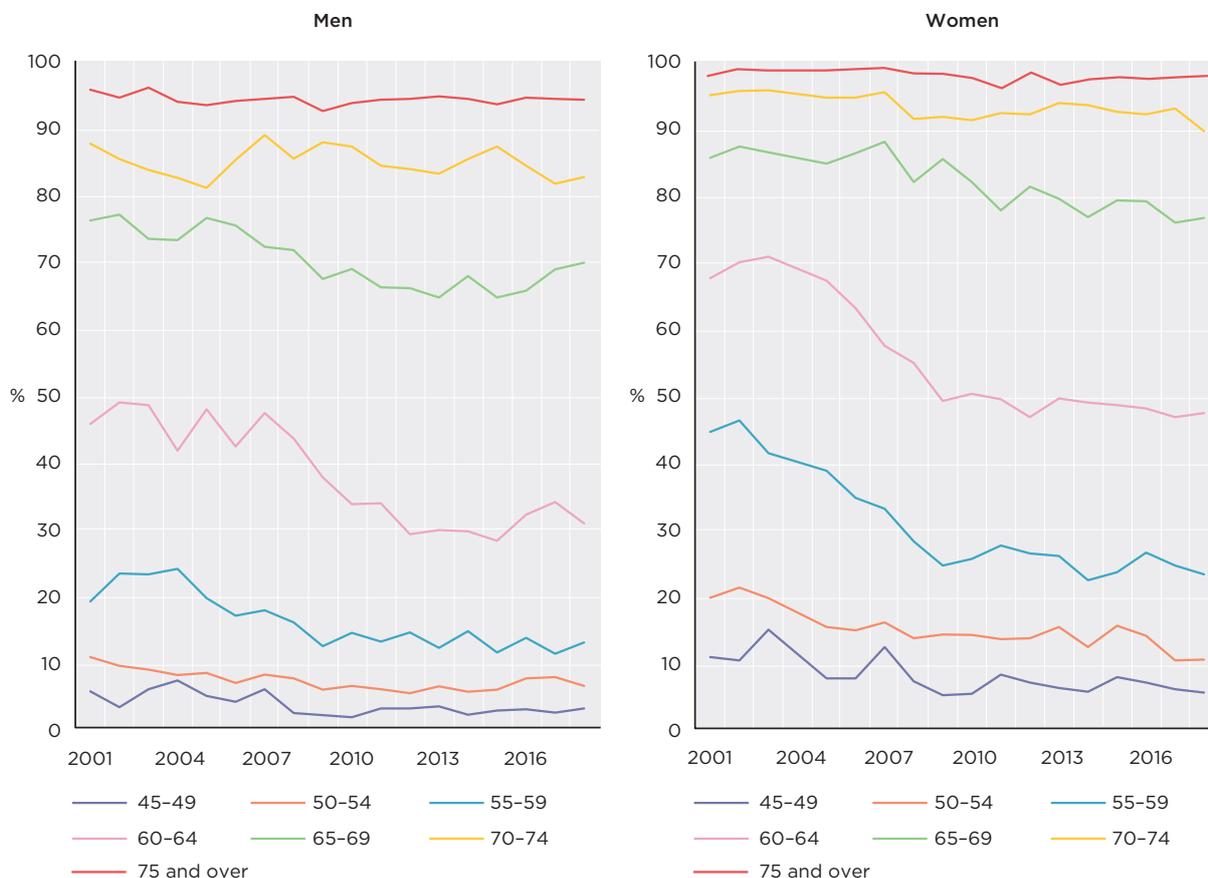
Mean and median equivalised incomes of retirees are considerably lower than those of the non-retired population, but they have experienced markedly greater growth in incomes since 2002. For example, the mean equivalised income of retirees grew by 39.0% in real terms between 2002 and 2018, compared with 29.7% for the

Box 9.1: Retirement status in the HILDA Survey

Retirement status is simply based on whether an individual describes themselves as retired. It therefore has a degree of subjectivity in the sense that someone not in the labour force may nonetheless regard themselves as not retired, while another person in the same situation may consider themselves retired.



Figure 9.1: Proportion of people retired, by age group



non-retired population. (See Box 3.2, page 28, for an explanation of equivalised income.) It bears noting that this is greater than the increase in the Age Pension over this period, indicating that other income sources were important to the growth in retirees' incomes.

Unsurprisingly, average wealth levels are considerably higher among retirees than among the non-retired population, but again we see that growth in mean and median wealth has been considerably greater for retirees.

Between 2002 and 2018, retirees' mean wealth grew by 79.0% and median wealth grew by 85.2%, compared with respective growth of 55.7% and 46.4% for the non-retired population. It is therefore clear that, based on average income and wealth levels, the economic wellbeing of retirees has increased in both absolute terms and relative to the broader community.

Consistent with the rise in average income levels, poverty rates (see Chapter 2) have fallen among retirees, although poverty

rates among retirees remained at least 80% higher than for the non-retired population across the entire 16-year period. That said, the experience of financial stress (two or more indicators of financial stress, as described in Box 2.6, page 23) is much lower among retirees than among the rest of the population. For example, in 2018, 7.4% of retirees reported experiencing two or more indicators of financial stress, compared with 11.9% of the non-retired population.

Table 9.1: Measures of economic wellbeing of retirees compared with the non-retired population, 2002 to 2018

	2002	2006	2010	2014	2018	Percentage change 2002 to 2018
<i>Retirees</i>						
<i>Equivalised income (\$, December 2018 prices)</i>						
Mean	31,199	35,615	38,202	42,977	43,377	39.0
Median	24,659	27,764	30,408	33,384	34,014	37.9
<i>Household wealth (\$, December 2018 prices)</i>						
Mean	687,478	984,719	968,091	1,039,771	1,230,891	79.0
Median	413,869	562,209	602,172	634,257	766,508	85.2
<i>Relative income poverty (%)</i>						
Before housing costs	30.6	30.6	31.4	23.7	27.2	-11.1
After housing costs	21.1	20.9	22.0	16.2	18.7	-11.4
In financial stress (%)	7.6	5.1	-	7.5	7.4	-0.2
Home-owner household (%)	80.9	81.5	79.3	79.8	80.8	-0.1
<i>Non-retired people</i>						
<i>Equivalised income (\$, December 2018 prices)</i>						
Mean	45,503	51,362	57,052	57,834	59,032	29.7
Median	40,309	45,401	50,627	50,944	52,343	29.9
<i>Household wealth (\$, December 2018 prices)</i>						
Mean	620,611	842,493	848,889	784,322	966,253	55.7
Median	351,136	475,746	489,120	423,256	514,053	46.4
<i>Relative income poverty (%)</i>						
Before housing costs	8.0	7.3	7.7	6.9	7.4	-7.5
After housing costs	13.0	11.4	11.4	10.3	10.6	-18.5
In financial stress (%)	15.7	12.1	-	12.3	11.9	-3.8
Home-owner household (%)	69.9	69.8	68.7	65.0	65.7	-6.0



Table 9.1 also shows that home ownership among retirees has defied the broader national trend, with approximately 80% of retirees home owners in all years over the 2002 to 2018 period. By contrast, the proportion of the non-retired population living in owner-occupied housing declined from 69.9% in 2002 to 65.7% in 2018.

Figures 9.2 and 9.3, focusing only on retirees, respectively consider differences in income and wealth across three age groups: 55 to 64, 65 to 74 and 75 and over. They show that both income and wealth are ordered by age group,

being highest for the youngest age group and lowest for the oldest age group. However, all three age groups have experienced substantial increases in mean income and wealth. Income and wealth growth was particularly strong for the 65 to 74 age group, with mean income growing by approximately 54% and mean wealth growing by approximately 95%.

The growth in superannuation, and potentially other forms of wealth, among retirees creates the potential for greater inequality in both income and wealth among retirees. Table 9.2

shows it is unambiguously the case that income inequality has increased among retirees, although inequality in the distribution of wealth shows no clear trend. Whether one examines all retirees or only retirees aged 65 and over, income inequality as measured by the Gini coefficient (see Box 3.3, page 29) has increased substantially—by 11% among all retirees and by 17% among retirees aged 65 and over. Wealth inequality has actually decreased slightly among all retirees, but among retirees aged 65 and over it has remained essentially unchanged.



Figure 9.2: Mean equivalised income of retirees by age group

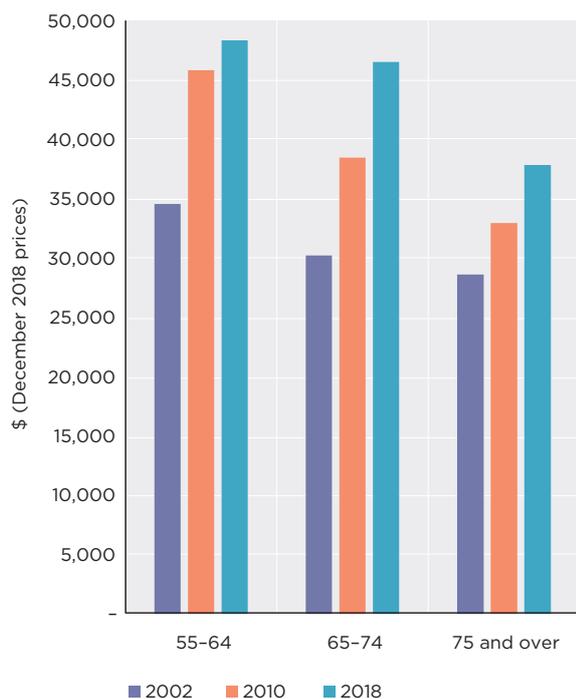


Figure 9.3: Mean household wealth of retirees by age group

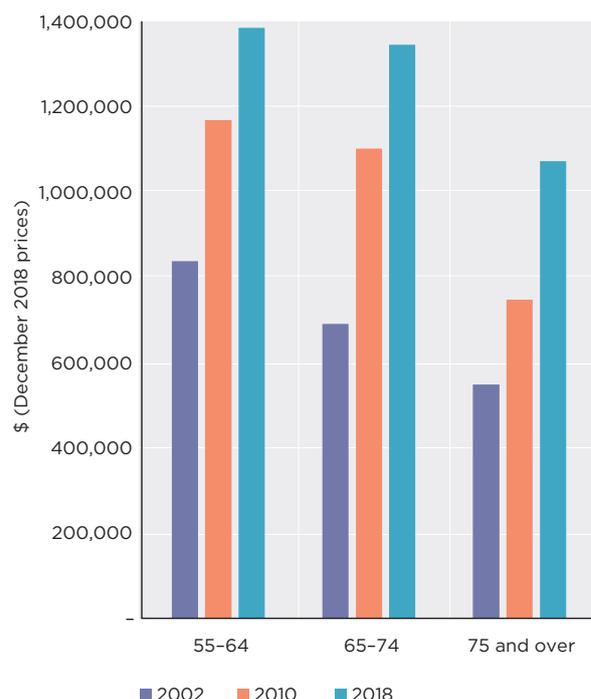


Table 9.2: Inequality in economic wellbeing among retirees—Gini coefficient, 2002 to 2018

	Income		Wealth	
	All retirees	Retirees aged 65 and over	All retirees	Retirees aged 65 and over
2002	0.315	0.296	0.577	0.547
2006	0.325	0.309	0.575	0.562
2010	0.329	0.305	0.583	0.550
2014	0.339	0.329	0.571	0.562
2018	0.349	0.347	0.547	0.553

Economic circumstances and the timing of retirement

In this section we consider how the economic characteristics of retirees are related to the age of retirement, and whether this has changed over the HILDA Survey period. To do this, we examine people who retired during the 2001 to 2018 period and distinguish three groups of retirees: retired before the age of 64 (retired early); retired aged 64 to 67 (retired 'on time'); and retired after the age of 67 (retired 'late').

Table 9.3 presents, for each of four sub-periods in the 2001 to 2018 period, the proportion of men and women in each of the three age categories at the time of retirement. For men the proportion retiring early fell from 63.6% in the first (2001 to 2004) sub-period to 50.0% in the fourth (2013 to 2015) sub-period, and then rose slightly to 51.4% in the most recent (2016 to 2018) sub-period. The proportion of men retiring aged 64 to 67 rose from 16.0% in the first sub-period to 23.5% in the second (2005 to 2008) sub-period, fell to 17.8% in the third (2009 to 2012) sub-period and then subsequently rose again, to 29.4% in the most recent sub-period. The proportion of men retiring after the age of 67 rose up until the third sub-period, when 28.0% of men who retired were in this age category,

and subsequently fell to 19.2% in the most recent sub-period. From these trends, it appears that the GFC was responsible for a significant proportion of men delaying retirement, but also for a small proportion of men retiring early.

Women on average retire earlier than men, but there has been a more pronounced trend away from early retirement over the 2001 to 2018 period than is evident for men. In the first sub-period, 83.3% of women who retired were under the age of 64, while in the most recent sub-period this proportion fell to 64.6%. Both on-time and late retirement have increased for women, but not in a linear fashion. Between the second and third sub-periods, on-time retirement increased substantially and late retirement decreased substantially, while between the third and fourth sub-periods on-time retirement decreased, and between the fourth and most recent sub-periods, on-time and late retirement both increased.

Table 9.4 examines the economic characteristics of male and female retirees immediately prior to retirement disaggregated by age category at the time of retirement (early, on time or late) and by time period (2001 to 2006 and 2013 to 2018). Specifically, characteristics are measured in the wave (year) immediately prior to the wave the individual was observed to have moved into retirement. For example, for individuals who were observed to retire between 2005 and 2006



Table 9.3: Age at retirement of retirees, by period in which they retired (%)

	2001 to 2004	2005 to 2008	2009 to 2012	2013 to 2015	2016 to 2018
<i>Men</i>					
Retired before age 64	63.6	53.5	54.2	50.0	51.4
Retired aged 64–67	16.0	23.5	17.8	27.7	29.4
Retired after age 67	20.4	23.0	28.0	22.4	19.2
Total	100.0	100.0	100.0	100.0	100.0
<i>Women</i>					
Retired before age 64	83.3	71.1	69.9	71.6	64.6
Retired aged 64–67	6.7	11.4	18.0	15.5	18.0
Retired after age 67	10.0	17.5	12.2	12.9	17.4
Total	100.0	100.0	100.0	100.0	100.0

Note: Cells may not add up to column totals due to rounding.

(the last year of the 2001 to 2006 period), their characteristics in 2005 are examined.

The first characteristic considered is partner status, since being partnered is generally associated with better economic circumstances (as shown, for example, in Figure 3.1 in Chapter 3). For men, those retiring aged 64 to 67 were the most likely to be partnered prior to retirement in the 2001 to 2006 period—90.1% were partnered, compared with 73.2% of those who retired early and 80.0% of those who retired late. However, in the 2013 to 2018 period, men aged over 67 at retirement were the most likely to be partnered. The proportion of men partnered has fallen markedly for both on-time and early retirees, from 73.2% to 59.8% for early retirees, and from 90.1% to 75.6% for on-time retirees. There has also been an increase in the proportion of late-retiring women who are partnered, rising from 47.8% to 59.7%, with declines in the proportion partnered among women retiring early and on time. These patterns suggest that late retirement is increasingly associated with more advantaged economic circumstances, while early retirement is increasingly associated with less advantaged circumstances.



Turning to housing tenure type, in the 2001 to 2006 period, home owners were most heavily represented among those retiring on time, for both men and women. Also evident is that men renting privately were most heavily represented among early retirees, while male renters of social housing were most heavily represented among late retirees. In the 2013 to 2018 period, home

ownership became more strongly associated with late retirement, less strongly associated with on-time retirement and less strongly associated with early retirement—particularly for men. Renting, whether private or social housing, became much more strongly associated with early retirement. For example, in 2013 to 2018, private renters accounted for 30.5% of male early retirees,

Table 9.4: Economic circumstances of retirees immediately prior to retirement, by age at retirement and period

	Retired between 2001 and 2006			Retired between 2013 and 2018		
	Aged under 64	Aged 64-67	Aged over 67	Aged under 64	Aged 64-67	Aged over 67
<i>Men</i>						
Proportion of all retirees (%)	61.7	17.5	20.8	50.4	29.7	19.9
Partnered (%)	73.2	90.1	80.0	59.8	75.6	83.8
<i>Housing tenure type (%)</i>						
Home owner	75.4	87.7	71.8	63.1	83.2	90.2
Private renter	17.6	8.9	15.3	30.5	14.3	6.7
Social housing	7.0	3.4	12.9	6.4	2.5	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
<i>Labour force status (%)</i>						
Employed full-time	30.7	37.3	16.0	21.4	36.3	18.0
Employed part-time	14.9	25.4	48.2	9.2	32.9	68.6
Unemployed	10.1	3.0	0.5	6.6	8.6	0.7
Not in the labour force	44.4	34.3	35.3	62.8	22.1	12.7
Total	100.0	100.0	100.0	100.0	99.9	100.0
Weekly wage of employed (\$, December 2018 prices)	1,255	880	498	1,560	1,319	960
Hourly wage of employed (\$, December 2018 prices)	33.90	32.82	35.15	44.81	39.81	46.89
In income poverty (%)	23.2	16.4	18.4	26.1	14.4	5.7
Equivalised income (\$, December 2018 prices)	41,758	41,007	38,203	47,260	56,780	67,554
Have home debt (%)	18.4	6.2	4.2	19.2	24.9	13.8
Mean home debt of those with debt (\$, December 2018 prices)	141,466	63,478	100,255	179,697	137,146	207,555
<i>Women</i>						
Proportion of all retirees (%)	73.8	8.0	18.2	66.2	18.7	15.2
Partnered (%)	75.8	73.2	47.8	71.3	67.9	59.7
<i>Housing tenure type (%)</i>						
Home owner	76.6	86.9	79.3	76.0	87.9	86.7
Private renter	13.2	13.1	10.4	17.4	9.2	9.2
Social housing	10.2	*0.0	10.3	6.6	2.8	4.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
<i>Labour force status (%)</i>						
Employed full-time	10.0	6.1	1.8	8.9	24.1	12.5
Employed part-time	23.7	45.1	25.2	22.4	40.8	60.7
Unemployed	1.5	2.7	0.7	3.7	1.5	0.8
Not in the labour force	64.8	46.1	72.4	64.9	33.4	25.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Weekly wage of employed (\$, December 2018 prices)	576	567	210	844	807	620
Hourly wage of employed (\$, December 2018 prices)	31.32	38.78	27.62	42.01	34.70	34.22
In income poverty (%)	20.1	18.5	24.5	16.3	15.9	8.3
Equivalised income (\$, December 2018 prices)	42,852	38,566	33,188	54,347	57,339	62,165
Have home debt (%)	20.0	2.2	4.5	33.4	17.2	3.7
Mean home debt of those with debt (\$, December 2018 prices)	148,103	61,635	177,810	360,882	177,062	166,095

Notes: * Estimate not reliable. Cells may not add up to column totals due to rounding.



compared with 14.3% of on-time retirees and 6.7% of late retirees; in the 2001 to 2006 period, the corresponding proportions were 17.6%, 8.9% and 15.3%.

Labour force status immediately prior to retirement differs considerably across early, on-time and late retirees. The majority of men and women who retired early were not employed prior to retirement in both periods examined. Full-time employment prior to retirement is most common for those who retire on time, with the exception that, for women who retired in the 2001 to 2006 period, full-time employment prior to retirement was most common for those who retired early. Among men who retired after age 67, part-time employment prior to retirement was common in 2001 to 2006, and became even more common in 2013 to 2018, applying to 68.6% of these retirees. Similarly, 60.7% of women who retired aged 67 and over in the 2013 to 2018

period were employed part-time immediately prior to retirement.

Mean weekly wage and salary earnings prior to retirement are lower the older the age at retirement. However, comparisons with hourly wages indicate that, for men, this is in part because of lower hours of work. This is particularly the case in respect of men who retire after age 67, who have the highest mean hourly wages in both of the periods examined in Table 9.4.

Comparisons of household equivalised income across the retiree groups (see Box 3.2, page 28) reveal a striking change between the 2001 to 2006 period and the 2013 to 2018 period. In the earlier period, for both men and women, mean incomes were highest for early retirees and lowest for late retirees; in the later period, the reverse is true. This is compelling evidence of the shift from early retirees tending to be the most economically advantaged in the early years of

this century, to them now tending to be the least advantaged; and, conversely, it is evidence of the shift from late retirees tending to be the least economically advantaged, to them now tending to be the most advantaged.

The final two rows of Table 9.4 examine the extent to which retirees carry mortgage debt into retirement. Here there are marked differences for men and women. For men, home debt increased considerably for all three retiree groups, with growth greatest for those retiring on time, followed by those retiring late. For women, those retiring early in 2001 to 2006 were much more likely to carry mortgage debt on their home than those in the other two retiree groups, and this group experienced very large growth in home debt. While home debt also grew substantially for women who retired on-time, for those retiring late, the proportion carrying debt, and the mean value of that debt, declined.



10

Religious belief and practice

Ferdi Botha

The HILDA Survey has collected information on religious belief and practice in 2004, 2007, 2010, 2014 and 2018. The questions administered to respondents identify religious affiliation, the importance of religion in one's life and the frequency of attendance at religious services. This chapter examines how religious belief and practice have changed in Australia in the 14 years between 2004 and 2018. The chapter also considers who commenced religious affiliation, who ceased religious affiliation, and how major life events and major changes in health and economic circumstances are related to commencement and ceasing of religious affiliation and to changes in the importance of religion in one's life.

Religious affiliation

Figure 10.1 shows the percentage of males and females with a religious affiliation for the period 2004 to 2018. Throughout the period, a larger proportion of females were religious than were males. Regardless of gender, there has also been a clear decline in the proportion of people with a religious affiliation over the period. In 2004, approximately 78% of females and 70% of males reported having a religion. These proportions declined steadily over time, and in 2018 around 63% of females and 56% of males had a religious affiliation.

When considering changes by birth cohort, shown in Figure 10.2, older cohorts have consistently higher proportions with a religious affiliation than younger cohorts. Nonetheless, the decline in religious affiliation since 2004 has occurred within all birth cohorts, the strongest decline in religious affiliation being among the 1980 to 1989 and 1990 to 1999 cohorts.

Figure 10.3 provides an interesting picture of the differences and changes in

religious affiliation according to social marital status. The widowed are consistently the most likely to report a religious affiliation, whereas the never married and those in de facto relationships are consistently the least likely. These patterns are mainly reflected in the age compositions of marital status groups as well, with most widowed individuals falling in the older birth cohorts and most of the younger cohorts being never married or in de facto relationships. As with the trends observed by sex and birth



Figure 10.1: Proportion of people with a religious affiliation

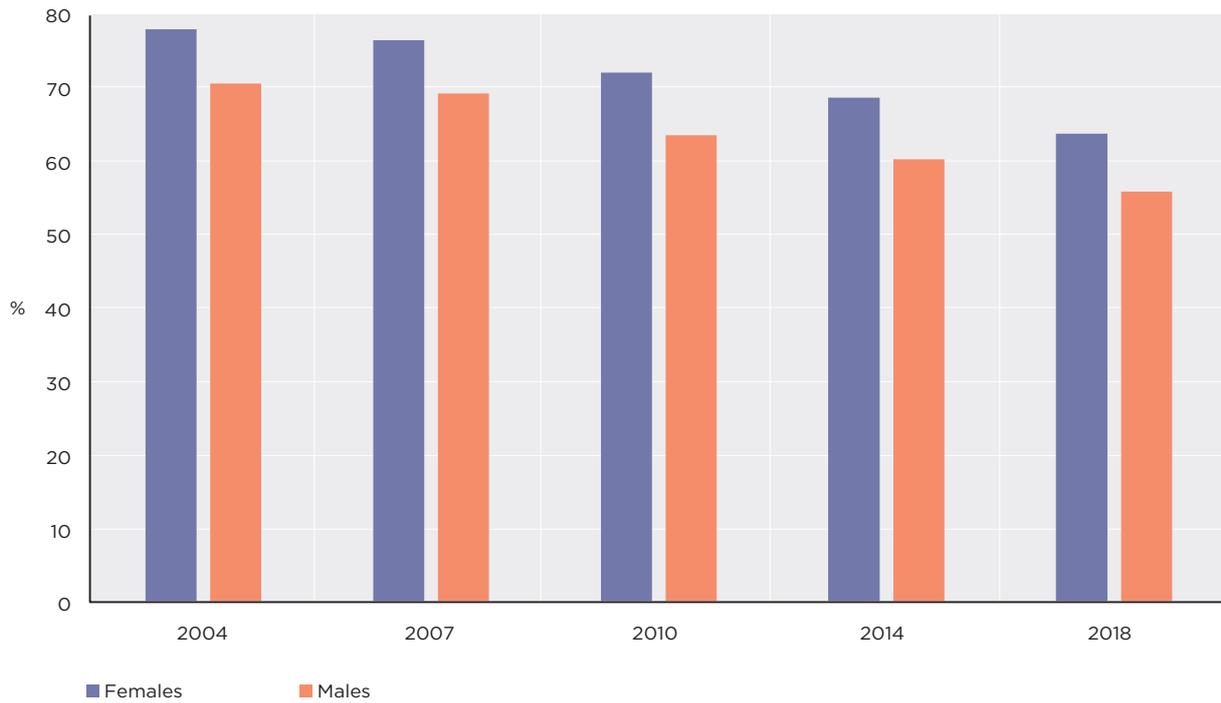
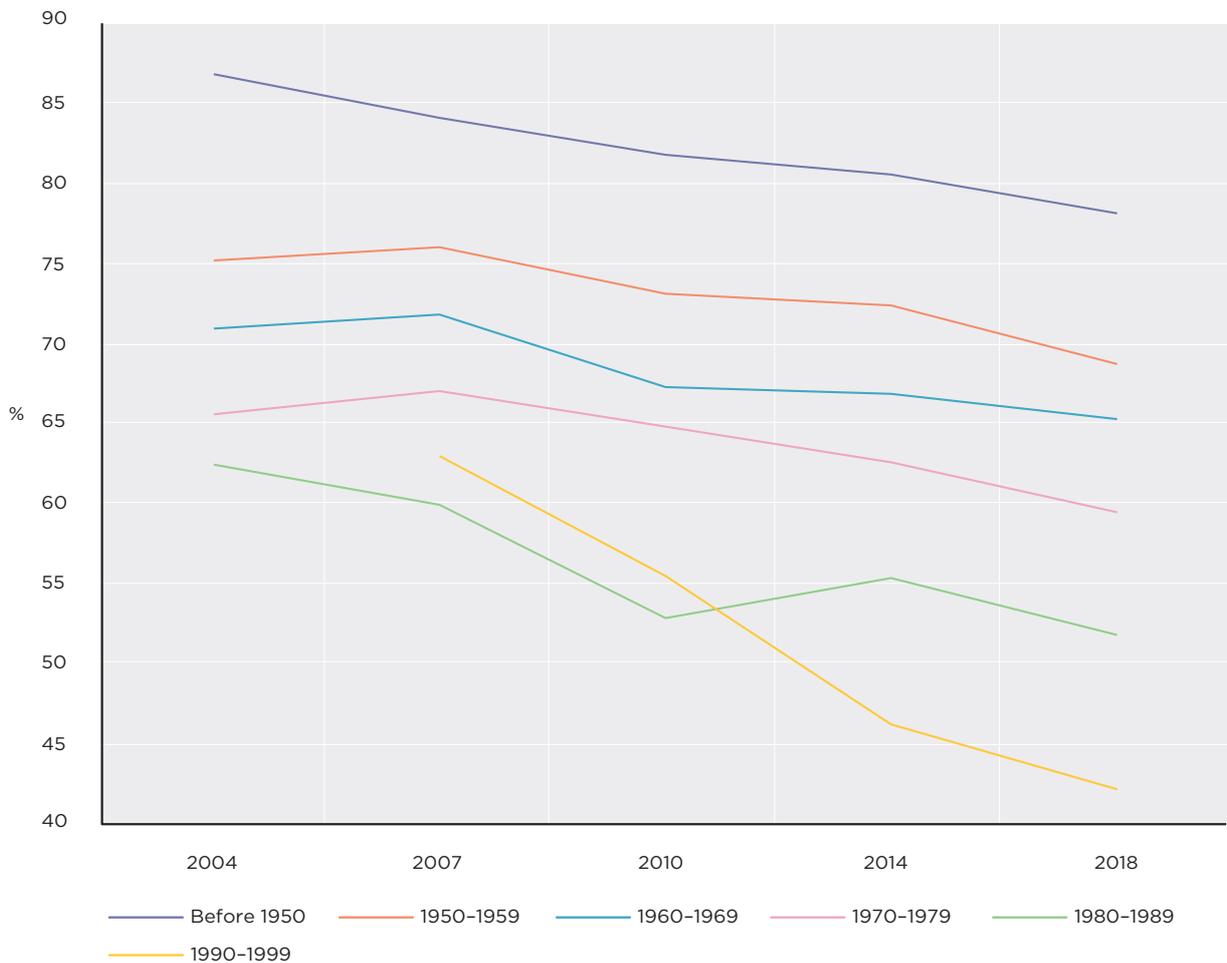


Figure 10.2: Proportion of people with a religious affiliation, by birth cohort



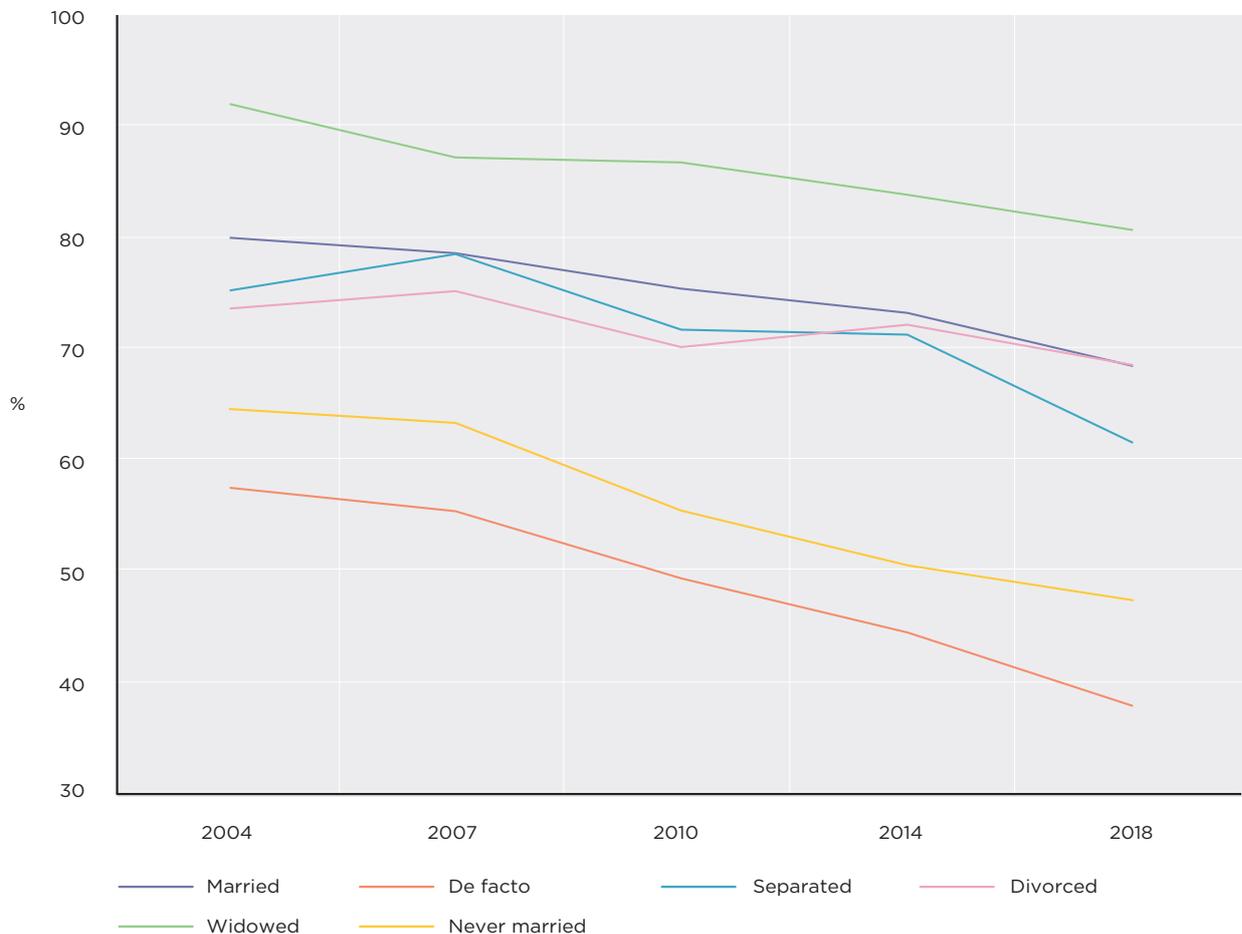


cohort, the percentage of people with a religious affiliation in each marital status group has also declined over time, and the largest declines are among the never married and people in de facto relationships.

Considering in more detail changes in the types of religious affiliation, Table 10.1 reports the proportion of people aged 15 and over according to reported religious affiliation for both 2004 and 2018. In 2004, the

dominant religion was Christianity, being the religion for 69.3% of all people aged 15 and over. The prevalence of Christianity has dropped substantially since 2004, however, as in 2018 just over

Figure 10.3: Proportion of people with a religious affiliation, by marital status



half (51.1%) of all people aged 15 and over identified as Christian. This is a significant change, and is evident for both males and females. The drop in Christianity has been accompanied by large increases in the number of people with no religion. For example, whereas about a quarter of people had no religion in 2004, by 2018 those with no religion made up almost 40% of the

population. There have also been increases in other religions (such as Buddhism and Islam, for example) and in non-disclosure of religion. Most of the decline in religious affiliation, though, is because of people who previously were Christian switching to having no religion.

Table 10.1 also shows clear differences in patterns across age

groups. Larger proportions of Christians are in the older age groups, whereas the largest proportions of those with no religion are in the younger age groups. Regardless of age group, however, from 2004 to 2018 the proportion of people identifying as Christians declined by roughly 15 percentage points, with a comparable rise in the proportion of people with no religion.

Table 10.1: Religious affiliation of individuals aged 15 and over, 2004 and 2018 (%)

	2004				Total	2018				
	Christian	Other religion	No religion	Not stated		Christian	Other religion	No religion	Not stated	
All people	69.3	4.4	25.4	1.0	100.0	51.1	7.6	39.7	1.6	100.0
Sex										
Males	65.4	4.4	29.2	1.0	100.0	47.3	7.4	43.7	1.6	100.0
Females	72.9	4.4	21.7	0.9	100.0	54.7	7.8	35.9	1.6	100.0
Age group										
15-44	60.9	5.6	32.8	0.7	100.0	38.9	9.9	49.2	2.0	100.0
45-64	74.8	3.6	20.8	0.9	100.0	57.9	6.4	34.6	1.1	100.0
65 and over	86.7	2.2	9.2	1.9	100.0	71.5	3.7	23.2	1.6	100.0

Note: Cells may not add up to row totals due to rounding.



Importance of religion

Importance of religion is measured by responses to the question *How important is religion in your life?*, where respondents were asked to provide a rating between zero (one of the least important things in my life) and 10 (the most important thing in my life). The average level of and changes in the importance of religion in one's life, disaggregated by sex and age, are shown in Table 10.2. When considering people irrespective of religious affiliation, from 2004 to 2018 the mean importance attached to religion declined across all age groups

and among both males and females. For people with a religious affiliation, there were some increases in the importance of religion. For instance, for males (females) the average increased from 4.5 (5.4) points in 2004 to 4.8 (5.5) points in 2018. Of note, however, is that average religious importance is very low (around 4.5 to 5.5 on the 0-10 scale), even among individuals with a religious affiliation.

Frequency of attendance at religious services

Frequency of attendance at religious services (excluding

ceremonies such as weddings and funerals) is examined in Table 10.3, which presents the frequency of attendance at religious services for 2004 and 2018 disaggregated by sex and age. As we would expect from the declining trends in religious affiliation and general importance attached to religion, the frequency of attending religious services has also decreased. In 2004, approximately 49.8% of males and 40.3% of females never attended any services, which increased to 56.6% and 49.6%, respectively, in 2018. Furthermore, 17.4% of men aged 65 and over attended religious services at least once per week in 2004; by 2018, 13.9% of men in this age category did so.

Table 10.2: Mean importance of religion by sex and age group, 2004 and 2018 (0-10 scale)

	2004				2018			
	15-44	45-64	65 and over	All aged 15 and over	15-44	45-64	65 and over	All aged 15 and over
<i>Males</i>								
All males	3.0	3.6	4.3	3.4	2.7	2.9	3.6	3.0
Males with religious affiliation	4.3	4.5	4.8	4.5	5.2	4.4	4.8	4.8
<i>Females</i>								
All females	3.9	4.7	5.9	4.5	3.3	3.8	4.8	3.7
Females with religious affiliation	5.1	5.5	6.3	5.4	5.5	5.2	5.8	5.5

Table 10.3: Frequency of attendance at religious services by sex and age group, 2004 and 2018 (%)

	2004				2018			
	15-44	45-64	65 and over	All aged 15 and over	15-44	45-64	65 and over	All aged 15 and over
<i>Males</i>								
Never	52.4	48.2	43.7	49.8	58.2	56.8	52.2	56.6
Once a year or less	21.6	25.3	25.0	23.3	17.6	21.0	20.6	19.2
Several times per year	11.2	8.0	8.6	9.8	9.7	9.3	8.4	9.3
1-3 times per month	4.6	5.8	5.3	5.1	4.7	4.0	4.9	4.5
At least once per week	10.3	12.7	17.4	12.1	9.8	9.0	13.9	10.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Females</i>								
Never	43.5	39.9	30.6	40.3	52.6	49.5	42.0	49.6
Once a year or less	23.3	24.9	25.2	24.1	18.2	21.1	23.7	20.2
Several times per year	13.7	11.3	12.4	12.8	12.8	10.9	8.8	11.4
1-3 times per month	7.0	7.2	6.7	7.0	5.0	6.2	6.5	5.7
At least once per week	12.5	16.7	25.3	15.9	11.5	12.3	19.1	13.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Cells may not add up to column totals due to rounding.

Who is most likely to be religious?

This section considers the association between personal characteristics and whether one has a religious affiliation. Table 10.4 presents the results of the Probit regression analysis in the form of mean marginal effects. In the case of indicator variables (such as educational attainment, disability status and birth cohort), these estimates are interpreted as the change in the probability of being religious if the characteristic is present compared to the reference category. In the case of continuous variables (such as household equivalised disposable income), the estimates designate the effect of a one-unit increase in this variable on the probability of having a religious affiliation.

Consistent with the descriptive results presented in Figure 10.2, individuals in younger birth cohorts are substantially less likely to be religious as compared to those in older birth cohorts. For instance, compared to females in the pre-1950 cohort, females in the 1980 to 1989 and

1990 and later cohorts are respectively 18.5 percentage points and 24.1 percentage points less likely to be religious. The results are similar for males, with the pre-1950 cohort being more likely to have a religious affiliation than all the other birth cohorts. Higher education is associated with a lower probability of having a religious affiliation with, for instance, males with at least a bachelor's degree about 6.4 percentage points less likely to be religious than those with an education level of Year 11 or below.

Compared to married individuals, those who are in de facto relationships, divorced and never married are less likely to have a religious affiliation. Widowed women are more likely than married women to be religious, whereas separated men are less likely than married men to report a religious affiliation. The differences in marital status are particularly strong between married and de facto partnerships; for both men and women, those in de facto relationships are about 19 percentage points less likely to be religious when compared to married people.

Having a moderate or severe disability is associated with a lower likelihood of having a religious affiliation among males, whereas there is no significant association between religious status and employment status. Household equivalised income is not related to religiosity for females, but for males a \$100,000 increase in income is associated with a 0.2 percentage-point lower probability of reporting a religious affiliation.

People who have children are more likely to report being religious as compared to people without children, and there is no evidence of an association between religious affiliation and Indigenous status. Immigrants from the main English-speaking countries are about 14 to 15 percentage points less likely to report a religious affiliation than other immigrants. Finally, the year indicators suggest that having a religious affiliation was more likely in 2004 than in 2010, 2014 and 2018. For example, holding constant other factors, the probability of having a religious affiliation was 9.2 percentage points lower in 2018 than in 2004 for females, and 9.9 percentage points lower for males.





Table 10.4: Predictors of having a religious affiliation—People aged 15 and over

	Females	Males
<i>Birth cohort (Reference category: Before 1950)</i>		
1950–1959	–0.092	–0.066
1960–1969	–0.105	–0.133
1970–1979	–0.156	–0.146
1980–1989	–0.185	–0.218
1990 and later	–0.241	–0.236
<i>Educational attainment (Reference category: Less than high school completion)</i>		
Bachelor's degree or higher	–0.039	–0.064
Other post-school qualification	–0.024	<i>ns</i>
Completed high school	–0.035	<i>ns</i>
<i>Marital status (Reference category: Married)</i>		
De facto	–0.192	–0.193
Separated	<i>ns</i>	–0.042
Divorced	–0.038	–0.069
Widowed	0.035	<i>ns</i>
Never married and not in de facto relationship	–0.061	–0.095
Moderate or severe disability	<i>ns</i>	–0.019
<i>Labour force status (Reference category: Unemployed)</i>		
Employed	<i>ns</i>	<i>ns</i>
Not in the labour force	<i>ns</i>	<i>ns</i>
Household equivalised income (\$'00,000, December 2018 prices)	<i>ns</i>	–0.002
Has children	0.016	0.028
Immigrant from country other than the main English-speaking countries	0.139	0.149
Indigenous	<i>ns</i>	<i>ns</i>
<i>Year (Reference category: 2004)</i>		
2007	<i>ns</i>	<i>ns</i>
2010	–0.034	–0.045
2014	–0.055	–0.066
2018	–0.092	–0.099
Number of observations	34,027	29,953

Notes: Table presents mean marginal effects from Probit regression models of the determinants of having a religious affiliation. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Individual-level changes in religious beliefs and practice

Table 10.5 lists the proportions of individuals who, between 2004 and 2018, reported changes in their religious affiliation, the importance of religion in their lives and the frequency of attending religious services. Approximately 5% of males took up a religious affiliation between 2004 and 2018 (thus, they had no religion in 2004 and had a

religion in 2018), compared to 4% of females. Of males who had a religious affiliation in 2004, 13.7% ceased having an affiliation by 2018; for females, the corresponding proportion is 11.1%. Not surprisingly, a much greater proportion of people ceased having a religious affiliation than commenced a religious affiliation.

Among males aged 15 to 44, 37.5% reported a drop in the importance of religion over the 14-year period, whereas 19.7% reported an increase in importance. Similar patterns are evident for females. Overall, for most people, the importance of

religion decreased rather than increased over the period under consideration. Not surprisingly, decreases in religious service attendance were more prevalent than increases in attendance of religious services. For example, for males with a religious affiliation in 2004, 28.1% decreased their frequency of attendance, whereas 13.8% increased their frequency of attendance. For females, 32.2% decreased their frequency of attendance at services compared to 16.1% for whom the frequency of attendance at religious services increased.



Table 10.5: Individual changes in religious belief, its importance and attendance at services, 2004 to 2018, by sex and age group (%)

	Males				Females			
	15-44	45-64	65 and over	All aged 15 and over	15-44	45-64	65 and over	All aged 15 and over
<i>Religious affiliation</i>								
Commenced religious affiliation	6.3	6.5	2.9	5.3	4.1	4.9	2.6	4.0
Ceased religious affiliation	19.3	11.0	10.2	13.7	17.4	10.3	7.6	11.1
<i>Change in importance of religion, for people with an affiliation in 2004</i>								
Increase in importance	19.7	23.8	25.4	23.4	20.1	25.4	27.2	24.8
Decrease in importance	37.5	34.1	35.1	35.2	40.1	38.5	35.1	38.1
<i>Frequency of attendance at services, for people with an affiliation in 2004</i>								
Increase in frequency	13.6	13.3	14.8	13.8	15.6	15.4	17.5	16.1
Decrease in frequency	30.5	27.0	28.0	28.1	31.5	33.7	30.6	32.2

Association between major life changes and religious beliefs

Table 10.6 considers different major health-related changes between 2004 and 2018 and how such events are associated with commencement and termination of religious affiliation, as well as average changes in the importance of religion in relation to each event experienced.

There is no clear pattern between health changes and take-up of religion for males, although the commencement of religion was higher for those whose mental

health deteriorated, and general health improved, when compared to religion commencement among all males. Compared to take-up of religion for all females (4.0%), the rate of take-up of religion was much higher for females who became non-disabled (5.5%) or had improvements in general health (7.8%) and physical functioning (7.3%).

For males, rates of cessation of religious affiliation were relatively high for all health-related changes other than becoming non-disabled and changes in physical functioning. Males whose mental health deteriorated had the highest rate of cessation (17.8%). For females, cessation

rates were relatively high for those with improvements in general health, mental health and physical functioning, and those who acquired a disability also had a relatively high rate of cessation.

The importance of religion declined for all males and all females, regardless of the health change experienced. For males, changes in religious importance were largest for those whose mental health deteriorated and who experienced improvements in physical functioning. For females, those who had large improvements in mental health and physical functioning reported the largest declines in the importance of religion.

Table 10.6: Association between health-related changes and changes in religious belief—People aged 15 and over, 2004 to 2018

	Experienced the event (%)	Changes in religious affiliation among those experiencing the event		
		Commenced religious affiliation (%)	Ceased religious affiliation (%)	Mean change in importance (0–10 scale)
<i>Males</i>				
Acquired a disability	19.5	4.7	13.4	–0.2
General health deteriorated	20.6	5.3	13.4	–0.4
Mental health deteriorated	12.5	5.6	17.8	–0.6
Physical functioning deteriorated	19.6	5.3	12.3	–0.3
Became non-disabled	6.6	4.7	9.1	–0.4
General health improved	6.9	6.3	14.9	–0.5
Mental health improved	10.6	4.8	15.0	–0.5
Physical functioning improved	6.2	5.3	8.9	–0.6
All males	–	5.3	12.7	–0.3
<i>Females</i>				
Acquired a disability	20.8	2.4	11.9	–0.3
General health deteriorated	20.8	4.4	10.5	–0.3
Mental health deteriorated	12.7	4.1	8.5	–0.4
Physical functioning deteriorated	21.4	2.9	8.2	–0.4
Became non-disabled	5.8	5.5	9.0	–0.4
General health improved	8.5	7.8	12.0	–0.4
Mental health improved	11.9	4.1	11.6	–0.5
Physical functioning improved	6.2	7.3	11.7	–0.7
All females	–	4.0	11.1	–0.4

Notes: 'Experienced the event': Proportion of people who experienced the health-related change between 2004 and 2018. 'Acquired a disability': Did not have a disability in 2004 and had a disability in 2018; 'Became non-disabled': Did not have a disability in 2018 and had a disability in 2004; 'General health deteriorated': SF-36 measure of general health was at least 20 points lower in 2018 than in 2004; 'General health improved': SF-36 measure of general health was at least 20 points higher in 2018 than in 2004; 'Mental health deteriorated': SF-36 measure of mental health was at least 20 points lower in 2018 than in 2004; 'Mental health improved': SF-36 measure of mental health was at least 20 points higher in 2018 than in 2004; 'Physical functioning deteriorated': SF-36 measure of physical functioning was at least 20 points lower in 2018 than in 2004; 'Physical functioning improved': SF-36 measure of physical functioning was at least 20 points higher in 2018 than in 2004.



Take-up and cessation of religious affiliation, as well as changes in the importance of religion, are presented in Table 10.7 for people who experienced major economic changes between 2004 and 2018. For males, the highest take-up of religion was among those whose income ranking increased (8.5%) and those who became unemployed (6.8%), and was lowest for those who became employed (2.6%).

The highest rate of take-up of religion among females was for those people who became unemployed (7.1%). There are no

distinct patterns when considering cessation of religion and its association with major economic changes, but for both males and females, apart from a fall in income rank, the cessation of religion is at least 10% for all other economic changes. About 18.6% and 17.5% of males who ceased income support and became employed, respectively, ceased religious affiliation. Among females, 16.6% of people who became unemployed ceased religious affiliation, but also of note is that 15.1% who became employed ceased religion as well.

As with health-related changes, all groups examined in Table 10.7 reported a decrease in the mean importance of religion, irrespective of the economic changes experienced. The largest decline in religious importance among males was for those who became employed, followed by those who ceased income support receipt. For females, those who ceased income support receipt had the largest decline in average religious importance, followed by people whose income rank increased and those who became unemployed.

Table 10.7: Association between major changes in economic circumstances and changes in religious belief—People aged 15 and over, 2004 to 2018

	Experienced the event (%)	Commenced religious affiliation (%)	Ceased religious affiliation (%)	Mean change in importance (0–10 scale)
<i>Males</i>				
Income ranking rose	21.7	8.5	16.0	-0.4
Income ranking fell	26.3	5.8	9.6	-0.2
Ceased income support receipt	4.4	3.4	18.6	-0.6
Commenced income support receipt	13.5	5.9	12.3	-0.3
Became unemployed	11.9	6.8	14.4	-0.3
Became employed	5.5	2.6	17.5	-1.0
Became not employed	21.9	4.3	11.0	-0.2
All males	–	5.3	12.7	-0.3
<i>Females</i>				
Income ranking rose	21.2	4.1	12.6	-0.6
Income ranking fell	26.6	4.0	9.1	-0.3
Ceased income support receipt	7.2	2.7	13.3	-0.7
Commenced income support receipt	14.4	3.1	10.1	-0.4
Became unemployed	7.7	7.1	16.6	-0.6
Became employed	12.7	2.6	15.1	-0.4
Became not employed	20.6	2.7	10.7	-0.2
All females	–	4.0	11.1	-0.4

Notes: 'Experienced the event': Proportion of people who experienced the economic change indicated by the row heading; 'Income ranking rose (fell)': A rank in the distribution of equivalised household disposable income was at least 20 percentiles higher (lower) in 2018 than in 2004; 'Ceased income support receipt': On income support in 2004 and not on income support in 2018; 'Commenced income support receipt': Not on income support in 2004 and on income support in 2018; 'Became unemployed': Not unemployed in 2004 and became unemployed at any stage between 2004 and 2018; 'Became employed': Not employed in 2004 and employed in 2018; 'Became not employed': Employed in 2004 and not employed in 2007.

Association between major life events and religious belief

Figure 10.4 plots the proportion of individuals who commenced and ceased religious affiliation among those who experienced major life events between 2004 and 2018. For comparison, the top two bars provide these proportions for the entire population.

Regardless of the life event, in all cases people were more likely to cease religion than take it up. The highest rates of cessation of religious affiliation were among

those who experienced a pregnancy or birth, people who separated from their partner or people who were retrenched. The highest rates of take-up of religion were among people who were victims of violence as well as among those who were promoted at work. Individuals who retired and those who became partnered had very low levels of commencement of religious affiliation.

Similar to Figure 10.4, Figure 10.5 plots the mean change in the *importance* of religion in the 14 years for people who experienced major life events. Individuals who were victims of violence reported the highest increase in religious importance, although this

increase was still small compared to the magnitudes of declines in importance of religion. Increases in religious importance also occurred for those who experienced the death of a spouse or child, those who retired or those whose finances worsened substantially; however, these changes are very small.

Consistent with the high rates of ceasing religious affiliation among people who became partnered, separated, or experienced pregnancy or the birth of a child, the declines in importance of religion were also highest for these groups. Declines in religious importance were also relatively large for people who were promoted.

Figure 10.4: Take up and cessation of religious affiliation between 2004 and 2018, by major life events

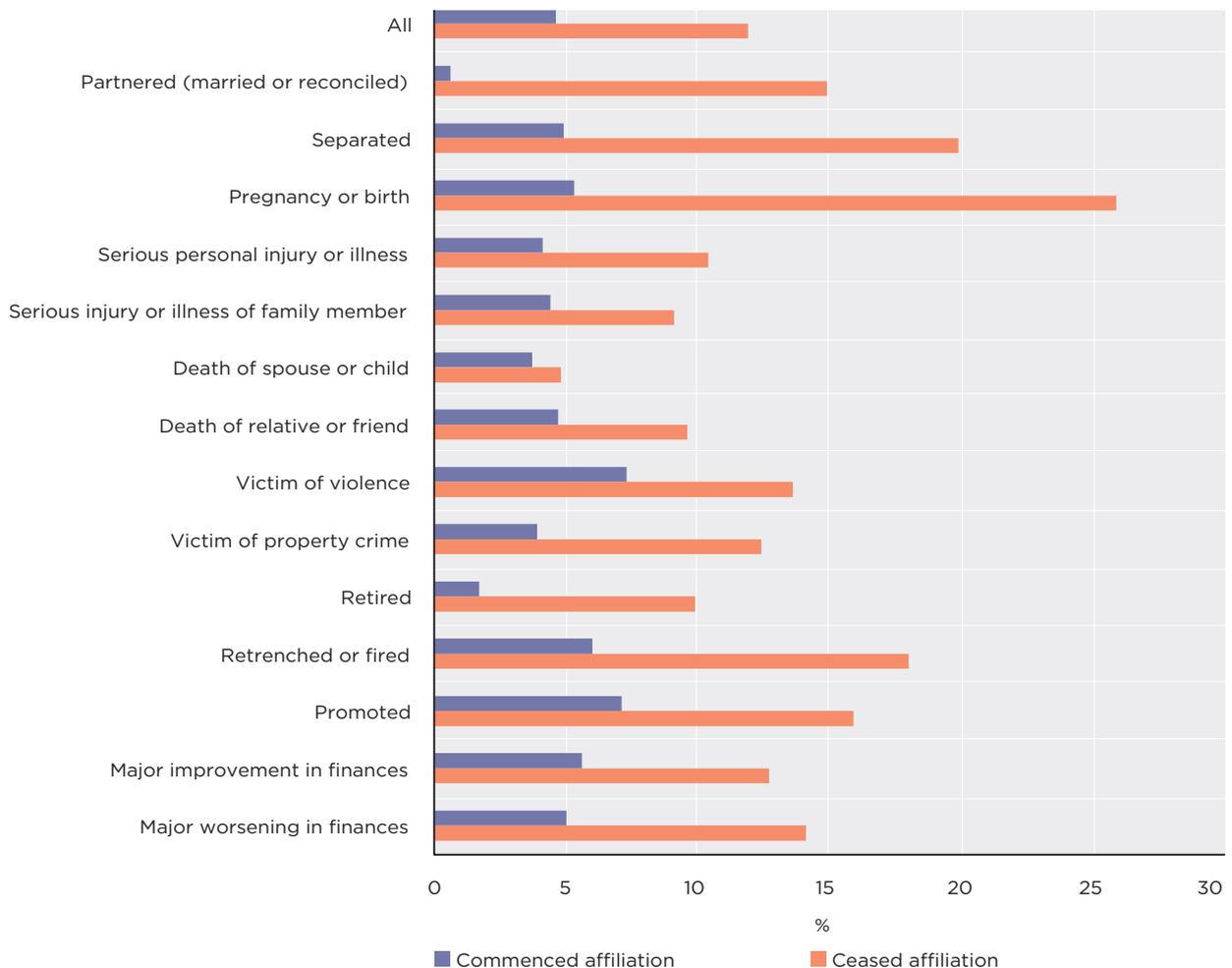
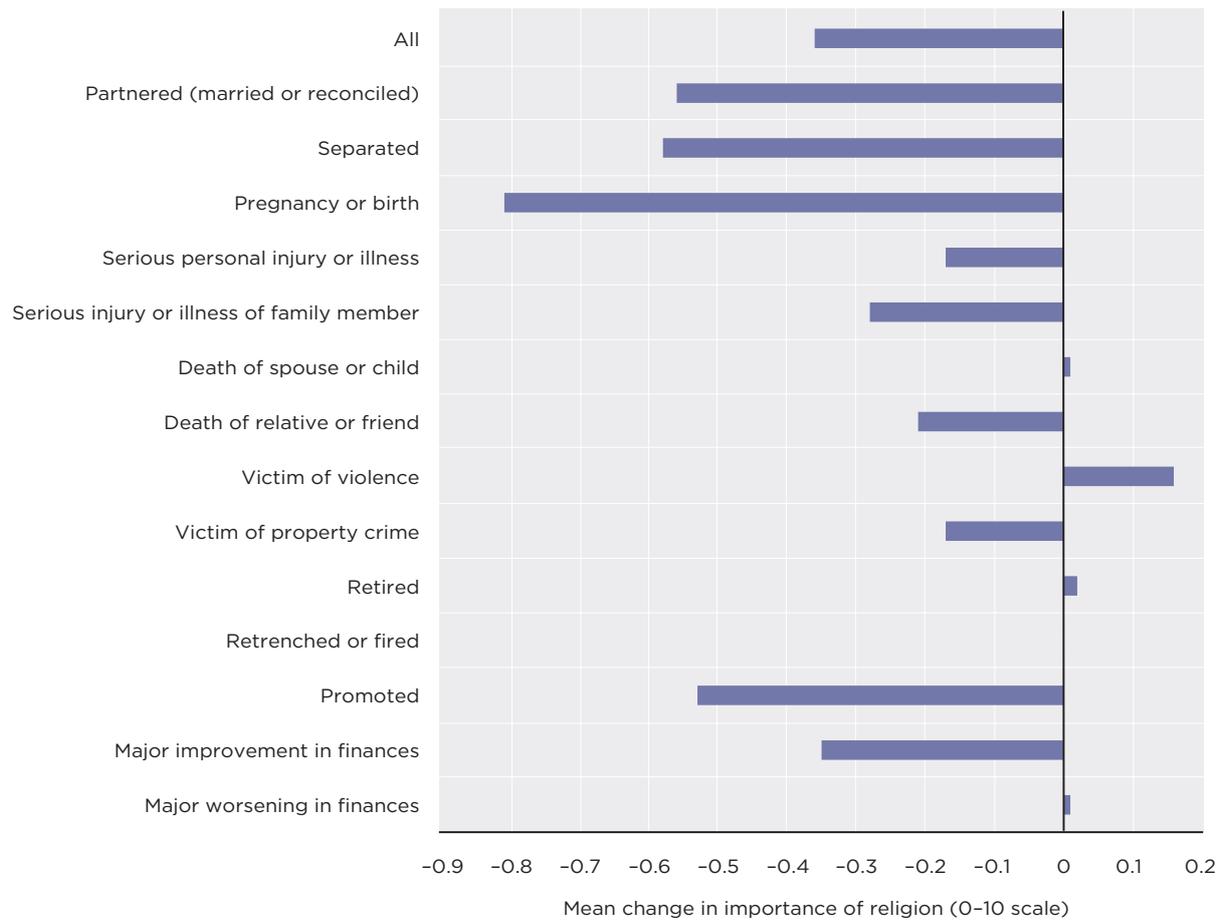


Figure 10.5: Mean change in the importance of religion between 2004 and 2018, by major life events



11

Pet ownership

Ferdi Botha and Roger Wilkins



Many people consider their pets part of the family. Pets can contribute to individuals' wellbeing, perhaps both negatively and positively, and knowledge of pet ownership can be important to understanding decision making of individuals, such as on where they live, work and holiday. In Wave 18, for the first time the HILDA Survey included new questions in the self-completion questionnaire on pet ownership. This includes whether people have pets or not and, if they do, what kinds of pets they have. This chapter reports the patterns of pet ownership and explores which individuals are more likely to own a pet. We additionally consider how pet ownership is associated with the individual wellbeing outcomes of life satisfaction, mental health and general health.

Extent of pet ownership in Australia

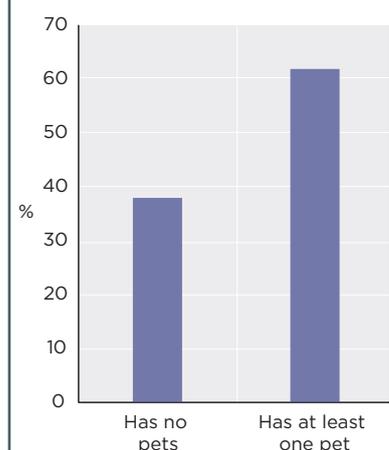
Figure 11.1 shows that pet ownership in Australia is quite high, with almost 62% of people owning at least one pet. For people who report owning a pet, Figure 11.2 reports the proportion of individuals owning each type of pet. Note that these categories are not mutually exclusive, since a person may own more than one type of pet.

Among pet-owning individuals, dogs are by far the most popular. Almost 72% of pet-owning people—or 48% of all people—have a dog. Cats are the next most popular pet, with approximately 37% of pet-owning people having a cat, while 16% have a bird, 18% have a fish, 3.6% have a horse and 17% have some other type of pet.

It is not possible to ascertain exactly how many pets an

individual owns. For example, a person classified as owning a dog may own more than one dog. We can, however, examine the number of pet types a person has. We can also infer that a person owning two types of pet has at least two pets, a person owning three types of pet has at least three pets, and so on. Figure 11.3 shows the distribution of the number of pet types for

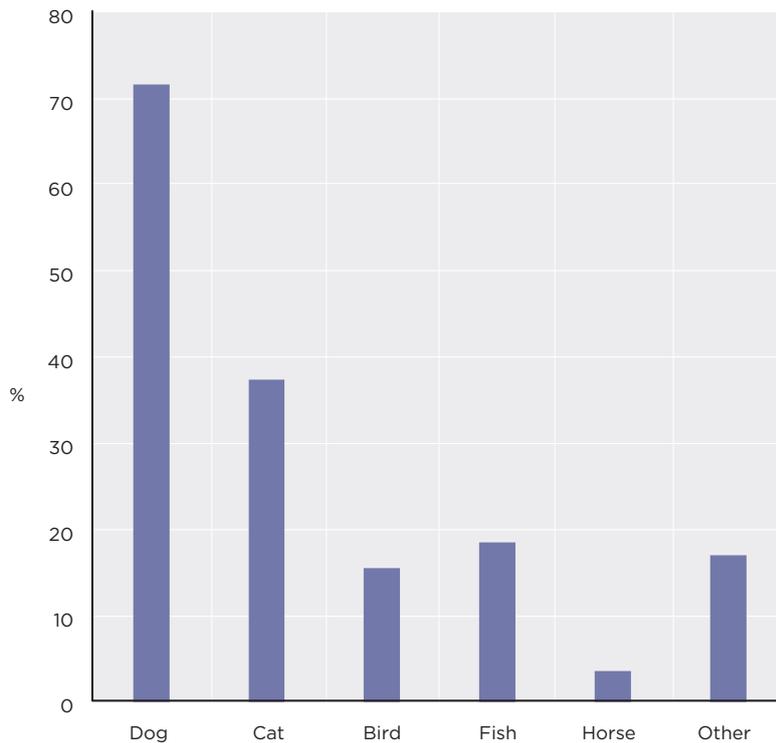
Figure 11.1: Pet ownership



Box 11.1: Measurement of pet ownership

To measure pet ownership, in the self-completion questionnaire, respondents were asked: *Do you have any pets?* In the case of a 'Yes' answer, respondents could state whether they owned a dog, cat, bird, fish, horse or other type of animal. In this report, a person is deemed to own a pet if anyone in the household reports owning a pet, and the person is deemed to own a particular type of pet if anyone in the household reports owning that type of pet.

Figure 11.2: Types of pets owned by pet owners



Note: Columns add up to more than 100% because a household can own multiple pet types.

pet-owning individuals. Approximately 59% of pet owners have only one type of pet, while 24% have two types of pet and 17% have three or more pet types.

Who is most likely to own a pet?

Table 11.1 examines how personal characteristics differ between pet owners and those who do not own pets. In addition, given that the majority of pet owners have dogs and/or cats, we also compare the characteristics of dog owners who do not have a cat (but may include other pet types) with the characteristics of cat owners who do not have a dog (but may include other pet types).

Pet ownership is more prevalent among people aged under 65

Figure 11.3: Number of types of pet owned by pet owners

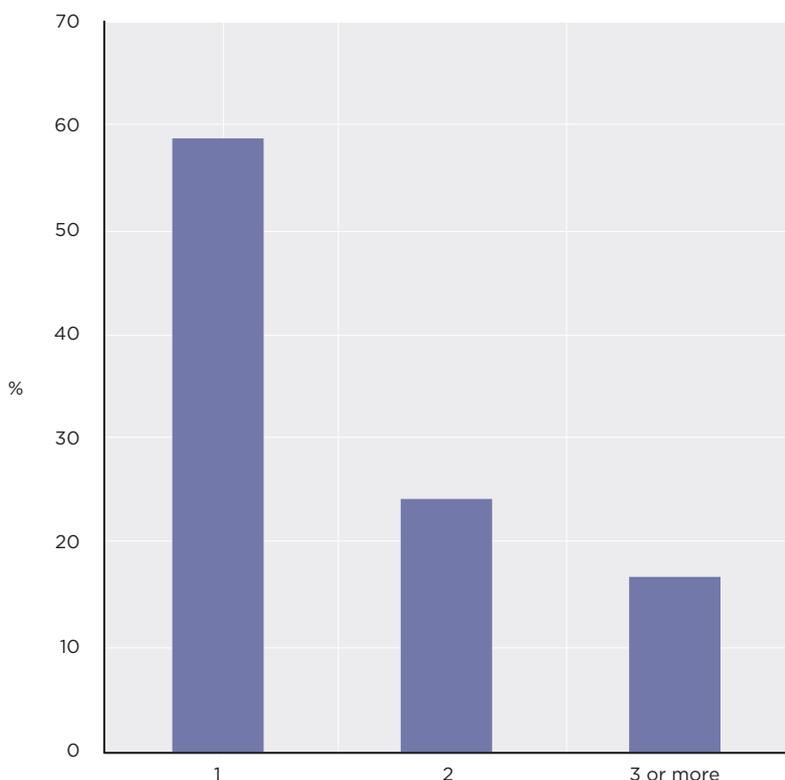


Table 11.1: Personal characteristics of individuals by pet ownership status

	No pets	Pets	Dog, no cat	Cat, no dog
<i>Age group (%)</i>				
Under 15	17.9	20.4	20.1	18.2
15-24	9.8	14.9	14.9	12.8
25-34	14.5	13.4	14.5	14.3
35-44	13.9	12.8	12.4	13.1
45-54	9.6	15.2	14.7	14.1
55-64	11.8	12.1	13.2	12.9
65 and over	22.5	11.1	10.2	14.6
Total	100.0	100.0	100.0	100.0
Mean household equivalised income (\$, December 2018 prices)	56,408	57,418	59,729	55,563
<i>Region of residence (%)</i>				
Major urban area	80.8	67.8	68.0	73.3
Other urban area	13.1	21.3	20.3	18.3
Non-urban area	6.1	10.9	11.6	8.5
Total	100.0	100.0	100.0	100.0
<i>Gender (%)</i>				
Males	50.4	48.7	50.3	53.2
Females	49.6	51.3	49.7	46.8
Total	100.0	100.0	100.0	100.0
Any children in household (%)	40.4	46.1	31.7	26.3
<i>Housing type (%)</i>				
Separate house	70.3	90.0	91.4	83.9
Semi-detached house	3.9	3.0	2.7	3.7
Flat	19.0	4.6	3.3	9.0
Other house type	6.8	2.5	2.5	3.5
Total	100.0	100.0	100.0	100.0
<i>Housing tenure type (%)</i>				
Rent privately	31.8	23.4	21.3	32.1
Rent social housing	3.3	2.9	2.6	3.4
Owner with mortgage	32.2	45.6	47.8	34.3
Owner outright	32.7	28.1	28.3	30.3
Total	100.0	100.0	100.0	100.0
<i>Family type (%)</i>				
Non-elderly couple	16.4	19.6	21.5	20.6
Couple with dependent children	36.8	46.2	46.0	37.6
Single parent	6.2	7.8	7.2	9.9
Single non-elderly male	12.3	9.0	9.6	10.0
Single non-elderly female	7.5	7.9	7.3	9.1
Older couple	12.9	6.1	5.6	7.3
Single older male	2.7	0.9	0.9	1.2
Single older female	5.1	2.6	2.2	4.3
Total	100.0	100.0	100.0	100.0
<i>State or territory (%)</i>				
New South Wales	36.0	28.7	29.6	26.0
Victoria	24.9	26.6	25.2	29.0
Queensland	19.3	20.8	21.7	19.5
South Australia	6.0	8.0	7.0	9.1
Western Australia	9.7	11.1	11.6	11.8
Tasmania	1.7	2.6	2.4	2.0
Northern Territory	0.5	0.7	0.7	0.8
Australian Capital Territory	1.9	1.6	1.8	1.9
Total	100.0	100.0	100.0	100.0

Note: Cells may not add up to column totals due to rounding.

than among people aged 65 and over. People aged under 25 or 45 to 54 are particularly likely to be pet owners: people aged 15 to 24 account for 9.8% of people who do not own pets, but 14.9% of pet owners, while people aged 45 to 54 account for 9.6% of people who do not own pets, but 15.2% of pet owners. By contrast, people aged 65 and over account for 22.5% of non-pet owners but only 11.1% of pet owners. Also evident in the table is that older age groups have relatively high proportions owning cats (and no dogs) and relatively low proportions owning dogs.

Equivalised income (see Box 3.2, page 28) is slightly higher among pet owners. People with a dog (and no cat) have a mean equivalised income of just under \$60,000, whereas it is roughly \$55,600 for those with a cat (and no dog). Approximately 80.8% of people without pets live in major urban areas, compared to about 68% of pet owners. A slightly higher percentage of individuals with cats than with dogs live in major urban areas. Among people with pets, about 46% have children, whereas 36.8% of non-pet-owning people have children.

Unsurprisingly, 90% of pet owners reside in separate houses, and dogs are also more common than cats in separate houses. In contrast, 19% of people with no pets live in flats, and the proportion of cats is larger for people in a flat. Among people

with no pets, 31.8% are renting and 32.7% own their house outright. Approximately 45.6% of pet owners own their house with a mortgage. The majority of pet owners are young couples and couples with dependent children. In households that have a dog, 46% are couples with dependent children. Finally, about 70% of pet owners reside in New South Wales, Victoria and Queensland. Moreover, 29.6% of dog owners live in New South Wales, compared to 26% of cat-owners who live in the same state.

To more formally explore the likelihood of owning a pet, given certain household and individual characteristics, Table 11.2 presents the results from Probit models in which we regress individual pet ownership status on selected characteristics. The second column of Table 11.2 considers the probability of owning any type of pet within the entire sample, whereas the third column considers only pet owners and reports the factors associated with the likelihood of owning a cat rather than a dog.

Older people are significantly less likely to own pets. For example, those aged 65 and over are 17 percentage points less likely to own pets as compared to people aged 15 to 24. Older people are more likely to own a cat than a dog with, for example, those aged 65 and over being 10.9 percentage points more likely to own a cat than a dog.

People with higher equivalised income are more likely to own pets, and cat ownership is less likely than dog ownership among higher-income individuals. People residing in major urban areas are 11.8 percentage points less likely to own pets relative to people in non-urban areas. People who rent are significantly less likely to own a pet when compared to those in social housing, those holding a mortgage and those owning their house outright. As expected, individuals in freestanding houses are more likely to own pets as opposed to those in semi-detached houses, flats and other house types. There is little evidence of an association between family type and pet ownership.

Compared to non-urban people, people in major urban areas are 6.9 percentage points more likely to have a cat than a dog. People who rent are more likely to own cats as compared to all other housing groups. As we would expect, relative to those in freestanding houses, people living in a flat are 28.1 percentage points less likely to own pets, and those in flats that do own pets are 14.5 percentage points more likely to own a cat than a dog. There is not much evidence of a relationship between pet-ownership status and family type, although compared to young couples, single non-elderly males and elderly couples are less likely to own a pet.

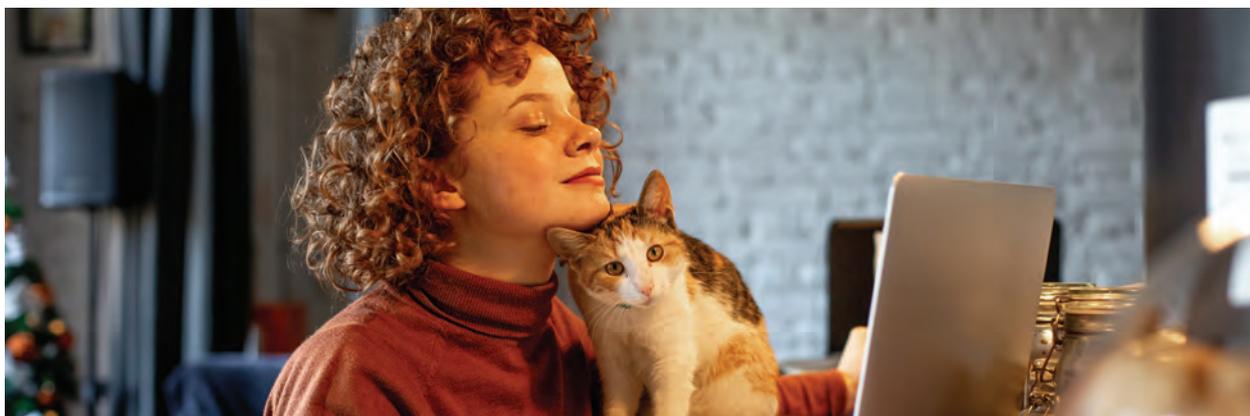


Table 11.2: Predictors of pet ownership

	Own any pets	Own cat rather than dog
<i>Age (Reference category: 15-24)</i>		
25-34	-0.050	ns
35-44	-0.099	0.094
45-54	ns	0.073
55-64	-0.097	0.082
65 and over	-0.171	0.109
Male	ns	ns
<i>Marital status (Reference category: Married)</i>		
De facto	0.061	0.080
Separated	-0.080	ns
Divorced	ns	ns
Widowed	ns	ns
Never married and not de facto	ns	0.119
<i>Education (Reference category: Year 11 or lower)</i>		
Year 12	ns	ns
Certificate III or IV, Advanced Diploma or Diploma	ns	ns
Bachelor's degree or higher	-0.112	0.064
<i>Country of birth (Reference category: Australian-born)</i>		
Immigrant from main English-speaking country	ns	0.046
Immigrant from country other than main English-speaking countries	-0.254	ns
Moderate or severe disability	0.074	ns
<i>Labour force status (Reference category: Employed)</i>		
Unemployed	ns	ns
Not in the labour force	-0.049	ns
<i>Household equivalised income (Reference category: Bottom quintile)</i>		
2nd quintile	0.041	-0.042
3rd quintile	0.061	-0.076
4th quintile	0.057	-0.107
Top quintile	0.077	-0.091
<i>Region of residence (Reference category: Other non-urban area)</i>		
Major urban area	-0.118	0.069
Other urban area	ns	ns
<i>Housing tenure type (Reference category: Renting)</i>		
Social housing	0.123	-0.090
Owner with mortgage	0.089	-0.101
Owner outright	0.064	-0.058
<i>Housing type (Reference category: Freestanding house)</i>		
Semi-detached house	-0.063	ns
Flat	-0.281	0.145
Other house type	-0.251	ns
<i>Family type (Reference category: Non-elderly couple)</i>		
Couple with dependent children	ns	ns
Single parent	ns	ns
Single non-elderly male	-0.115	ns
Single non-elderly female	ns	ns
Older couple	-0.132	ns
Single older male	-0.137	ns
Single older female	ns	ns
Number of observations	15,633	6,825

Notes: Table presents mean marginal effects from a Probit regression model of the determinants of individual pet ownership. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Association between pet ownership and individual wellbeing

Having considered the patterns of pet ownership and the probability of owning a pet based on certain household and individual characteristics, we next briefly explore whether pet ownership is associated with individual wellbeing. More specifically, we focus on life satisfaction, the probability of being in poor general health and the probability of having poor mental health.

When considering the entire sample in the top panel of Table 11.3, there are no differences in life

satisfaction or the likelihood of being in poor general health between pet owners and non-pet owners. This remains the case regardless of the type of pet (evident in additional results not presented). However, the findings do suggest differences in mental health: somewhat surprisingly, pet owners are 2.6 percentage points *more* likely to report being in poor mental health than people who do not own a pet.

The bottom panel of Table 11.3 considers only individuals who own pets to determine whether there are any differences in wellbeing outcomes across people owning different types of pets. There are some significant differences in all three outcomes. Compared to people with a dog (but no cat), those with a cat (but no dog) are about 0.1 points

(on the 0–10 scale) less satisfied with life, while people who own a dog *and* a cat report about a 0.9-point-lower life satisfaction relative to those with a dog but no cat. In addition, those with a dog *and* a cat are 1.8 and 3.2 percentage points more likely to report poor general health and poor mental health, respectively, relative to people with only a dog (but no cat).

These associations overall imply that cat owners—and particularly those who also own a dog—have somewhat lower wellbeing than other pet owners. However, this does not imply that cats *cause* lower wellbeing. It is entirely possible—and indeed likely—that people in poorer health and with lower life satisfaction are more likely to acquire a cat, and in fact would be worse off if they did not own the cat.

Table 11.3: Pet ownership and individual wellbeing

	Life satisfaction	Poor general health (SF-36)	Poor mental health (SF-36)
<i>Entire sample, including pet owners and non-pet owners</i>			
Pet owner	ns	ns	0.026
Number of observations	15,624	15,453	15,533
<i>Pet owners only</i>			
Pet ownership (Reference category: Dog and no cat)			
Cat and no dog	-0.096	ns	ns
Dog and cat	-0.091	0.018	0.032
Other pets (and no dog or cat)	ns	ns	ns
Number of observations	10,045	9,930	9,980

Notes: Table presents the results from regression models of the associations between pet ownership and individual wellbeing outcomes. For life satisfaction, the results are from OLS models. For poor general health and poor mental health, the results are mean marginal effects from Probit models reporting the probability of being in poor general or mental health. See the Technical Appendix for an explanation of these models. All models additionally control for age, sex, education, employment status, immigrant status, marital status, housing tenure type, housing type, presence of a disability, equivalised income and the presence of children. ns indicates the estimate is not significantly different from 0 at the 10% level.



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Technical Appendix

A. Overview of statistical methods and terms used in the report

Adjustments for inflation

All dollar figures presented in this report are expressed at December 2018 prices to remove the effects of inflation (the general rise in prices of goods and services) and thereby make estimates for different years more comparable. This is achieved using the Australian Bureau of Statistics (ABS) Consumer Price Index (CPI), which is produced on a quarterly basis (ABS Catalogue Number 6401.0). To convert a dollar value to December 2018 prices, the value is multiplied by the ratio of the CPI for the December quarter of 2018 (114.1) to the value of the CPI in the quarter to which the value relates. For example, to convert a wage measured in the third quarter of 2001 (when the CPI was 74.7) to December 2018 prices, the wage is multiplied by 1.53 (114.1/74.7). The interpretation of this adjustment is that prices on average rose by 53% between the September quarter of 2001 and the December quarter of 2018, which means that the amount of money required to buy a given bundle of goods and services had on average increased by 53%. We therefore need to increase the wage measured in the September quarter of 2001 by 53% to make it comparable with a wage measured in the December quarter of 2018. Note that for dollar values measured over an annual time-frame, as is the case for income, the average value of the CPI over the relevant year is used for the denominator.

Balanced panel

A longitudinal household survey is known as a household panel study. A **balanced** panel restricts the sample to individuals who have responded to the survey in all waves of the period under study. For example, a balanced panel for Waves 1 to 10 of the HILDA Survey consists of individuals who have responded in all 10 waves.

Correlation coefficient

Often referred to as the Pearson correlation coefficient, the correlation coefficient is a statistical measure of how two variables are associated with each other. It is equal to the covariance of the two variables relative to the product of their standard deviations, having a minimum possible value of -1 (perfectly negatively correlated) and a maximum possible value of 1 (perfectly positively correlated). Positive values indicate that when one variable increases, the other variable also tends to increase. Negative values indicate that when one variable increases, the other variable tends to decrease. If the correlation coefficient is 0, there is no (linear) association between the two variables. Note that the correlation coefficient does not tell us about the extent and nature of any *causal* relationship between the two variables.

Gini coefficient

The Gini coefficient is a measure of dispersion often used as a measure of inequality of income and wealth. It ranges between 0 and 1, a low value indicating a more equal distribution and a high value indicating a more unequal distribution. Zero corresponds to perfect equality (everyone having exactly the same) and 1 corresponds to perfect inequality (where one person has everything and everyone else has nothing).

Indicator variable

Used in regression analysis, an indicator (or dummy) variable is an indicator variable equal to 1 if a particular characteristic or event is present, and equal to 0 otherwise. In Ordinary Least Squares regression, the coefficient on an indicator variable is interpreted as the mean effect on the dependent variable of the presence of the characteristic/event, holding all else constant.

Mean marginal effects

Qualitative dependent variable models, such as Probit and Logit, are 'non-linear', meaning that the effects of explanatory variables on the probability of an outcome depend upon the value of that explanatory variable at which the effects are evaluated, and indeed also depend on the values of the other explanatory variables at which they are evaluated. For example, in the Logit model of the probability of dissolution of a couple relationship, presented in Chapter 2, the effects of income will depend on the values of the other explanatory variables. This makes it difficult to interpret coefficient estimates. We therefore report 'mean marginal effects' estimates, which provide a straightforward way of ascertaining the effects of explanatory variables that are analogous to those obtained in linear regression models—that is, the effect on the dependent variable of a one-unit increase in the explanatory variable. Specifically, continuing with the example above, the mean marginal effect estimate for income, which is measured in tens of thousands of dollars, is the mean effect on the probability of the relationship dissolving, evaluated over all members of the sample, of increasing income by \$10,000.

Mean, median and mode

The mean, median and mode are all measures of central tendency. The mean is the statistical term used for what is more commonly known as the average—the sum of the values of a data series divided by the number of data points. The median is the middle data point in data sorted from lowest to highest value; 50% of the data points will lie below the median and 50% will lie above it. The mode is simply the most frequently occurring value of a data series.

Percentiles, deciles and quintiles

Percentiles, deciles and quintiles all identify 'locations' in the distribution of a variable, such as income, when it is ordered from lowest to highest. There are 100 percentiles, 10 deciles and five quintiles for any given distribution. For example, the first (or bottom) percentile of the income distribution identifies the income below which are the lowest 1% of incomes (and above which are the highest 99% of incomes), the first decile identifies the income below which are the lowest 10% of incomes, and the first quintile identifies the income below which are the lowest 20% of incomes. It is also common to refer to the percentile, decile or quintile to which an observation 'belongs'. For example, people with an income greater than the income at the 19th percentile but less than the income at the 20th percentile are said to belong to (or be located in) the 20th percentile. (Such individuals would also belong to the second decile and the first quintile.)

Regression models

In statistical analysis, a regression model is used to identify associations between a 'dependent' variable (such as earnings) and one or more 'independent' or 'explanatory' variables (such as measures of educational attainment and work experience). In particular, it shows how the typical value of the dependent variable changes when any one of the independent variables is varied and all other independent variables are held fixed. Most commonly, regression models estimate how the mean value of the dependent variable depends on the explanatory variables—for example, mean (or 'expected') earnings given a particular level of education and work experience. Different types of regression models are used depending on factors such as the nature of the variables and data, and the 'purpose' of the regression model. The following types of models are often estimated using HILDA Survey data:

- **Ordinary Least Squares** models estimate linear associations between a dependent variable (such as earnings) and one or more independent (or explanatory) variables (such as age and educational attainment). The method finds the linear combination of the explanatory variables that minimises the sum of the squared distances between the observed values of the dependent variable and the values predicted by the regression model.
- **Probit** and **Logit** models are used to estimate the effects of factors, such as age and educational attainment, on a 'qualitative' or categorical dependent variable, such as labour force status. (The variable 'labour force status' is qualitative because it is not naturally 'quantitative' or numerical, such as is the case with income.) The standard models examine 'binary' dependent variables, which are variables with only two distinct values, and estimates obtained from these models are interpreted as the effects on the *probability* the variable takes one of those values. For example, a model might be estimated on the probability an individual is employed (as opposed to not employed).
- **Fixed-effects** models are often applied to panel data such as the HILDA Survey data. They involve accounting for the effects of all characteristics of sample members that do not change over time. For example, if we are interested in how life events impact on life satisfaction, a fixed-effects model is useful because we can control for (remove the effects of) fixed individual traits such as optimism and pessimism. This is achieved by examining how the outcome of interest changes at the individual level in response to changes in explanatory variables (such as income). For example, a fixed-effects model will find a positive effect of income on life satisfaction if individuals who experience increases in income from one year to the next tend to exhibit increases in life satisfaction over the same period, and individuals who experience decreases in income from one year to the next tend to exhibit decreases in life satisfaction over that period.
- **Random-effects** models are also often applied to panel data. They differ from fixed-effects models by allowing estimation of the effects of characteristics that typically do not change over time (such as sex). This is made possible by assumptions about the distribution and nature of unobserved fixed individual traits, such as intrinsic motivation. The models are relatively complicated. For more information on random-effects models, see, for example, Hsiao (2003).

Relative standard error

The standard error of an estimate is a measure of the precision with which the estimate is estimated. For example, assuming statistical independence of the values in the sample, the standard error of the mean of a variable (such as income) is the standard deviation of the variable divided by the square root of the sample size, and there is a 95% probability that the true mean lies within 1.96 standard deviations of the estimated mean. The relative standard error of an estimate is the ratio of the standard error to the value of the estimate. In this report, we have marked with an asterisk (*) estimates that have a relative standard error greater than 25%. Note that a relative standard error that is less than 25% implies there is a greater than 95% probability the true quantity lies within 50% of the estimated value.

Standard deviation

The standard deviation is a measure of variability or 'dispersion' of a variable. It is equal to the square root of the mean squared difference of a variable from its mean value.

Statistical significance

In the context of statistical analysis of survey data, a finding is statistically significant if it is unlikely to be simply due to sampling variability—that is, if it is unlikely to be due to random factors causing specific characteristics of the survey sample to differ from the characteristics of the population. A common standard is to regard a difference between two estimates as statistically significant if the probability that they are different is at least 95%. However, 90% and 99% standards are also commonly used. The 90% standard is adopted for regression results presented in this report. Note that a statistically significant difference does not mean the difference is necessarily large or significant in the common meaning of the word.

B. Population inferences from the HILDA Survey data

As discussed in Watson and Wooden (2002), the reference population for Wave 1 of the HILDA Survey was all members of private dwellings in Australia, with the main exception being the exclusion of people living in remote and sparsely populated areas. These coverage rules were broadly in line with those adopted by the Australian Bureau of Statistics in its supplements to the Monthly Population Survey. Households were selected using a multi-staged approach designed to ensure representativeness of the reference population. First, a stratified random sample of 488 1996 Census Collection Districts (CDs), each of which contains approximately 200 to 250 households, was selected from across Australia. Within each of these areas, depending on the expected response and occupancy rates of the area, a random sample of 22 to 34 dwellings was selected. Within each dwelling, up to three households were randomly selected. The frame of CDs was stratified by state and territory and, within the five most populous states, by metropolitan and non-metropolitan regions. Nonetheless, despite the region-based stratification, Wave 1 of the HILDA Survey was an equal-probability sample; in particular, the smaller states and territories were not over-sampled. This reflects the focus of the HILDA Survey on producing nationwide population estimates.

All members of the selected households were defined as members of the sample, although individual interviews were (and continue to be) only conducted with those aged 15 years and over. Since Wave 1, interviews have been sought with all members of Wave-1 responding households, which has meant following all individuals of these households wherever they go in Australia (including remote and sparsely populated areas). Individuals who move overseas are, however, not interviewed while they are living overseas. Note that, to ensure completeness of household information, any individuals who become part of an existing (permanent) sample member's household are also interviewed, but—aside from important exceptions explained below—these individuals are only interviewed as long as they remain in the same household as the permanent sample member.

The HILDA Survey is designed to have an indefinite life, which is primarily achieved by adding to the sample any children born to or adopted by sample members. The HILDA Survey aims to remain representative of the Australian population, but its original design as a longitudinal study meant that it would not be representative of immigrants who arrived after the initial (Wave 1) selection of the sample. To date, two approaches have been taken to address this source of declining representativeness. First, immigrants who join the household of an existing sample member automatically become permanent sample members. Second, in Wave 11, a general sample top-up (of 4,096 individuals) was conducted, which allowed immigrants who had arrived between 2001 and 2011 to enter the HILDA Survey sample.

Non-response is an issue for all household surveys, and *attrition* (that is, people dropping out due to refusal to participate or our inability to locate them) is a further particular issue in all panel surveys. Because of attrition, and despite sample additions owing to changes in household composition, panels may slowly become less representative of the populations from which they are drawn, although as a result of the 'split-off' method, this does not necessarily occur.



To overcome the effects of survey non-response (including attrition), the HILDA Survey data managers analyse the sample each year and produce *weights* to adjust for differences between the characteristics of the panel sample and the characteristics of the Australian population.¹ That is, adjustments are made for non-randomness in the sample selection process that causes some groups to be relatively under-represented and others to be relatively over-represented. For example, non-response to Wave 1 of the survey was slightly higher in Sydney than it was in the rest of Australia, so that slightly greater weight needs to be given to Sydneysiders in data analysis in order for estimates to be representative of the Australian population as a whole.

The population weights provided with the data allow us to make inferences about the Australian population from the HILDA Survey data. A population weight for a household can be interpreted as the number of households in the Australian population that the household represents. For example, one household (Household A) may have a population weight of 1,000, meaning it represents 1,000 households, while another household (Household B) may have a population weight of 1,200, thereby representing 200 more households than Household A. Consequently, in analysis that uses the population weights, Household B will be given 1.2 times (1,200/1,000) the weight of Household A. To estimate the mean (average) of, say, income of the households represented by Households A and B, we would multiply Household A's income by 1,000, multiply Household B's income by 1,200, add the two together and then divide by 2,200.

The sum of the population weights is equal to the estimated population of Australia that is 'in scope', by which is meant 'they had a chance of being selected into the HILDA sample' and which therefore excludes those that HILDA explicitly has not attempted to sample—namely, some people in very remote regions in Wave 1, people resident in non-private dwellings in 2001 and non-resident visitors.² In Wave 18, the household population weights sum to 9.5 million and the 'person' population weights sum to 24.4 million.

As the length of the panel grows, the variety of weights that might be needed also grows. Most obviously, separate cross-sectional weights are required for every wave, but more important is the range of longitudinal weights that might be required. Longitudinal (multi-year) weights are used to retain representativeness over multiple waves. In principle, a set of weights will exist for every combination of waves that could be examined—Waves 1 and 2, Waves 5 to 9, Waves 2, 5 and 7, and so on. The longitudinal weights supplied with the data allow population inferences for analysis using any two waves (that is, any pair of waves) and analysis of any 'balanced panel' of a contiguous set of waves, such as Waves 1 to 6 or Waves 4 to 7. Longitudinal weights are also provided to allow analysis of 'rotating' content. For example, to facilitate longitudinal analysis of wealth, longitudinal weights are provided for Waves 2, 6, 10, 14 and 18. In this report, cross-sectional weights are always used when cross-sectional results are reported and the appropriate longitudinal weights are used when longitudinal results are reported. Thus, all statistics presented in this report should be interpreted as estimates for the in-scope Australian population. That is, all results are 'population-weighted' to be representative of the Australian community.

A further issue that arises for population inferences is missing data for a household, which may arise because a member of a household did not respond or because a respondent did not report a piece of information. This is particularly important for components of financial data such as income, where failure to report a single component by a single respondent (for example, dividend income) will mean that a measure of household income is not available. To overcome this problem, the HILDA data managers *impute* values for various data items. For individuals and households with missing data, imputations are undertaken by drawing on responses from individuals and households with similar characteristics, and also by drawing on their own responses in waves other than the wave in which the data are missing. Full details on the imputation methods are available in Watson (2004a), Hayes and Watson (2009) and Sun (2010). In this report, imputed values are used in all cases where relevant data are missing and an imputed value is available. This largely applies only to income, expenditure and wealth variables.

The population weights and imputations allow inferences to be made from the HILDA Survey about the characteristics and outcomes of the Australian population. However, estimates based on the HILDA Survey, like all sample survey estimates, are subject to sampling error. Because of the complex sample design of the HILDA Survey, the reliability of inferences cannot be determined by constructing standard errors on the basis of random sampling, even allowing for differences in probability of selection into the sample reflected by the population weights. The original sample was selected via a process that involved stratification by region and geographic 'ordering' and 'clustering' of selection into the sample within each stratum. Standard errors (measures of reliability of estimates) need to take into account these non-random features of sample selection, which can be achieved by using replicate weights. *Replicate weights* are supplied with the unit record files available to approved researchers for cross-sectional analysis and for longitudinal analysis of all balanced panels that commence with Wave 1 (for example, Waves 1 to 4 or Waves 1 to 8). Full details on the sampling method for the HILDA Survey are available in Watson and Wooden (2002), while details on the construction, use and interpretation of the replicate weights are available in Hayes (2009).

In this report, standard errors of statistics are not reported. Instead, for tabulated results of descriptive statistics, estimates that have a relative standard error of more than 25% are marked with an asterisk (*). For regression model parameter estimates, estimates that are not statistically significantly different from 0 at the 10% level are not reported, with *ns* (not significant) appearing in place of the estimate.

¹ Further details on how the weights are derived are provided in Watson and Fry (2002), Watson (2004b) and Summerfield et al. (2019).

² In principle, the in-scope population in Waves 2 to 10 excludes most immigrants arriving in Australia after 2001, and the in-scope population in Waves 12 to 17 excludes most immigrants arriving after 2011. However, owing to a lack of suitable external benchmarks for this population subgroup, these immigrants are in practice included in the in-scope population. Consequently, in all waves, the HILDA Survey weights sum to the total Australian population inclusive of new immigrants.

C. Fieldwork process and outcomes

Sample

The HILDA Survey commenced, in 2001, with a nationally representative sample of Australian households (residing in private dwellings). Of the 11,693 households selected for inclusion in the sample in 2001, 7,682 households agreed to participate, resulting in a household response rate of 66%. The 19,914 residents of those households form the basis of the 'main sample' that is interviewed in each subsequent year (or survey wave), but with interviews only conducted with people aged 15 years or older. As noted in Section B of this Technical Appendix, interviews are also conducted with any other person who joins a household in which an original sample member is living. These individuals are only interviewed as long as they remain living with an original sample member, unless they are an immigrant who migrated to Australia after 2001 or they have a child with an original sample member, in which case they become a 'permanent' sample member. People who are known to have died are removed from the sample (but their existing data are retained). We also do not pursue interviews with people who have moved overseas, people who have requested to no longer be contacted or people we have not been able to contact for three successive survey waves. In 2011 an entirely new 'top-up' sample was added. This resulted in the addition of 2,153 households and 5,451 people (including children aged under 15). The household response rate for the top-up sample was 69%.

Data collection

The annual interviews for the main sample commence towards the end of July each year and conclude by mid-February of the following year. The interviewer workforce comprised 183 interviewers in Wave 18, 150 of whom undertook interviews in person, with the remaining 33 being dedicated telephone interviewers. Most interviews are undertaken in person, usually in the home of the sample member. Some interviews, however, are undertaken by telephone, usually because the cost of sending an interviewer to the location of that sample member is prohibitive or because the sample member prefers a telephone interview. In Wave 18, 1,632 interviews (or 9.4% of the total completed) were undertaken by telephone.

Response

Table A1 and Figure A1 summarise key aspects of the HILDA sample for the period examined in this report (Waves 1 to 18).³ Table A1 presents the number of households, respondents and children under 15 years of age in each wave. In Wave 18, interviews were obtained with a total of 17,434 people, of which 13,723 were from the original sample and 3,711 were from the top-up sample. Of the original 13,969 respondents in 2001, 7,357 or 62.0% of those still in scope (that is, alive and in Australia), were still participating at Wave 18.

Note that—the top-up sample aside—the total number of respondents in each wave is greater than the number of Wave 1 respondents interviewed in that wave, for three main reasons. First, some non-respondents in Wave 1 are successfully interviewed in later waves. Second, interviews are sought in later waves with all people in sample households who turn 15 years of age. Third, additional people are added to the panel as a result of changes in household composition. For example, if a household member 'splits off' from his or her original household (for example, children leave home to set up their own place, or a couple separates), the entire new household joins the panel. Inclusion of 'split-offs' is the main way in which panel surveys, including the HILDA Survey, maintain sample representativeness over the years.



³ More detailed data on the sample make-up, and in particular response rates, can be found in Summerfield et al. (2019).



Table A1: HILDA Survey sample sizes

	Households	Persons interviewed	Children under 15
Wave 1	7,682	13,969	4,787
Wave 2	7,245	13,041	4,276
Wave 3	7,096	12,728	4,089
Wave 4	6,987	12,408	3,888
Wave 5	7,125	12,759	3,896
Wave 6	7,139	12,905	3,756
Wave 7	7,063	12,789	3,691
Wave 8	7,066	12,785	3,574
Wave 9	7,234	13,301	3,625
Wave 10	7,317	13,526	3,600
Wave 11 (original sample)	7,390	13,603	3,601
Wave 12 (original sample)	7,420	13,536	3,608
Wave 13 (original sample)	7,463	13,608	3,680
Wave 14 (original sample)	7,441	13,633	3,625
Wave 15 (original sample)	7,546	13,753	3,653
Wave 16 (original sample)	7,635	13,834	3,765
Wave 17 (original sample)	7,660	13,791	3,819
Wave 18 (original sample)	7,616	13,723	3,821
Wave 11 (top-up sample)	2,153	4,009	1,180
Wave 12 (top-up sample)	2,117	3,939	1,090
Wave 13 (top-up sample)	2,092	3,892	1,055
Wave 14 (top-up sample)	2,097	3,878	1,045
Wave 15 (top-up sample)	2,085	3,852	1,037
Wave 16 (top-up sample)	2,115	3,859	1,054
Wave 17 (top-up sample)	2,082	3,779	1,025
Wave 18 (top-up sample)	2,023	3,711	1,010

Figure A1: HILDA Survey response rates, Waves 2 to 18 (2002 to 2018)



Figure A1 reports re-interview rates (percentage of previous-wave respondents still in scope who were interviewed in the current wave) and response rates among new entrants to the sample for both the original sample and the top-up sample. As can be seen, re-interview rates for the original sample are high, exceeding 95% for the first time in Wave 8, and remaining above that level ever since. In Wave 18, the re-interview rate was 96.4% for the original sample and 95.3% for the top-up sample. We expect much lower response rates among new individuals joining the sample. Nevertheless, response rates for this group have averaged approximately 75% to 80% for much of the period since Wave 4. In Wave 18, the rate was 79.0% for the original sample and 84.1% for the top-up sample.

Within the top-up sample, the re-interview rate in Wave 18 was 95.3%. The comparable rate within the original sample is the rate recorded in Wave 8, which was 95.2%. The interview rate for new entrants to the top-up sample in Wave 18 was, at 84.1%, also comparatively high.

All people who are interviewed are also asked to complete a separate paper-based questionnaire. Of the 17,434 people who were interviewed in Wave 18, 15,923 (91.3%) returned this self-completion questionnaire.

More detailed information on interview response rates across demographic groups is presented in Tables A2 and A3. Table A2 examines Wave 1 respondents, presenting the proportion of the sample responding in all 18 waves and the proportion responding in Wave 18, disaggregated by characteristics in Wave 1 (that is, in 2001). Table A3 presents analogous information for the Wave 11 top-up sample.



Table A2: Percentage of Wave 1 respondents re-interviewed by selected Wave 1 characteristics (%)

<i>Wave 1 characteristics</i>	<i>Interviewed in all waves</i>	<i>Interviewed in Wave 18</i>	<i>Wave 1 characteristics</i>	<i>Interviewed in all waves</i>	<i>Interviewed in Wave 18</i>
<i>Area</i>			<i>Indigenous status</i>		
Sydney	48.1	59.4	Indigenous	36.2	61.7
Rest of New South Wales	52.2	62.5	Non-Indigenous	51.0	62.0
Melbourne	48.6	62.1	<i>Education attainment</i>		
Rest of Victoria	49.8	60.7	Year 11 or below	45.4	57.2
Brisbane	54.8	64.8	Year 12	50.2	61.4
Rest of Queensland	51.3	61.0	Certificate 3 or 4	49.4	61.2
Adelaide	54.4	63.7	Diploma	56.7	67.2
Rest of South Australia	49.3	65.1	Degree or higher	61.6	71.4
Perth	50.0	59.6	<i>Dwelling type</i>		
Rest of Western Australia	46.3	59.8	House	51.3	62.6
Tasmania	53.9	66.7	Semi-detached	49.9	61.4
Northern Territory	62.9	79.7	Flat, unit, apartment	45.7	56.0
Australian Capital Territory	56.3	68.4	Other	47.8	59.6
<i>Sex</i>			<i>Labour force status</i>		
Male	49.0	60.6	Employed full-time	51.8	62.9
Female	52.1	63.2	Employed part-time	54.5	65.8
<i>Age group (years)</i>			Unemployed	40.3	54.7
15-19	37.0	55.0	Not in the labour force	47.8	58.8
20-24	38.9	54.8	<i>Employment status in main job^a</i>		
25-34	47.5	60.8	Employee	52.8	64.1
35-44	53.8	64.0	Employer	50.8	61.7
45-54	58.1	67.6	Own account worker	52.9	62.6
55-64	59.8	68.1	Contributing family worker	49.2	64.1
65-74	51.4	58.5	<i>Occupation^a</i>		
75 and over	20.9	26.7	Managers/administrators	53.6	66.0
<i>Marital status</i>			Professionals	61.5	72.1
Married	53.7	63.4	Associate professionals	52.9	62.2
De facto	48.6	60.9	Tradespersons	45.6	58.5
Separated	51.8	64.2	Advanced clerical/service	52.2	62.8
Divorced	58.4	68.9	Intermediate clerical/sales/service	53.5	64.7
Widowed	53.4	57.9	Intermediate production/transport	48.0	56.5
Single	42.2	57.8	Elementary clerical/sales/service	51.4	64.0
<i>Country of birth</i>			Labourers	43.9	56.2
Australia	52.4	63.6	<i>All Wave 1 respondents</i>		
Overseas				50.7	62.0
Main English-speaking	53.2	62.4	<i>Total number responding</i>		
Other	39.6	52.6		5,806	7,357

Notes: Estimates are for the sample and are therefore not population-weighted. ^a Employed persons only.



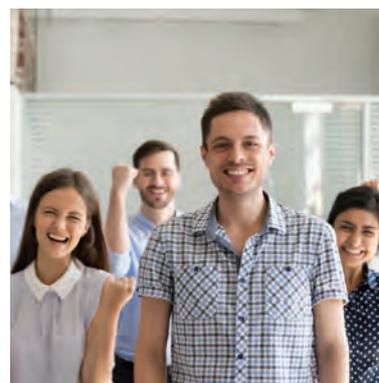
Table A3: Percentage of Wave 11 top-up respondents re-interviewed by selected Wave 11 characteristics (%)

<i>Wave 11 characteristics</i>	<i>Interviewed in all waves</i>	<i>Interviewed in Wave 18</i>	<i>Wave 11 characteristics</i>	<i>Interviewed in all waves</i>	<i>Interviewed in Wave 18</i>
<i>Area</i>			<i>Indigenous status</i>		
Sydney	68.3	72.6	Indigenous	73.6	76.1
Rest of New South Wales	73.1	77.5	Non-Indigenous	70.8	75.9
Melbourne	73.2	76.8	<i>Education attainment</i>		
Rest of Victoria	72.8	79.2	Year 11 or below	67.2	73.1
Brisbane	70.9	78.0	Year 12	71.5	76.4
Rest of Queensland	70.8	77.8	Certificate 3 or 4	72.4	78.0
Adelaide	71.6	72.8	Diploma	72.1	78.1
Rest of South Australia	73.1	78.9	Degree or higher	73.0	76.1
Perth	65.8	73.2	<i>Dwelling type</i>		
Rest of Western Australia	62.9	72.4	House	70.9	76.2
Tasmania	76.2	80.2	Semi-detached	67.2	71.9
Northern Territory	70.8	87.5	Flat, unit, apartment	73.7	76.8
Australian Capital Territory	72.6	75.0	Other	100.0	100.0
<i>Sex</i>			<i>Labour force status</i>		
Male	70.0	75.2	Employed full-time	70.1	76.1
Female	71.7	76.4	Employed part-time	70.6	74.7
<i>Age group (years)</i>			Unemployed	79.1	83.2
15-19	64.1	71.1	Not in the labour force	71.3	75.5
20-24	67.5	74.4	<i>Employment status in main job^a</i>		
25-34	73.4	79.1	Employee	70.4	75.7
35-44	71.3	76.4	Employer	61.2	72.0
45-54	70.8	75.1	Own account worker	71.8	76.2
55-64	73.7	78.5	Contributing family worker	60.0	70.0
65-74	78.5	81.4	<i>Occupation^a</i>		
75 and over	56.4	58.4	Managers	69.2	75.6
<i>Marital status</i>			Professionals	73.1	78.0
Married	72.9	76.9	Technicians and trades workers	65.5	71.3
De facto	69.2	77.0	Community and personal service workers	72.0	74.2
Separated	80.8	82.0	Clerical and administrative workers	69.3	76.8
Divorced	70.7	75.8	Sales workers	68.9	73.1
Widowed	67.4	69.4	Machinery operators and drivers	72.7	77.6
Single	66.9	73.4	Labourers	71.7	77.5
<i>Country of birth</i>			<i>All Wave 11 respondents</i>		
Australia	71.8	77.0		70.9	75.9
Overseas			Total number responding	2,573	2,800
Main English-speaking	70.6	76.9			
Other	67.9	71.1			

Notes: Estimates are for the sample and are therefore not population-weighted. ^a Employed persons only.



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Rebecca Jarvis

Liam Jemmeson

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Kieran Kelly

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Louise Liu

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Colleen Martin

Hazel McLeod

Calvin Mijares

Sebastiaan Mulder

Jodi Norton

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Commenced in 2001, the Household, Income and Labour Dynamics in Australia (HILDA) Survey is a nationally representative household-based panel study, providing longitudinal data on the economic wellbeing, employment, health and family life of Australians.

The study is funded by the Australian Government Department of Social Services and is managed by the Melbourne Institute at the University of Melbourne. Roy Morgan Research has conducted the fieldwork since 2009, prior to which The Nielsen Company was the fieldwork provider.

