The 20th Annual Statistical Report of the HILDA Survey

The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 23

2025

Inga Laß, Ferdi Botha, Kyle Peyton and Roger Wilkins

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THE UNIVERSITY OF MELBOURNE | MELBOURNE INSTITUTE

Inga Laß, Ferdi Botha, Kyle Peyton and Roger Wilkins

LIVING IN AUSTRALIA

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Introduction

1. Introduction

Inga Laß

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. There are now 23 waves (years) of data available to researchers, while this year (2025) saw the collection of the 25th 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 continue indefinitely, 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 23 waves of data now available, the HILDA Survey is also becoming a sufficiently long-running panel to enable very long-term analyses, including studies of intergenerational linkages. For example, 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 linkages.

This report

This report presents brief statistical analyses of the first 23 waves of the study, which were conducted between 2001 and 2023. An important theme of this year's report is how Australians are faring in the aftermath of the COVID-19 crisis and the sharp rise in the cost of living that has followed it.

This report should 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 have been undertaken by researchers in Australia and internationally over the years since data from the first wave of the HILDA Survey were released in January 2003. Further details on the publications resulting from these studies are available on the HILDA Survey website 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 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, educational attainment, hours of work and so on (i.e., the average difference in earnings when males and females 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, however, that the HILDA Survey under-represents immigrants arriving in Australia after 2011. These individuals are largely not represented in the HILDA Survey sample and therefore in the analysis presented in this report. Section B of the Technical Appendix further discusses this limitation.[1]

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 marked with an asterisk (*) estimates based on fewer than 20 observations. 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%.

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1 In 2024, the HILDA Survey began recruiting immigrants who have arrived in Australia post 2011. It is expected that, by Wave 25, recent immigrants will no longer be under-represented in the HILDA Survey sample.

2

Households
and family life

2. Households and family life

Inga Laß

The HILDA Survey collects information on various aspects of family life every year. These aspects comprise family and household structures; how parents cope with parenting responsibilities, including the care arrangements they use; how families spend their time; perceptions of family relationships; and the wellbeing of family members. Collecting this information from the same individuals every year allows us to investigate how and why family circumstances change over time—partnering and marriage, separation and divorce, childbirth, adult children leaving the family home, and any other change to the composition or nature of family circumstances.

In this chapter, we present analyses for the 2001 to 2023 period on five aspects of family life:

• the changing living arrangements of Australians

• child-care arrangements for children not yet in school

• grandparents as providers of child care

• fertility intentions

• attitudes towards marriage and children, and work and family roles

Household dynamics, 2001 to 2023

Table 2.1 presents the evolution of household types (as described in Box 2.3, page 12) over the 2001–2023 period, with every third year being displayed until 2019 and every second year for the more recent period. 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 and 2.2 (below) and Box 2.3 (page 12)).

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 to be classified as a dependent child of the couple.

For a child to be classified as a member of the household, the child must reside in the household at least 50% of the time (unless the child resides in a facility such as a boarding school or hall of residence). 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 the event that a child resides exactly 50% of the time in each parent's household, the child is assigned to the mother's household.

Box 2.2: Single parents

We adopt the Australian Bureau of Statistics' (ABS) definition of a single parent in this report (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.

The distribution of household types has been relatively stable across the 23 years. A household containing a couple with children (with or without others) has remained the most common household type, with around half of all individuals living in such households across the period. Within this group, couples with dependent children (and no one else) were the most prevalent, with approximately 38% to 41% of individuals living in this household type each year. Households containing a couple (and no children) remain the second most common household type, accounting for approximately 21% of individuals. Single-parent households (with dependent or non-dependent children) are the third most common household type, accounting for about 11% to 12% of individuals. The vast majority of these are single-mother households.[2] The fourth position in the ranking is for people living alone (the single-person household type), accounting for around 10% of individuals.

Table 2.1: Proportion of individuals in each household type, 2001 to 2023 (%)

	2001	2004	2007	2010	2013	2016	2019	2021	2023	Change 2001 to 2023	Change 2019 to 2023
Couple with children	52.4	52.7	53.6	52.7	50.6	50.7	50.4	51.2	48.4	–4.0	–2.0
Couple with dependent children	41.5	41.5	41.4	40.9	40.3	40.8	40.6	40.1	38.1	–3.3	–2.5
Couple with dependent children and others[a]	2.4	1.8	2.0	3.0	2.3	1.8	1.7	2.5	1.9	–0.5	0.3
Couple with non-dependent children, with or without others[a]	8.5	9.4	10.2	8.9	8.0	8.1	8.1	8.6	8.4	–0.1	0.2
Couple without children, with or without others[a]	20.4	20.6	20.2	21.0	21.5	21.1	20.7	21.2	21.8	1.4	1.2
Single-parent household	11.4	12.1	11.8	11.9	11.5	12.3	12.3	11.2	12.1	0.7	–0.1
Single parent with dependent children	6.9	7.2	6.6	6.3	6.7	6.7	6.5	6.0	6.2	–0.8	–0.3
Single parent with dependent children and others[a]	1.5	1.4	1.0	1.5	1.4	1.3	1.1	1.2	1.2	–0.3	0.1
Single parent with non-dependent children, with or without others[a]	3.0	3.6	4.2	4.1	3.4	4.3	4.7	4.0	4.8	1.8	0.1
Single person	9.5	9.3	9.3	9.4	9.5	9.7	10.2	10.5	10.8	1.4	0.6
Other household type	6.3	5.3	5.2	5.0	7.0	6.2	6.5	5.9	6.8	0.5	0.4
Other family household	1.1	1.3	0.9	1.0	1.4	1.1	1.2	1.3	1.5	0.4	0.3
Multiple-family household	2.7	2.6	3.1	2.7	4.3	4.1	4.3	3.9	4.7	2.0	0.4
Group household	2.5	1.4	1.2	1.3	1.3	0.9	1.0	0.8	0.6	–1.9	–0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

Notes: [a] 'Others' comprises related people and 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.

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2   In 2023, for example, 81% of all single-parent households and 88% of single-parent households with children under 15 years of age are female-headed. However, note that children who live half the time with their mother and half the time with their father are typically assigned to the mother's household in the HILDA Survey.

Nonetheless, some important trends are evident. The proportion of people living in multiple-family households increased from 2.7% in 2001 to 4.7% in 2023, up by 2.0 percentage points. Furthermore, the prevalence of several household types without dependent children has grown over the 2001–2023 period. Specifically, there was a 1.8 percentage-point increase in people living in single-parent households with non-dependent children as well as a 1.4 percentage-point increase in both couple households without children and single-person households.

By contrast, two-generation households with dependent children saw a marked decline. The proportion of people living in couple households with dependent children (and no others) had the largest percentage-point decrease of any household type, declining by 3.3 percentage points between 2001 and 2023. Notably, the 2019–2023 period alone accounts for more than half of this decline (2.5 percentage points). Couples with dependent children and others also saw a 0.5 percentage-point decline over the 2001–2023 period. Similarly, the proportion of single parents with dependent children (and no others) declined by 0.8 percentage points and that of single parents with dependent children and others declined by 0.3 percentage points between 2001 and 2023. The proportion of people living in group households also saw a considerable decline of 1.9 percentage points.

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 9). 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, 52% are aged 15–24, and 87% 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).

In some of the analysis presented in this report, individuals are classified according to family type (see Box 3.4, page 50) 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.

Changes in household structure

While the proportion of households of each type has remained quite stable over the 23-year period, for many individuals, their household structure would have changed at least once during this time. Some may have had household members leave because of a relationship breakdown, because an adult child left the family home, or due to the death of a household member. It could also have changed as new members joined the household, for example, due to the birth of a baby, the adoption of a child, or a couple moving in together.

In Table 2.2, we focus on how individuals have changed their household types over three different time spans. Specifically, we look at one-year, five-year and 10-year changes in household type over the last 10 years. Each row of the table shows, for each initial household type, the proportion of individuals in each household type one, five or 10 years after. To provide a concise picture, the table focuses on the five broader household types (as displayed in italics in Table 2.1) rather than the detailed 11-type classification.

Looking at year-to-year changes first, the table shows that the vast majority of people stayed within the same household type from one year to the next. Of individuals who were living in a couple-with-children household in any given year, 93% remained in that household type in the next year. Couple households without children were also very stable, with 91.1% of persons living in those households still living in this household type one year later. For individuals in single-parent households, 85.5% stayed in that household type. Of those who were no longer in a single-parent household, the most common reason was moving in with a new partner, hence the change to a couple-with-children household (5.6%). People living alone had a retention rate of 89.6%, but 7% moved in with partners (2% + 5%). The category of 'other households' was the least persistent, but still 71.1% of individuals remained in this household type from one year to the next. A considerable share of people in these households changed to couple households, both with (9.7%) and without (8.7%) children, in the next year.

Table 2.2: Changes in household structure over three time spans, 2013 to 2023 (pooled) (%)

Current household type	Household type 1 year later					
	Couple with children	Single parent	Couple without children	Single person	Other household type	Total
Couple with children	93.0	1.9	2.3	1.5	1.3	100.0
Single parent	5.6	85.5	1.8	4.7	2.4	100.0
Couple without children	5.2	0.2	91.1	2.3	1.2	100.0
Single person	2.0	1.9	5.0	89.6	1.4	100.0
Other household type	9.7	4.6	8.7	5.9	71.1	100.0
Current household type	Household type 5 years later					
	Couple with children	Single parent	Couple without children	Single person	Other household type	Total
Couple with children	76.2	5.5	9.5	5.0	3.8	100.0
Single parent	13.2	60.6	7.1	14.1	5.1	100.0
Couple without children	16.6	0.9	73.8	7.1	1.6	100.0
Single person	7.5	4.1	11.2	75.3	1.8	100.0
Other household type	23.8	9.8	17.1	14.8	34.4	100.0
Current household type	Household type 10 years later					
	Couple with children	Single parent	Couple without children	Single person	Other household type	Total
Couple with children	62.7	8.4	17.3	7.5	4.1	100.0
Single parent	18.8	42.7	11.6	21.4	5.5	100.0
Couple without children	23.4	1.3	63.3	10.4	1.7	100.0
Single person	16.6	5.2	10.9	65.7	1.6	100.0
Other household type	38.6	10.6	14.3	15.0	21.4	100.0

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

Clearly, it is much more likely that households will change structure over a longer time span. However, couple households (with or without children) and single-person households remained relatively stable even over a period of 10 years. Around three-quarters of individuals in each of these household types were in the same household type five years later, and more than 60% remained so 10 years later. By contrast, for the remaining two household types, only a minority is still (or again) in the same household type 10 years later. Specifically, 42.7% of people in single-parent families and 21.4% of people in 'other households' were in the same household type 10 years later. These sorts of living arrangements tend to be temporary for the vast majority of people, for example while studying at university.

While persistence of household types declines over longer timeframes, it necessarily follows that people are more likely to transition from each household type to another as the timeframe increases. For example, for couple-without-children households, the likelihood of children joining the household increases over time. Of those in couple-without-children households in one year, 5.2% had changed to a couple-with-children household the year after, 16.6% had made this change five years later, and 23.4% had made this change 10 years later. For single-parent households, the most common change was the arrival of a new partner: 5.6% had changed to a couple-with-children household one year later, 13.2% five years later, and 18.8% 10 years later. Finally, living in 'other household types' appears to be a stepping stone to couple-with-children households, with 9.7% moving into this household type within one year, 23.8% within five years, and 38.6% within 10 years.

Child care

For several decades, child care has been a crucial public policy concern, primarily due to the continuous rise in female employment participation since the 1970s. The Australian Government provides substantial subsidies for child care for many families, but it is nonetheless clear that access to affordable and high-quality child care remains a significant concern for many parents with young children. Besides paid care, many parents draw on other, more informal types of care, and especially on child-care support from their own parents. This section provides analyses on the topic of child care from two perspectives—first from the perspective of the parents using child care (with a focus on care for children not yet in school) and second from the perspective of grandparents providing care to some of their grandchildren.

Use of different types of child care by parents

The HILDA Survey has gathered data on child-care use and access at the household level in every wave for households with children under 15 years of age. However, changes to the questionnaire between Waves 1 and 2 imply that comparable information on child care is only accessible from Wave 2 onwards.[3]

This section focuses on child-care arrangements for young children who are not yet attending school,[4] which is a topic of significant public interest. The analysis covers both single- and couple-parent families but excludes multi-family households that have multiple families with children under five years old, as it is not possible to attribute child-care arrangements to a specific family in such cases.

Figure 2.1 presents the proportion of parents using child care for children aged under five over the 2002–2023 period, overall and separately for paid care, grandparental care and other types of care. In this context, paid care comprises formal child care (i.e., family day care, long day care and kindergarten/pre-school) and informal paid child care (i.e., care by a paid sitter or nanny). Given changes in questionnaire design, grandparental care can only be distinguished from other types of care since 2004.

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3   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'.
4   For some of the analysis presented in this section, it is not known for all children whether they are in school. Where this information is missing, it is assumed that children under the age of five as of 30 June of the survey year are not yet attending school. It should be noted, however, that this assumption will not hold true for all children.

The figure shows that over the entire period, the majority of parents used some form of care for their children not yet at school. Between 2002 and 2013, this share fluctuated between 57% and 63% before rising significantly in the period after. Between 2013 and 2023 the share of parents using any type of care rose by 11 percentage points from 58% to 69%.[5]

Among the different types of child care, paid care was most frequently used by parents of children not yet at school. The percentage of families using paid care remained relatively stable between 2002 and 2014, ranging between 42% and 45%. Since 2014, use of paid care has increased considerably. Whereas in 2014, about 44% of families used paid care, by 2023, this share had risen to 56%. This upward trend was only briefly interrupted by the COVID-19 pandemic, when the proportion of families using paid care dropped from 53% in 2019 to 51% in 2020.

The second most important type of care is care provided by grandparents. In each year, between 22% and 29% of families with children not yet at school relied on grandparental care. While use of grandparental care saw a significant drop in the wake of the pandemic, declining from 26% in 2019 to 23% in 2020, it rose again in subsequent years and reached its highest level in 2023, with 29% of families using grandparental care.

Other types of care, such as care provided by relatives, neighbours and friends, were less frequently used by parents than paid care and grandparental care. Furthermore, usage has declined significantly over the 2004–2023 period, from 18% to 12%.

Figure 2.1: Proportion of families using child care for children aged under five, by type of care
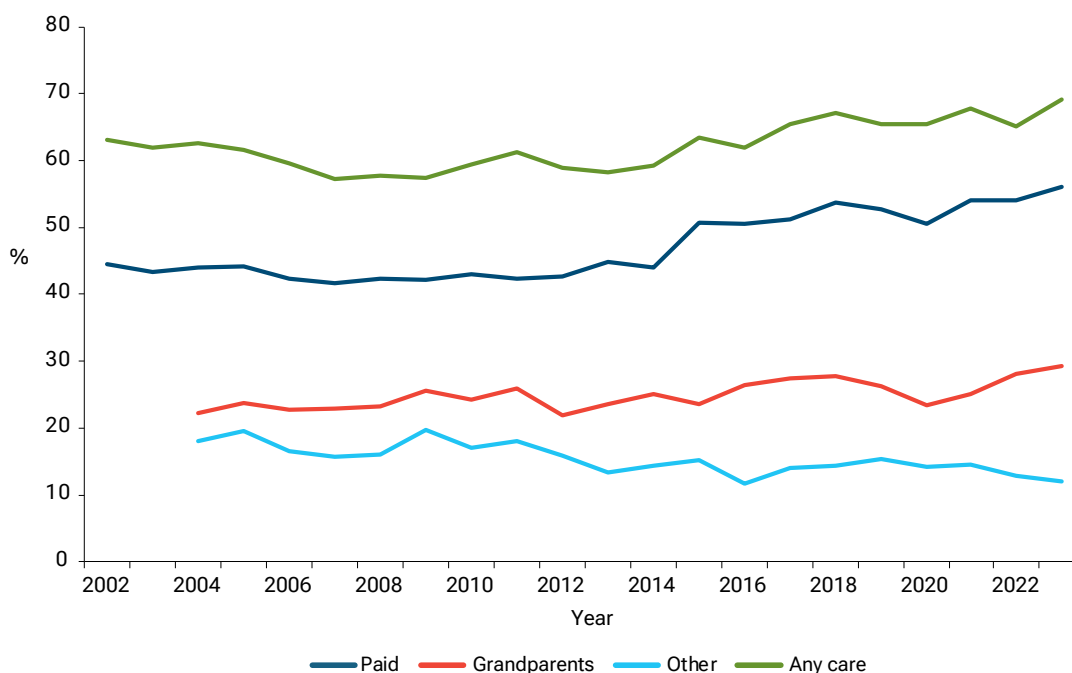
Figure 2.2 presents the average number of hours of care used per week for each child not yet at school, again for all types of care and separately for paid care, grandparental care and other forms of care. The figure focuses on the period since 2005 since full information on the number of children not yet at school per household is only available since then.

5 Additional analyses show that the key factor driving the increase in the use of child care was the significant rise in maternal employment. Whereas in 2013, 50% of mothers with a child aged four or younger were not employed, by 2023 this proportion had declined to 30%. At the same time, the proportion working full-time had increased from 17% to 29%. Given mothers are the primary caregivers in most families, their employment status is closely linked with child-care utilisation.

The figure shows that families have considerably increased the number of hours of care over the 2005–2023 period. Whereas an average of 20.1 hours per week was used in total for each child in 2005, the average increased by 7.0 hours or 35% to 27.1 hours in 2023. Looking at the different types of care shows that the mean hours of care were by far the longest for paid care. Furthermore, the hours used for paid care saw a similarly steep increase as the total hours of care—from 18.5 hours in 2005 to 26.2 hours in 2023. This corresponds to a 7.7-hour or 42% increase.

By contrast, for families using grandparental care, the average number of hours children spend in this type of care has remained relatively stable over the 2005–2023 period (apart from a spike in year 2011). At the beginning of the period, in 2005, each child spent an average of 10.5 hours per week in grandparental care, and this share increased only slightly by 1.3 hours to 11.8 hours in 2023. Families using other types of care usually used such care for relatively few hours, and the number of hours has declined considerably over time. Specifically, it went from 8.8 hours in 2005 to 5.0 hours in 2023.

Figure 2.2: Mean weekly hours of care per child not yet at school by type of care—Families using that type of care
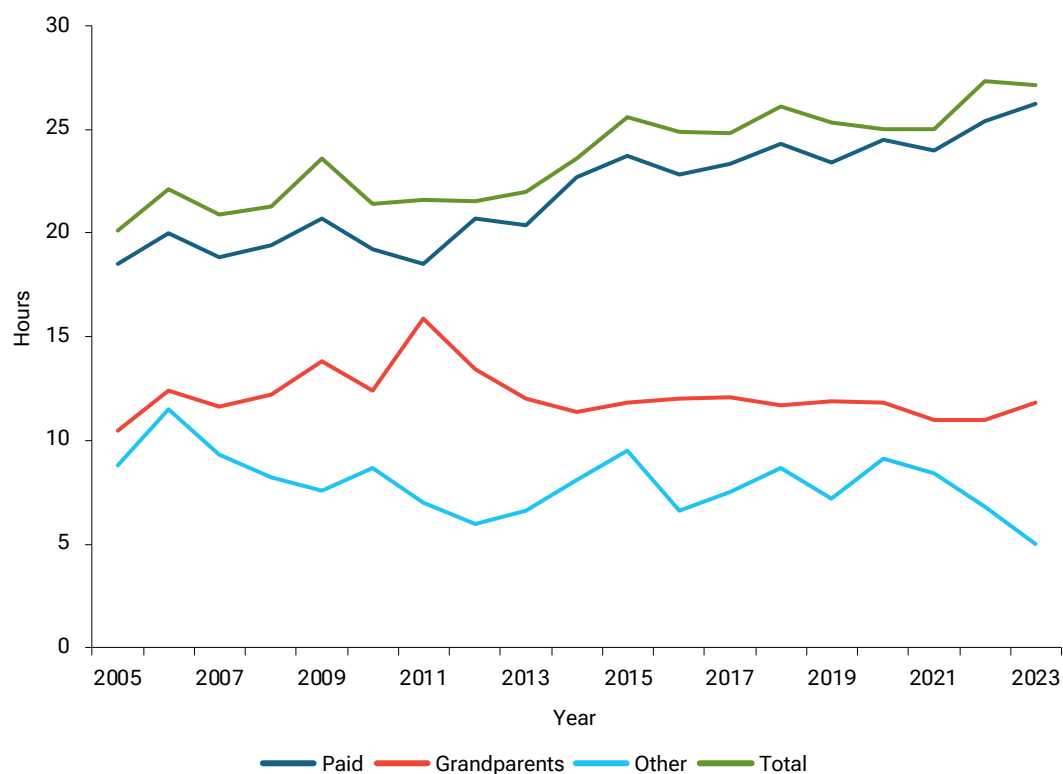
Expenditure on child care among parents

In every wave of the HILDA Survey, households that use child care are asked to report their usual weekly expenditure on child care[6] for each child 'after any regular child-care benefit you may receive has been deducted'. For families with expenditure on child care for children not yet at school, Figure 2.3 presents the median weekly child-care expenditure (at December 2023 prices) on these children. Child-care expenditure rose markedly between 2002 and 2017, from a median of $72 to $183. After a

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6 Child-care costs mainly arise from formal care (e.g., family day care) and informal paid care (e.g., by a paid sitter or nanny). However, a minority (around 4%) of parents with child-care costs for children not yet at school report child-care costs incurred by paying relatives, friends or other people for informal child care. This section of the report includes all types of child-care costs.

slight decline over the following years, median expenditure saw another rise between 2021 and 2022, reaching its highest level in 2022 at $191 per week. Median expenditure then fell in 2023 by $20 to $171. The recent drop in child-care expenditure likely reflects the improvements made to the child-care subsidy (both in terms of eligibility and payment rates) which came into effect in July 2023.

Figure 2.3: Median weekly expenditure on child care for children under five
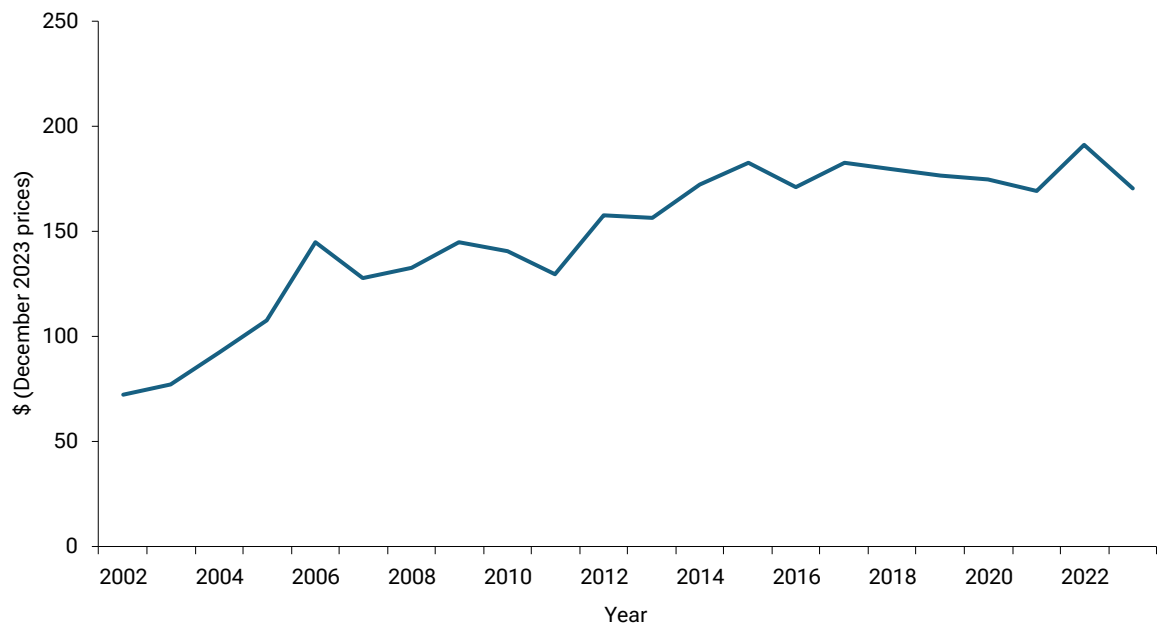
The burden of child-care costs for a household can be better understood by comparing child-care expenditure to the income of the household. This is done in Table 2.3, which presents the median share of annual household disposable equivalised income spent on child care for children not yet at school. To show how this measure of the burden of child-care costs depends on how well off the family is, the estimates are presented separately for each third of the income distribution (see Box 3.1, page 46, for an explanation of the measurement of income in the HILDA Survey).

Table 2.3: Median proportion of household disposable income spent on child care—Families with expenditure on child care, 2002 to 2023 (%)

Tercile (third) of the income distribution	2002	2007	2012	2018	2019	2020	2021	2022	2023	Percentage change 2002 to 2023
Bottom third	3.9	4.9	5.8	6.3	5.6	5.8	6.9	7.5	5.9	51.3
Middle third	4.3	5.4	6.7	6.5	6.8	6.8	6.5	7.2	6.1	41.9
Top third	5.4	6.6	6.9	7.9	7.1	7.7	7.0	6.3	6.6	22.2
All families	4.5	5.5	6.5	6.9	6.8	6.9	6.8	6.9	6.3	40.0

Despite year-to-year volatility, the clearly evident trend is that the share of income families spent on child care for children under five has risen between 2002 and 2023. Furthermore, this increase has been most pronounced for families in the lowest third of the income distribution. Among this group, the median proportion of income spent on child care rose from 3.9% in 2002 to 7.5% in 2022 before decreasing to 5.9% in 2023. Overall, this constitutes a 51.3% increase in the proportion of income spent on child care for low-income households. For families in the middle third, the share spent on child care rose from 4.3% to 7.2% in 2022 before also declining, to 6.1% in 2023, designating a 41.9% increase over the 2002–2023 period. Finally, for those in the top third the share rose from 5.4% to 6.6% over the 2002–2023 period, which constitutes a 22.2% increase. In contrast to families in the bottom and middle third, families in the top third did not see a decline in the share spent on child care between 2022 and 2023.

Although the income share spent on child care grew more strongly among the low-income families than among other families, there is a positive relationship between the income share spent on child care and the position in the income distribution in both 2002 and 2023: families in the bottom third spent the smallest share of their income on child care, and those in the top third spent the greatest share.

Grandparents providing child care

The previous section highlighted that a considerable proportion of parents rely on grandparents for the care of their children, and that this proportion has increased over time. This section changes the perspective from the parents using child care to the grandparents as providers of child care. Since 2007, every four years, the HILDA Survey has asked persons who are 40 years or older and who have children whether they have any grandchildren and whether they ever take care of, or baby-sit, any of their grandchildren. In 2015, a question about the age of the youngest grandchild was added.

Figure 2.4 shows the proportion of persons at each age who have grandchildren. To see how this proportion might have changed over time, it compares the average proportions for the two earliest available years (2007 and 2011) with the average proportions for the two most recent years (2019 and 2023). It shows that, in both periods, the share of people who have grandchildren is very low at age 40, then initially starts to rise slowly until the mid-50s before rising more steeply between the mid-50s and early 70s.

Figure 2.4: Proportion of people who have grandchildren, by age and period
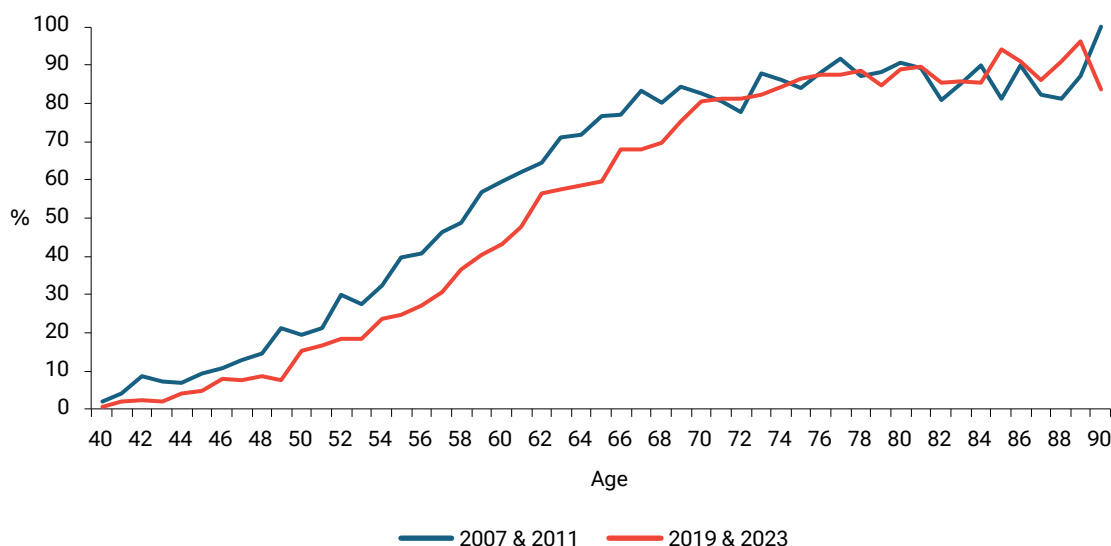
The figure also shows that until about age 70, the line for 2019 & 2023 is below that for 2007 & 2011, which means that at a given age, fewer people are already grandparents in the more recent period than in the earlier period. For example, at age 40, more than 2% of people were already grandparents in 2007 or 2011, whereas this share was 0.5% in 2019 and 2023. At age 50, 19% in the earlier period and 15% in the recent period reported having grandchildren. At age 60, the corresponding shares were 60% and 43%, indicating a 17-percentage-point difference. At older ages, the gap between the 2007 & 2011 period and the 2019 & 2023 period closes. In both cases, the share of grandparents lies above 80% from age 70 onwards.

We now investigate whether and how often grandparents take care of at least one of their grandchildren. Figure 2.5 shows how the share of grandparents looking after any of their grandchildren has developed over the 2007–2023 period, separately for grandmothers and grandfathers. From 2015 onwards, the figure also shows the proportion of grandmothers and grandfathers with a youngest grandchild below 15 years who provide care.

The figure shows that a substantial share of grandparents provides care, but this share is greater for grandmothers than grandfathers. In 2023, 47% of all grandmothers and 36% of all grandfathers took care of their grandchildren. Among grandparents with a youngest grandchild below 15 years, these proportions are higher than for all grandparents, at 59% for grandmothers and 43% for grandfathers.

Figure 2.5 also shows a declining trend in the proportion of grandparents providing care. In 2007, 57% of grandmothers and 48% of grandfathers reported providing care. The proportions of grandparents providing care thus declined by 10 percentage points among grandmothers and close to 13 percentage points among grandfathers over the 2007–2023 period. Among grandparents with a youngest child below 15 years, the proportion providing care remained relatively stable between 2015 and 2019 but then also declined between 2019 and 2023. This significant decline in the provision of care by grandparents is in contrast to the increase in the share of parents using paid care (as discussed in the previous section).

Figure 2.5: Proportion of grandparents providing care
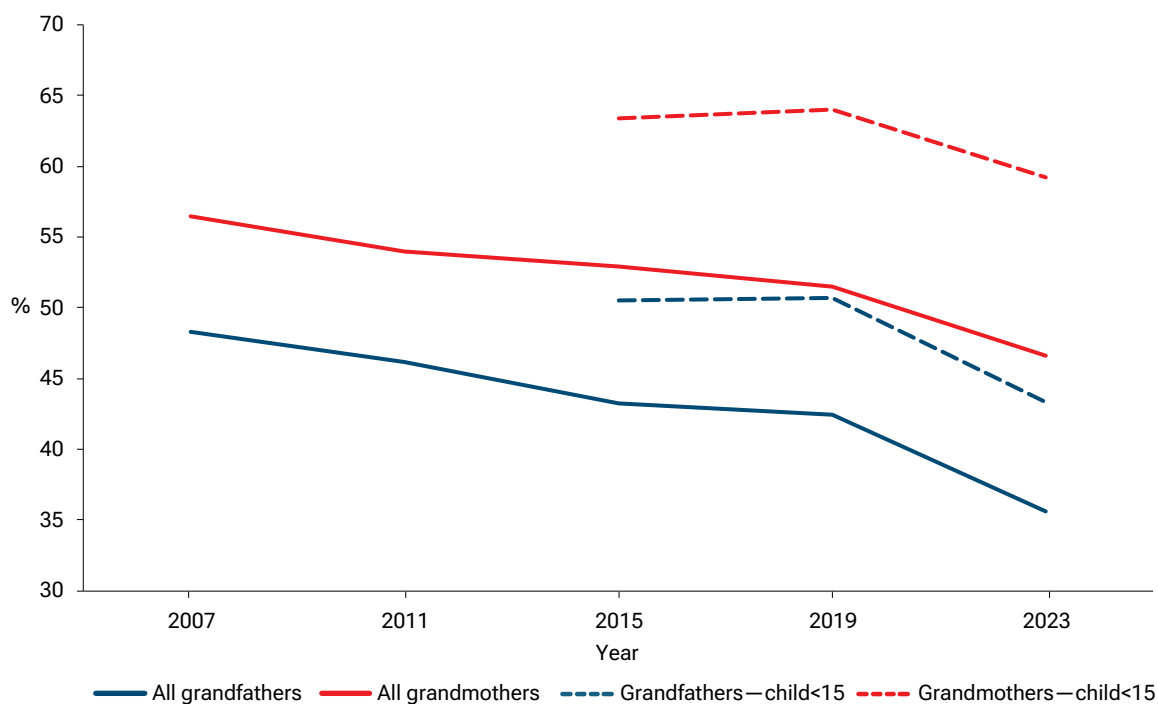
One of the factors determining whether grandparents are involved in the care of their grandchildren is the grandparent's age. Figure 2.6 shows, pooled for the 2015–2023 period, how the proportion of grandmothers and grandfathers taking care of their grandchildren changes with age. We start at age 50 and end at age 85 to ensure that the sample is large enough to obtain reliable values for each year of life. Furthermore, we focus only on grandparents who have a grandchild under the age of 15.

In the group of 'young grandparents' between the ages of 50 and 66 the proportion taking care of grandchildren is significantly larger among grandmothers than grandfathers. For example, whereas around 71% of grandmothers aged 50 take care of their grandchildren, this share is 55% among grandfathers. Part of this gap may be explained by the greater labour market participation of men at this age, which leaves less time for child care.

After the mid-60s, the proportion of grandparents taking care of grandchildren declines steeply. This may be due to both the grandchildren being older and the grandparents being less able to take care of children for health reasons. Nevertheless, even at age 80, there is still a substantial minority of roughly 20% of grandmothers and grandfathers who take care of some of their grandchildren.

Figure 2.6: Proportion of persons providing care to a grandchild—Persons with grandchildren under the age of 15 years
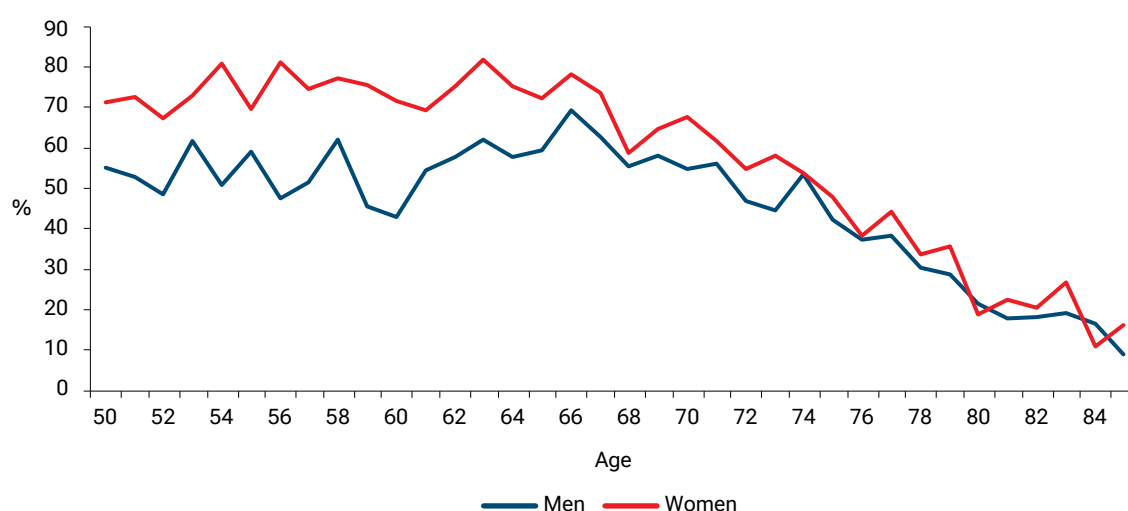
Whereas many grandparents are involved in looking after their grandchildren, the frequency of care varies considerably. Figure 2.7 provides information on how often grandparents take care of their grandchildren, separately by gender and for select years. It shows that a significant share of both grandfathers and grandmothers is very regularly involved in the care of their grandchildren. In 2023, 21.9% of grandfathers and 23% of grandmothers took care of their grandchildren about once a week. Another 17% of grandfathers and 19.4% of grandmothers took care of them several times per week, and 5.2% and 7.4% respectively did so on a daily basis. Overall, the frequency of caregiving is thus higher among women than among men, with a total of 44.1% of grandfathers and 49.9% of grandmothers taking care of their grandchildren at least once per week (i.e., daily, several times per week or about once a week).

On the other hand, a significant minority of grandfathers (27.4%) and grandmothers (23%) provide care a few times a year, and around 3% of both groups provide care even less often than that.

Looking at the trends over time, we see that the frequency of caregiving has not changed much between 2007 and 2023. In both years, a total of around 44% of grandfathers and about 50% of grandmothers provided care at least once a week. However, daily caregiving has slightly declined, from 7.1% to 5.2% for grandfathers and from 9.9% to 7.4% for grandmothers.

Figure 2.7: Frequency of providing care to grandchildren—Persons providing care to their grandchildren
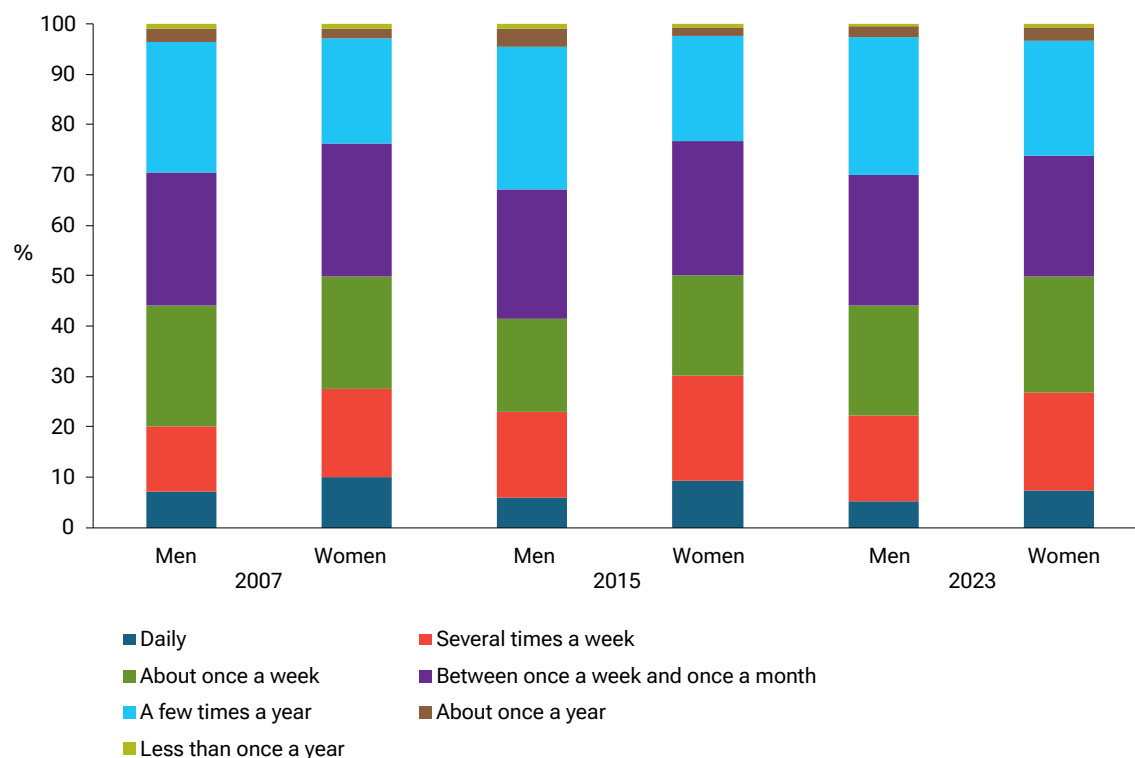
In the final step, we investigate what other factors—besides gender and age—might affect caregiving by grandparents. In this context, Table 2.4 provides results from logistic regression models of both the probability of providing any care to grandchildren and of frequently providing care, that is, at least once per week. For each of these outcomes, we ran one regression model for all grandparents and separate regressions for grandfathers and grandmothers. All models are based on pooled data for all available years over the 2007–2023 period.

Focusing first on the probability of providing any care, the table reconfirms that women are significantly more likely to provide care than men, all else being equal. Furthermore, grandparents aged 70 years and over are significantly less likely to provide care than those aged 40 to 49, and this holds true for both genders. The results also reconfirm a significant decline in the probability of caregiving over time, which was most marked between 2019 and 2023. The fact that this decline remains even after controlling for the grandparents' characteristics suggests that this change is not due to compositional changes in the group of grandparents, such as differences in age or employment status.

The availability of time is of high relevance for caregiving, with both part-time working and not working persons being more likely to take care of their grandchildren than full-time working persons (all else being equal).[7] By contrast, partner's time availability matters only for men; a non-working partner comes with an increased probability of taking care of grandchildren. However, having no partner in the household is associated with a lower probability of caregiving for both men and women. Further analyses suggest that this finding might in part be due to age differences among the grandchildren: grandparents without a partner in the household tend to have older grandchildren than those with a partner, and older grandchildren do not require as much care as younger grandchildren.

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7 It is worth noting that, based on additional analyses, employed grandparents have a higher likelihood of providing care if other characteristics are not accounted for. In 2023, 70% of full-time working grandmothers took care of a grandchild, compared to 64% of those working part-time and 40% of those not employed. Among men, these shares were 46% for both full-time and part-time workers and 31% for those not employed. One key reason for this pattern is that employed grandparents tend to be younger and healthier.

Table 2.4: Characteristics associated with providing care to grandchildren—Grandparents aged 40 and over, 2007 to 2023

	Any care			At least once per week		
	All	Men	Women	All	Men	Women
Female	0.107	–	–	0.068	–	–
Age category (Reference category: 40–49 years)						
50–59 years	*ns*	*ns*	*ns*	*ns*	*ns*	*ns*
60–69 years	*ns*	*ns*	*ns*	–0.044	*ns*	–0.042
70–79 years	–0.233	–0.147	–0.285	–0.174	–0.145	–0.203
80 and older	–0.525	–0.409	–0.602	–0.295	–0.245	–0.339
Educational level (Reference category: Year 11 and below)						
Year 12, Certificate III or IV, Diploma	0.041	*ns*	0.050	0.015	*ns*	*ns*
Bachelor's degree or higher	0.109	0.102	0.095	0.055	0.036	0.063
Employment status (Reference category: Full-time work)						
Part-time work	0.093	0.083	0.064	0.090	0.069	0.101
Not working	0.062	0.057	0.046	0.101	0.079	0.118
Partner's employment status (Reference category: Full-time work)						
Part-time	*ns*	*ns*	*ns*	*ns*	*ns*	*ns*
Not working	*ns*	0.039	*ns*	0.017	0.041	*ns*
No partner in household	–0.087	–0.143	–0.052	–0.044	–0.089	–0.025
Number of grandchildren	0.009	0.009	0.009	0.005	0.003	0.005
Household income quartile (Reference category: Lowest quartile)						
Second-lowest quartile	0.068	0.065	0.068	0.045	0.037	0.051
Second-highest quartile	0.104	0.121	0.089	0.046	0.037	0.052
Highest quartile	0.104	0.114	0.099	0.033	*ns*	0.049
Long-term health condition	–0.047	–0.037	–0.056	–0.020	–0.015	–0.025
Remoteness of residence (Reference category: Major cities)						
Inner regional	–0.065	–0.033	–0.087	–0.084	–0.053	–0.105
More remote	–0.091	–0.069	–0.106	–0.104	–0.068	–0.128
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)						
First Nations	*ns*	*ns*	*ns*	0.048	*ns*	0.080
Immigrant, main English-speaking countries	–0.057	–0.051	–0.062	–0.038	–0.035	–0.040
Immigrant, other countries	–0.070	–0.051	–0.089	0.030	0.036	0.022
Year (Reference category: 2007)						
2011	–0.023	*ns*	–0.026	–0.023	–0.024	–0.022
2015	–0.027	–0.033	–0.020	*ns*	*ns*	*ns*
2019	–0.027	–0.038	–0.018	*ns*	*ns*	*ns*
2023	–0.051	–0.060	–0.042	*ns*	*ns*	*ns*
Number of observations	19,505	8,148	11,357	19,496	8,147	11,349

Notes: The table presents mean marginal effects from logit regression models of the determinants of providing any care to grandchildren and of providing care at least once per week. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Furthermore, caring for grandchildren is more likely among persons with higher socio-economic status. Persons with a tertiary degree are more likely to provide care than those who completed up to Year 11, and those with a higher income are more likely to provide care than those in the lowest income quarter.

With respect to First Nations background and country of origin, First Nations grandparents do not differ significantly from non-First Nations Australian-born grandparents in their probability of looking after grandchildren. By contrast, immigrants from both the main English-speaking countries and other countries have significantly lower probabilities of looking after grandchildren.[8] Grandparents living in inner regional or more remote areas are less likely to look after their grandchildren than those living in the major cities. Finally, grandparents with long-term health conditions are less likely to look after their grandchildren, whereas a higher number of grandchildren increases the probability of caregiving.

Looking at the determinants of the probability of providing care at least once per week shows an overall similar pattern to the determinants of the probability of providing any care. The most significant exception is that there is no long-term declining trend in the probability of providing frequent care over the 2007–2023 period. Furthermore, with respect to age, the decline in the probability of providing frequent care sets in earlier than the decline in the probability of providing any care, that is, already at age 60–69. Furthermore, First Nations Australians are more likely to provide care at least once per week than non-First Nations Australian-born persons. Finally, grandparents born in 'other' countries, despite having a lower probability of providing any care, have a higher probability of providing frequent care than non-First Nations Australian-born grandparents.

Fertility intentions

Over the past 15 years, Australia has seen a considerable decline in the number of births. The total fertility rate (TFR) dropped from 2.02 in 2008 to its lowest ever recorded value of 1.5 in 2023 (Australian Bureau of Statistics (ABS), 2024). While official statistics can tell us about realised fertility, less is known about Australians' fertility intentions and the thoughts they have when deciding whether or not to have a child. In select 'fertility years' (2005, 2008, 2011, 2015, 2019 and 2023), the HILDA Survey contained a special module collecting detailed information about whether or not people would like to have (another) child, the total number of children they would like to have, and the factors considered important in deciding whether to have another child. In the earlier waves, these questions were asked of women aged 18 to 44, whereas from 2015 onwards, the upper age limit was raised to 49 years. For men, the questions were asked of those aged 18 to 54 and those with a female partner aged up to 44 or 49 years (depending on the year). For reasons of comparability, when looking at trends over time and/or comparing trends for women and men, the sample is restricted to persons aged 18 to 44.

Trends in the desired number of children

Figure 2.8 presents the total number of children that women and men aged 18 to 44 would like to have in the years 2005 and 2023. This number was calculated as the sum of the number of children the respondent already had and the number of additional children they reported they intended to have (see Box 2.4 page 25). Focusing first on 2023, the largest group of people favours a two-child family: around 44% of women and 47% of men would like to have two children in total. The second largest group is people who would like to have three children, at close to 21% of both women and men. Wanting one child, or four or more children, is much less common. Additionally, there is a substantial minority of women and men who do not wish to have any children, at around 14% and 15%, respectively.

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8 In part, this negative association between being born overseas and providing care might be driven by persons coming to Australia at an older age while (some of) the children stayed in the country of origin. The more grandchildren live overseas, the less opportunity grandparents will have to take care of them.

Figure 2.8: Total desired number of children—Persons aged 18 to 44 years

Comparing the distributions of the desired number of children for 2005 and 2023 reveals an overall similar pattern for both years. Both times, the largest group is the one that would like to have two children, followed by the group desiring three children. However, there is also an evident trend towards a preference for small families and for childlessness. The share of persons desiring no children saw the largest increase of all groups, rising from less than 8% to around 14% among women and from about 11% to close to 15% among men. Furthermore, the share of those favouring a one-child family increased from less than 9% among both genders to around 12% among women and 11% among men. By contrast, the shares of people who would like to have three, four, or five or more children declined among both genders between 2005 and 2023.

Table 2.5 investigates trends in the mean desired number of children overall and separately by age group over the 2005–2023 period. Looking at the mean values for all men and women first, we see that for men the mean desired number of children has declined by 0.23 children, from 2.22 in 2005 to 1.99 in 2023. This is the first time that this value has fallen below two children. For women, the mean

desired number of children is slightly higher than for men. However, it has seen an even stronger decline, by 0.26, from 2.35 children in 2005 to 2.09 children in 2023.

The trends over time by age group show that the decline in the desired number of children has been almost ubiquitous. For women, it is most marked in the two youngest age groups. Among women aged 25 to 29, the desired number of children went from 2.52 to 2.13—a decrease of 0.39. For women aged 18 to 24, the desired number dropped by 0.34 from 2.29 to 1.95. Among men, the decline was most marked for those aged 30 to 34, at –0.48, and those aged 25 to 29, at –0.42. The downward trend in the desired number of children was therefore particularly significant in those groups that are just before or at the usual age of family formation.[9] However, other groups have also seen very significant declines, most notably men aged 45 to 49 (–0.28) and women aged 40 to 44 (–0.30).

Table 2.5: Mean total desired number of children, by age group and gender, 2005 to 2023

	2005	2008	2011	2015	2019	2023	Change 2005 to 2023
Women							
18–24 years	2.29	2.33	2.37	2.21	2.19	1.95	–0.34
25–29 years	2.52	2.24	2.27	2.21	2.02	2.13	–0.39
30–34 years	2.28	2.39	2.36	2.30	2.17	2.03	–0.25
35–39 years	2.31	2.35	2.28	2.31	2.23	2.07	–0.24
40–44 years	2.38	2.26	2.38	2.35	2.30	2.08	–0.30
45–50 years				2.32	2.30	2.33	
Total	2.35	2.32	2.33	2.28	2.20	2.09	–0.26
Men							
18–24 years	2.23	2.11	2.30	2.15	2.01	2.06	–0.17
25–29 years	2.28	2.23	2.19	2.04	2.11	1.86	–0.42
30–34 years	2.30	2.22	2.25	2.11	2.02	1.82	–0.48
35–39 years	2.08	2.07	2.06	2.28	2.08	1.93	–0.15
40–44 years	2.16	2.15	2.17	2.09	2.12	2.16	0.00
45–49 years	2.29	2.13	2.04	2.28	2.05	2.01	–0.28
50–54 years	2.14	1.95	1.99	2.14	2.17	2.15	0.01
Total	2.22	2.14	2.17	2.15	2.07	1.99	–0.23

Another interesting question is whether other factors besides gender, age and time period determine the desired number of children. Table 2.6 presents results from regression models that investigate the association between the desired number of children and various personal characteristics. The first model, which is based on the pooled sample of women and men, shows that—all else being equal—women on average desire slightly more children than men (0.119 children). Furthermore, young people aged 18 to 24 desire a significantly greater number of children than older people, particularly those aged 35 and over. For example, those aged 35 to 39 desire 0.217 fewer children than those aged 18 to 24.

There are also significant associations with employment status. Full-time work is associated with a lower desired number of children than both part-time work and being out of the labour force. Persons in highly secure jobs report a higher number of desired children than persons in jobs with low job security. The partnership situation also matters. Cohabiting persons, and even more so married persons, desire considerably more children than persons who do not have a partner living with them. Persons living in both inner regional and more remote areas would like more children than

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9   In 2022, the mean age at birth for first-time mothers was 29.8 years (Australian Institute of Health and Welfare (AIHW), 2024a), and fathers tend to be a few years older than their partners.

those in the major cities, whereas those with higher incomes desire fewer children than those with lower incomes. Better mental health is associated with a greater desired number of children (see Box 7.1, page 148, for a description of the SF-36 health measures). First Nations Australians desire more children than non-First Nations Australian-born persons, whereas persons born in 'other' countries desire fewer children. Finally, those with more traditional attitudes towards marriage and children and those with more traditional attitudes towards parenting and work desire more children than those with less traditional attitudes in these areas (see Box 2.5, page 39, for the definition and calculation of these attitudinal measures).

Table 2.6: Characteristics associated with the desired number of children—Persons aged 18 to 49 (women) and 18 to 54 (men)

	All persons	Women	Men
Women	0.119	–	–
Age category (Reference category: 18–24 years)			
25–29 years	–0.061	*ns*	–0.138
30–34 years	–0.151	–0.071	–0.277
35–39 years	–0.217	–0.152	–0.325
40–44 years	–0.187	–0.103	–0.306
45–49 years	–0.166	*ns*	–0.304
50–54 years	–0.178		–0.257
Educational level (Reference category: Year 11 and below)			
Year 12, Certificate III or IV, Diploma	*ns*	–0.090	0.084
Bachelor's degree or higher	*ns*	–0.094	0.101
Employment status (Reference category: Full-time work)			
Part-time work	0.071	0.151	*ns*
Unemployed	*ns*	0.127	*ns*
Not in labour force	0.280	0.439	*ns*
Perceived job security (Reference category: Low, 0–4 points on a scale from 0 to 10)			
Medium (5–8 points)	*ns*	*ns*	*ns*
High (9–10 points)	0.106	0.125	0.087
Relationship status (Reference category: No partner in household)			
Married	0.526	0.376	0.637
Cohabiting	0.261	0.172	0.337
Remoteness of residence (Reference category: Major cities)			
Inner regional areas	0.057	0.053	0.063
More remote areas	0.145	0.130	0.166
Year (Reference category: 2005)			
2008	*ns*	*ns*	*ns*
2011	0.079	0.077	0.088
2015	0.094	0.093	0.098
2019	0.070	0.078	0.071
2023	0.067	0.093	*ns*
Household income quartile (Reference category: Lowest quarter)			
Second-lowest quarter	–0.169	–0.209	–0.129
Second-highest quarter	–0.393	–0.444	–0.319
Highest quarter	–0.509	–0.582	–0.403
Mental health (SF-36 subscale, 0–100 scale)	0.002	*ns*	0.002
Physical functioning (SF-36 subscale, 0–100 scale)	*ns*	*ns*	*ns*
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)			
First Nations	0.298	0.229	0.324
Immigrant, main English-speaking countries	*ns*	–0.138	*ns*
Immigrant, other countries	–0.196	–0.304	*ns*
Traditional attitudes towards marriage and children	0.155	0.133	0.185
Traditional attitudes towards parenting and work	0.073	0.093	0.045
Constant	1.230	1.435	1.200
Number of observations	33,912	17,014	16,898

Notes: This table presents coefficient estimates from ordinary least squares regression models of the determinants of the total desired number of children, as the sum of the children already had and additional children desired. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Perhaps surprisingly, the steep decline in the desired number of children that was visible in Figure 2.8 and Table 2.5 does not appear in the regression model. On the contrary, all else being equal, persons interviewed in the most recent years expressed a slightly greater number of desired children compared to those interviewed in 2005. This change is due to the inclusion of the two measures for traditional attitudes towards marriage and children and parenting and work. Traditional attitudes are associated with more desired children, but attitudes have become much less traditional over the 2005 to 2023 period (see next section). If both measures for traditional attitudes are excluded from the model, the year coefficients become negative. The drop in the desired number of children over time is thus strongly linked to the trend towards less traditional attitudes in society.

Looking at the separate models for women and men, there are many similarities in the relationships between personal characteristics and desired number of children. Among both genders, being in the youngest age group, having a secure job, being married or in a de-facto relationship, living in inner regional or more remote areas, having a low income, being a First Nations Australian, and having traditional attitudes towards marriage and children or parenting and work are all associated with a greater number of desired children.

However, there are clear gender differences regarding the association between both education and employment and desired number of children. Employment status matters only among women, with those who are unemployed, working part-time or out of the labour force all reporting a greater number of desired children than those working full-time. Furthermore, completion of Year 12, Certificate III or IV, a diploma, or a bachelor's or higher degree is associated with fewer desired children among women but more desired children among men compared to those who completed at a maximum Year 11. Finally, women born overseas (both in the main English-speaking or other countries) desire significantly fewer children compared to non-First Nations Australian-born women, whereas this is not the case for men.

Important factors in fertility decisions

What are the issues that people consider when they contemplate having children? And have these changed over recent decades? In the 'fertility years', we provided respondents with a list of issues related to the decision to have another child and asked them how important they felt each of these factors were for them at the time. Respondents answered on a four-point scale from 1 (not important) to 4 (very important).

Figure 2.9 shows how women aged 18 to 49 rated the importance of 14 different factors in the year 2023. The factors are sorted in descending order by importance, that is, by the share of women who rated the issue as 'very important'. First, looking at the overall pattern, almost all of the factors are considered important by the clear majority of women—except for the two issues at the very bottom, the 'very important' and 'important' shares always sum to more than 60%.

However, there are still marked differences in just how important women consider these factors to be. The issue that women consider most important is the general cost of raising children: 46% consider this factor to be very important, and another 39% consider it to be important. Conversely, only a small minority of 9% and 6% considers the general cost of raising children to be of limited importance or not important, respectively. The second most important factor is the emotional value of children: 'Having someone to love' is considered very important by 38% of women and important by another 33% of women. The security of a woman's own or her partner's job, available and affordable good-quality child care, and the stress and worry of raising children are also comparatively important factors in women's childbearing considerations. On the other hand, the factors related to intergenerational obligations, that is, 'Having someone to care for you when you are old' or 'Giving your parents grandchildren', are considered to be important by only a minority of women.

Figure 2.9: Importance of different factors in deciding whether to have a child—Women aged 18–49, 2023

Categories (top to bottom):
- The general cost of raising children
- Having someone to love
- The security of your or your partner's job
- The availability and affordability of good-quality child care
- The stress and worry of raising children
- How old you are
- Being able to buy a home or a better home
- Providing more purpose to life
- Having time for leisure or social activities
- Being able to make major purchases
- Your spouse or partner having time and energy for a career
- Having time and energy for your career
- Having someone to care for you when you are old
- Giving your parents grandchildren

%

■ Not important   ■ Of limited importance   ■ Important   ■ Very important

Figure 2.10: Importance of different factors in deciding whether to have a child—Men aged 18–49, 2023

Categories (top to bottom):
- The general cost of raising children
- Having someone to love
- The availability and affordability of good-quality child care
- The security of your or your partner's job
- Being able to buy a home or a better home
- Providing more purpose to life
- The stress and worry of raising children
- How old you are
- Being able to make major purchases
- Having time for leisure or social activities
- Your spouse or partner having time and energy for a career
- Having time and energy for your career
- Having someone to care for you when you are old
- Giving your parents grandchildren

%

■ Not important   ■ Of limited importance   ■ Important   ■ Very important

Figure 2.10 presents the importance of the same list of factors for men, this time sorted according to the relative importance among men. Although the question was also asked of men aged 50 to 54, we focus here on men aged up to 49 for better comparison with women's responses. The overall pattern is very similar to that of women. The same 12 out of 14 factors are considered important or very important by at least 60% of men. Furthermore, the same issues make up the top four factors among both genders. Just like women, men consider the general cost of raising children to be most important, followed by having someone to love, good-quality child care and job security.

However, some gender differences are also apparent. When combining the shares of persons considering a factor to be 'important' and 'very important', the greatest gender gap exists with respect to age. A total of 70% of women consider this issue to be important or very important, compared to 61% of men—a 9-percentage-point difference. This may be due to a greater awareness of the impact of ageing on women's fertility compared to men's. Women also place more importance on the stress and worries of raising children and on job security, with a 7-percentage-point difference for each, the general co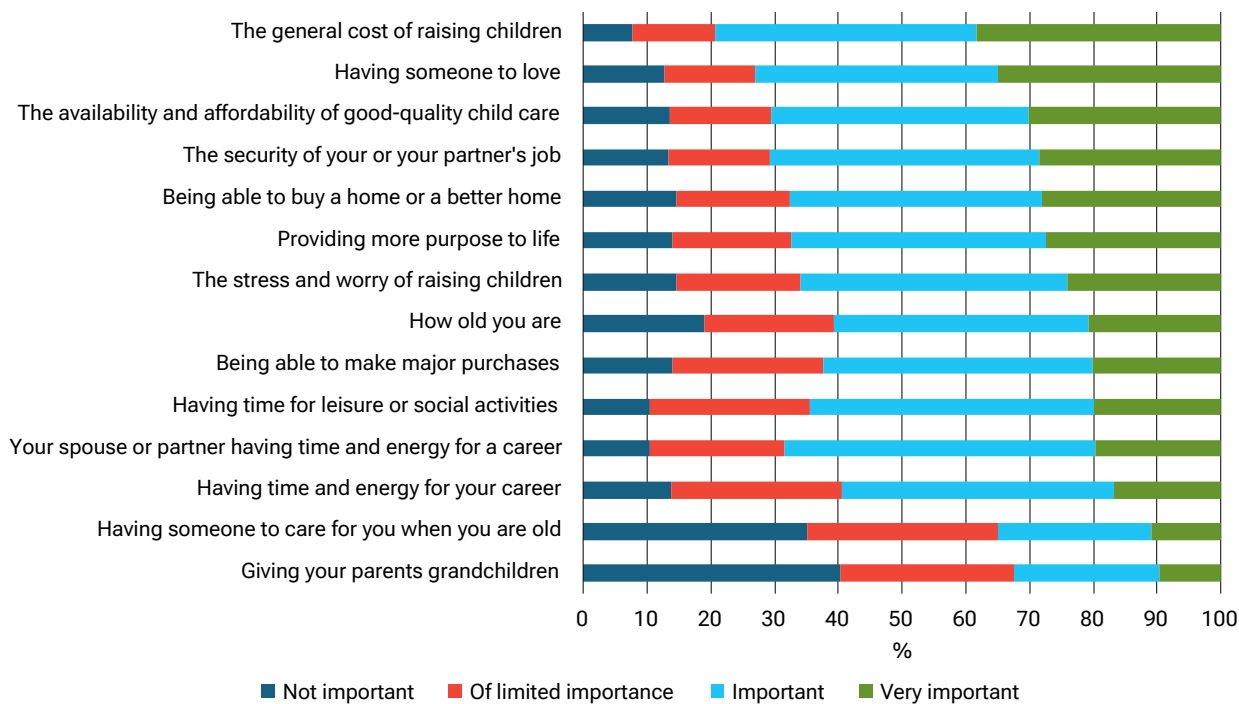st of raising children (6 percentage points) and the availability and affordability of good-quality child care (5 percentage points). On the other hand, men place more value than women on children's role in providing more purpose in life (4 percentage points) and on giving their parents grandchildren (3 percentage points).

The notable decline in the desired number of children over the 2005 to 2023 period raises the question of whether the importance of certain aspects around childbearing has also changed over time. Table 2.7 provides the time trends in the importance of the 14 factors, separately for men and women. It displays average values on a four-point scale from 1 (not important) to 4 (very important), so that higher numbers designate greater importance. For reasons of comparability, the sample is restricted to men and women aged 18 to 44 given, until 2011, women were only asked about these factors if they were under 45 years of age. For ease of interpretation, the factors are divided into two broad groups: (1) the benefits of having children and (2) the costs and concerns relating to childbearing. Within these broad groups, the factors are sorted by average importance in 2023.

Despite some year-to-year fluctuations, the clear pattern visible in Table 2.7 is that among both genders, costs and concerns relating to childbearing have become more important over time, whereas the social and emotional benefits of having children have become less important (or at best have remained stable).

Regarding the benefits of having children, 'Having someone to love' remains the most important factor over the period. However, between 2005 and 2023, the importance of this factor declined by 0.06 points for women and 0.07 points for men. Among women, all other benefits of having children also saw a decline of about 0.06 to 0.07 points, while the importance of these factors has been relatively stable among men.

By contrast, both genders assign rising importance to the general cost of raising children. Over the 2008 to 2023 period alone (the item was not asked in 2005), its importance increased from 2.85 to 3.14 points among men, designating a 0.29-point increase. Among women, its importance rose by 0.24 points from 3.05 to 3.29. Almost all other considerations related to childrearing costs and concerns, and especially being able to make major purchases, the stress and worry of raising children, the availability and affordability of good-quality child care and (among women) having time for leisure and social activities, also significantly rose in importance over the 2005 to 2023 period.

Overall, the declining importance assigned to the emotional value of children combined with increasing attention to the costs and challenges associated with childrearing could explain part of the trend towards the desire for smaller families that was outlined in the previous subsection.

Table 2.7: Mean importance of different factors in deciding whether to have another child—Women and men aged 18 to 44 years

	2005	2008	2011	2015	2019	2023	Change 2005–2023
Women							
Benefits							
Having someone to love	3.04	2.97	2.89	2.94	2.97	2.98	–0.06
Providing more purpose to life	2.82	2.77	2.70	2.76	2.74	2.76	–0.06
Having someone to care for you when you are old	2.17	2.08	2.04	2.10	2.16	2.10	–0.07
Giving your parents grandchildren	2.02	2.00	1.92	2.01	1.98	1.95	–0.07
Costs and concerns							
The general cost of raising children		3.05	3.05	3.07	3.16	3.29	0.24
The security of your or your partner's job	2.94	2.88	3.01	3.02	3.00	3.04	0.10
The availability and affordability of good-quality child care	2.83	2.69	2.77	2.85	2.92	3.02	0.19
The stress and worry of raising children	2.71	2.67	2.71	2.69	2.81	2.95	0.24
Being able to buy a home or a better home	2.72	2.69	2.70	2.73	2.74	2.87	0.15
Your spouse or partner having time and energy for a career	2.73	2.66	2.70	2.79	2.82	2.82	0.09
How old you are	2.83	2.79	2.86	2.80	2.77	2.81	–0.02
Having time for leisure or social activities	2.60	2.57	2.56	2.54	2.66	2.78	0.18
Being able to make major purchases	2.43	2.41	2.50	2.54	2.61	2.75	0.32
Having time and energy for your career	2.47	2.41	2.46	2.60	2.63	2.72	0.25
Men							
Benefits							
Having someone to love	3.07	2.98	2.95	3.00	3.04	3.00	–0.07
Providing more purpose to life	2.84	2.83	2.79	2.81	2.84	2.84	0.00
Having someone to care for you when you are old	2.12	2.07	2.05	2.09	2.16	2.12	0.00
Giving your parents grandchildren	2.08	2.06	2.04	2.08	2.08	2.06	–0.02
Costs and concerns							
The general cost of raising children		2.85	2.86	2.91	3.02	3.14	0.29
The availability and affordability of good-quality child care	2.76	2.62	2.66	2.80	2.87	2.93	0.17
The security of your or your partner's job	2.84	2.80	2.82	2.87	2.95	2.91	0.07
Being able to buy a home or a better home	2.77	2.72	2.73	2.79	2.80	2.87	0.10
Your spouse or partner having time and energy for a career	2.65	2.58	2.60	2.73	2.82	2.81	0.16
The stress and worry of raising children	2.50	2.44	2.51	2.57	2.68	2.77	0.27
Having time for leisure or social activities	2.73	2.63	2.65	2.62	2.73	2.77	0.04
Being able to make major purchases	2.50	2.43	2.52	2.56	2.64	2.74	0.24
Having time and energy for your career	2.56	2.54	2.53	2.60	2.65	2.67	0.11
How old you are	2.49	2.48	2.54	2.57	2.61	2.62	0.13

Note: Respondents with physical or health conditions making it difficult to have (more) children are excluded in Waves 2005 and 2008.

Attitudes towards marriage, parenting and work

The HILDA Survey collects information that enables tracking of community attitudes to marriage, parenting and work, providing objective evidence on the extent to which attitudes are shifting. Specifically, in Waves 1, 5, 8, 11, 15, 19 and 23, a list of statements about parenting and work was presented to respondents in the self-completion questionnaire (SCQ). Respondents were asked to indicate the extent to which they agreed with each statement on a scale of 1 (strongly disagree) to 7 (strongly agree). In addition, in Waves 5, 8, 11, 15, 19 and 23, the SCQ contained a set of statements about marriage and children, for each of which the respondent was likewise asked to indicate the extent of their agreement (see Box 2.5, page 39).

Because the HILDA data are longitudinal, we track not only changes in overall community attitudes over time, but also changes in individuals' attitudes, allowing us to see how attitudes change as people age and move into different stages of the lifecycle. For example, it is generally thought that older people tend to be more conservative or traditional than younger people. What is less clear is the extent to which this empirical regularity is an effect of ageing and moving into different lifecycle stages, as opposed to an effect of fixed differences in attitudes across birth cohorts—that is, it may be that people born in earlier years were always more conservative—even when they were young—than people born more recently. Longitudinal data such as those provided by the HILDA Survey can help resolve this uncertainty.

Trends in attitudes over time

Table 2.8 presents the proportion of people who agree with each of the statements on marriage and children in each year in which they have been administered. Since the available response options range from 1 (strongly disagree) to 7 (strongly agree), persons reporting a score between 5 and 7 are classified as agreeing with the statement. Agreement with statements *a, c, d, f* and *g* reflects a less traditional attitude, while agreement with the remaining statements reflects a more traditional attitude.

Overall, the direction of movement of attitudes between 2005 and 2023 is clear: attitudes have become more non-traditional over this period. Most strikingly, there has been a profound shift towards the view that homosexual couples should have the same rights as heterosexual couples. Between 2005 and 2023, the proportion agreeing with this statement increased from 44% to 74% for females and from 32% to 63% for males—an increase of about 30 percentage points in both cases.

The second very notable change over the 2005 to 2023 period concerns a trend towards greater support of raising children in family models other than the 'traditional' family with a co-resident father and mother. Specifically, agreement with the statement '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' rose by 32 percentage points among females, from 36% to 68%. For males, it rose by 22 percentage points from 32% to 54%. Relatedly, agreement with the statement that children will usually grow up happier if they live with both father and mother declined by 25 percentage points among females and 19 percentage points among males.

Table 2.8: Agreement with different statements on marriage and children—Persons aged 15 and over, 2005 to 2023 (%)

	2005	2008	2011	2015	2019	2023	Change 2005–2023
Females							
It is alright for an unmarried couple to live together even if they have no intention of marrying	64	68	72	74	78	78	14
Marriage is a lifetime relationship and should never be ended	52	48	47	39	33	30	−22
Marriage is an outdated institution	14	15	15	15	18	20	6
It is alright for a couple with an unhappy marriage to get a divorce even if they have children	69	70	72	76	80	80	11
Children will usually grow up happier if they have a home with both a father and a mother	66	65	63	49	43	41	−25
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	36	41	46	54	63	68	32
Homosexual couples should have the same rights as heterosexual couples	44	51	58	67	74	74	30
Males							
It is alright for an unmarried couple to live together even if they have no intention of marrying	68	72	73	76	78	77	9
Marriage is a lifetime relationship and should never be ended	57	54	52	47	43	41	−16
Marriage is an outdated institution	17	18	18	19	21	21	4
It is alright for a couple with an unhappy marriage to get a divorce even if they have children	62	64	66	69	71	71	9
Children will usually grow up happier if they have a home with both a father and a mother	83	80	78	68	65	64	−19
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	32	35	39	46	55	54	22
Homosexual couples should have the same rights as heterosexual couples	32	38	44	59	65	63	31

Note: The table presents the proportion of persons agreeing with each statement, that is, selecting a value of 5 or above on a 1 to 7 Likert scale, where 1 is 'strongly disagree' and 7 is 'strongly agree'.

Another visible trend is the declining support of the notion that marriage is a lifetime relationship that should never be ended. In 2023, support for this statement was down by 22 percentage points for females and 16 percentage points for males, with only 30% of females and 41% of males agreeing to this statement. On the other hand, the vast majority of people do not believe that marriage is an outdated institution. Only 20% of females and 21% of males agreed with this statement in 2023. Taken together, marriage still plays an important role for most people; however, it is no longer necessarily thought of as a lifelong commitment.

Tables 2.9 and 2.10 present the proportion agreeing with each of the statements on parenting and paid work, for females and males, respectively. The estimates are interpreted in the same way as for Table 2.8. Agreement with statements *a, c, d, f, j, k, l* and *n* reflects a more traditional attitude, while the remaining statements reflect a less traditional attitude.

Here again, the broad trend towards less traditional attitudes is evident. Among the largest changes over the 2001 to 2023 period is the increasing support for maternal employment. Most notably, there are large decreases in agreement with the assertions that a pre-school child will likely suffer if the mother works full-time (minus 20 percentage points for females and minus 17 percentage points for males since 2005), that mothers who do not really need the money should not work (minus 24 percentage points for females and minus 22 percentage points for males since 2001) and that it is better for everyone involved if the man earns the money and the woman takes care of the home and children (minus 22 percentage points for females and minus 21 percentage points for males since 2001). Similarly, there is an increase in agreement with the statement that a working mother can have as good a relationship with her children as a non-working mother (16 percentage points for females and 14 percentage points for males since 2001).

Table 2.9: Agreement with different statements on parenting and work—Females aged 15 and over, 2001 to 2023 (%)

	2001	2005	2008	2011	2015	2019	2023	Change 2001–2023	Change 2005–2023
Many working mothers seem to care more about being successful at work than meeting the needs of their children	29	24	23	20	17	17	12	–17	–12
If both partners in a couple work, they should share equally in the housework and care of children	91	91	90	89	88	88	87	–4	–4
Whatever career a woman may have, her most important role in life is still that of being a mother	80	78	74	75	72	66	60	–20	–18
Mothers who don't really need the money shouldn't work	37	31	29	26	22	16	13	–24	–18
Children do just as well if the mother earns the money and the father cares for the home and children	69	69	69	70	74	75	74	5	5
It is better for everyone involved if the man earns the money and the woman takes care of the home and children	37	31	29	28	22	17	15	–22	–16
As long as the care is good, it is fine for children under 3 years of age to be placed in child care all day for 5 days a week	23	23	24	28	33	35	38	15	15
A working mother can establish just as good a relationship with her children as a mother who does not work for pay	51	53	54	60	64	68	67	16	14
A father should be as heavily involved in the care of his children as the mother	85	83	83	82	83	86	84	–1	1
It is not good for a relationship if the woman earns more than the man		16	14	14	10	8	7		–9
On the whole, men make better political leaders than women do		16	14	18	11	9	7		–9
A pre-school child is likely to suffer if their mother works full-time		39	37	35	27	24	19		–20
Children often suffer because their fathers concentrate too much on their work		48	47	44	38	34	32		–16
If parents divorce it is usually better for the child to stay with the mother than with the father		33	32	32	26	22	22		–11

Note: This table presents the proportion of persons agreeing with each statement, that is, selecting a value of 5 or above on a 1 to 7 Likert scale, where 1 is 'strongly disagree' and 7 is 'strongly agree'.

However, the rising support for maternal employment is somehow at odds with people's attitudes towards external child care for young children. Agreement with the statement that 'As long as the care is good, it is fine for children under 3 years of age to be placed in child care all day for 5 days a week' has grown by 15 percentage points among women and 11 percentage points among men over the 2001 to 2023 period. Nevertheless, even in 2023, still only a minority of 38% of women and 30% of men agree with the statement.

Table 2.10: Agreement with different statements on parenting and work—Males aged 15 and over, 2001 to 2023 (%)

	2001	2005	2008	2011	2015	2019	2023	Change 2001–2023	Change 2005–2023
Many working mothers seem to care more about being successful at work than meeting the needs of their children	33	28	23	22	20	19	17	–16	–11
If both partners in a couple work, they should share equally in the housework and care of children	84	82	80	80	79	80	76	–8	–6
Whatever career a woman may have, her most important role in life is still that of being a mother	76	71	68	68	67	62	60	–16	–11
Mothers who don't really need the money shouldn't work	39	34	32	29	24	18	17	–22	–17
Children do just as well if the mother earns the money and the father cares for the home and children	58	60	61	60	65	68	63	5	3
It is better for everyone involved if the man earns the money and the woman takes care of the home and children	42	37	32	33	27	21	21	–21	–16
As long as the care is good, it is fine for children under 3 years of age to be placed in child care all day for 5 days a week	19	20	21	24	27	29	30	11	10
A working mother can establish just as good a relationship with her children as a mother who does not work for pay	38	39	41	46	51	54	52	14	13
A father should be as heavily involved in the care of his children as the mother	82	78	79	78	78	80	79	–3	1
It is not good for a relationship if the woman earns more than the man		14	12	14	11	8	9		–5
On the whole, men make better political leaders than women do		28	25	30	19	15	15		–13
A pre-school child is likely to suffer if their mother works full-time		43	40	39	31	27	26		–17
Children often suffer because their fathers concentrate too much on their work		56	53	50	45	41	38		–18
If parents divorce it is usually better for the child to stay with the mother than with the father		26	25	26	23	18	18		–8

Note: This table presents the proportion of persons agreeing with each statement, that is, selecting a value of 5 or above on a 1 to 7 Likert scale, where 1 is 'strongly disagree' and 7 is 'strongly agree'.

The responses to the statements presented in Tables 2.8 to 2.10 can be aggregated to provide an overall summary measure of the extent to which a person holds traditional views on marriage and children, and on parenting and paid work (see Box 2.5, page 39). The summary measure is essentially the mean response of the individual, but with the scale reversed (that is, 1 replaced with 7, 2 replaced with 6, and so on) for statements in favour of a more non-traditional attitude. Separate summary measures are produced for the two broad subject areas (marriage and children, and parenting and work).

Figure 2.11 shows that in 2005, the mean extent of agreement with the traditional viewpoint for parenting and work was 3.4 for females and 3.6 for males, compared with respective means of 4.2 and 4.4 for marriage and children. This indicates that both males and females were already less traditional in relation to parenting and work than in relation to marriage and children at the beginning of the period. Nonetheless, males consistently had somewhat more traditional views than females on both marriage and children and parenting and work.

The mean changes in attitude over the 2005 to 2023 period were slightly larger for females for both subject areas, with a mean decline of 1.1 points for marriage and children (compared to a decline of 0.8 for males) and 0.5 of a point for parenting and work (compared to 0.4 for males). The slopes of the four lines over the 2005 to 2023 period show that the period between 2011 and 2019 saw the most marked shift towards non-traditional attitudes, whereas the mean values remained mostly stable between 2019 and 2023.

Box 2.5: Summary measures of the extent to which one has traditional views on marriage and children and on parenting and paid work

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 seven-point Likert scale (where 1 is strongly disagree and 7 is strongly agree), with the following seven 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. 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 seven items as follows: $[(8 – a) + b + (8 – c) + (8 – d) + e + (8 – f) + (8 – g)]/7$. The score potentially ranges from 1 to 7.

A measure of the extent to which one has traditional views on parenting and work can be derived based on the extent of agreement with the following 14 statements:

a. Many working mothers seem to care more about being successful at work than meeting the needs of their children

b. If both partners in a couple work, they should share equally in the housework and care of children

c. Whatever career a woman may have, her most important role in life is still that of being a mother

d. Mothers who don't really need the money shouldn't work

e. Children do just as well if the mother earns the money and the father cares for the home and children

f. It is better for everyone involved if the man earns the money and the woman takes care of the home and children

g. As long as the care is good, it is fine for children under 3 years of age to be placed in child care all day for 5 days a week

h. A working mother can establish just as good a relationship with her children as a mother who does not work for pay

i. A father should be as heavily involved in the care of his children as the mother

j. It is not good for a relationship if the woman earns more than the man

k. On the whole, men make better political leaders than women do

l. A pre-school child is likely to suffer if their mother works full-time

m. Children often suffer because their fathers concentrate too much on their work

n. If parents divorce it is usually better for the child to stay with the mother than with the father

The total score for the extent to which views about parenting and work are traditional is calculated as $[a + (8 – b) + c + d + (8 – e) + f + (8 – g) + (8 – h) + (8 – i) + j + k + l + (8 – m) + n]/14$. Again, the score potentially ranges from 1 to 7.

The marriage and children items were first introduced in Wave 5. Items a to i of parenting and work were first administered in Wave 1, while additional items j to n were first administered in Wave 5. All items have subsequently been administered in Waves 8, 11, 15, 19 and 23. It is therefore possible to construct the two summary measures in Waves 5, 8, 11, 15, 19 and 23.

Figure 2.11: Mean extent of traditional attitudes towards marriage and children and parenting and work (1–7 scale)
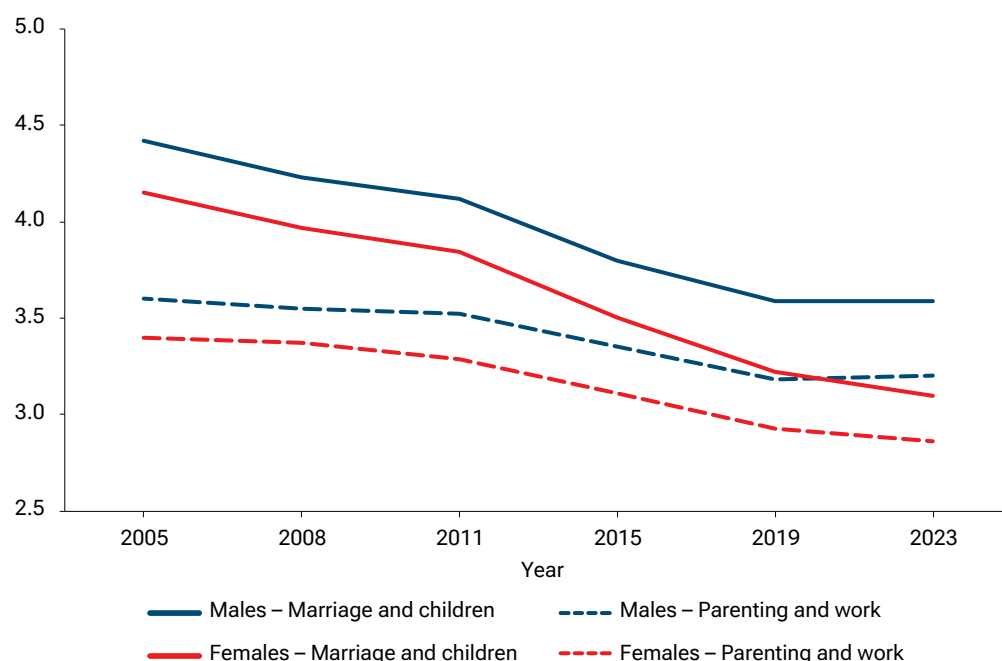
Notes: Attitudes are measured by the summary measures described in Box 2.5 (page 39). A smaller number indicates a less traditional attitude.

Trends in attitudes by age and cohort

This subsection looks at the question of whether the observed trend towards non-traditional attitudes has been driven by people changing their attitudes over time as they grow older, younger cohorts having less traditional attitudes than previous cohorts, or by a combination of these two factors.

To this end, Table 2.11 presents mean attitudes towards marriage and children across both age groups and birth cohorts based on the summary measure described in Box 2.5 (page 39). The table provides three pieces of information: (1) differences in attitude by age within the same cohort (if we compare values in the same row horizontally); (2) differences in attitude between different cohorts at the same age (comparing values in the same column vertically); and (3) differences in attitude by age group at broadly the same point in time (comparing values on the diagonal).

First, examining the attitudes of different age groups at roughly the same point in time (the diagonal perspective) reveals a consistent pattern of more traditional views among older people. Specifically, the age groups above 65 show significantly more traditional views than the age groups below. Focusing on the diagonal closest to the bottom among females shows that mean values are between 2.9 and 3.1 for all age groups between 15 and 64 years. For the older age groups, mean values rise to 3.3 among those aged 65 to 74, 3.8 among those aged 75 to 84 and 4.1 among those aged 85 and over.

A comparison of the mean values within one birth cohort at different ages (the horizontal perspective) shows that all cohorts saw declines in the mean extent of traditional attitudes as they grew older. For females, the three cohorts born between 1960 and 1989 saw the steepest declines in traditional attitudes as they aged, by 0.7 points over about a 20-year period. Similarly, among males, the 1970 to 1979 and 1980 to 1989 cohorts saw the largest declines (minus 0.6 of a point). By contrast, among both genders, the oldest cohort of those born between 1905 and 1929 exhibited the smallest declines in traditional attitudes, 0.1 to 0.2 points. However, it should be noted that for this cohort, we can only compare two age brackets, while there are three for most of the other cohorts.

With respect to differences between birth cohorts at the same age (the vertical perspective), the table shows that, at any given age, (almost) each subsequent cohort had less traditional attitudes towards marriage and children than the preceding cohort. For example, when the cohort of females born between 1980 and 1989 was between 15 and 24 years old, they had a mean value of 3.8. This average dropped to 3.3 for the 1990 to 1999 cohort and 3.1 for the 2000 to 2008 cohort at ages 15 to 24. Differences between cohorts are even more marked at ages 55 and over. For example, among females, the 1930 to 1939 cohort had a mean value of 4.7 at age 65 to 74, which was 1.4 points higher than when the 1950 to 1959 cohort was aged 65 to 74 (3.3 points). Similarly, mean support of traditional attitudes declined by 1.2 points for the female cohorts passing through the age brackets of 55 to 64 years and 75 to 84 years.

The one exception regarding this trend towards less traditional attitudes across cohorts is the youngest cohort of males born between 2000 and 2008. With a mean value of 3.7, this cohort has slightly more traditional views at the ages of 15 to 24 than the previous 1990 to 1999 cohort, with a mean of 3.6.[10]

Table 2.11: Mean extent to which traditional attitudes are held towards marriage and children, by gender, birth cohort and age group, 2005 to 2023 (pooled) (1–7 scale)

Cohort	Age group								Change within cohort
Females	**15–24**	**25–34**	**35–44**	**45–54**	**55–64**	**65–74**	**75–84**	**85 and over**	
1905–1929							5.0	4.8	−0.2
1930–1939						4.7	4.4	4.1	−0.6
1940–1949					4.3	3.9	3.8		−0.5
1950–1959				3.9	3.6	3.3			−0.6
1960–1969			3.8	3.4	3.1				−0.7
1970–1979		3.7	3.5	3.0					−0.7
1980–1989	3.8	3.5	3.1						−0.7
1990–1999	3.3	2.9							−0.4
2000–2008	3.1								
Change within age group	−0.7	−0.8	−0.7	−0.9	−1.2	−1.4	−1.2	−0.7	
Males									
1905–1929							5.0	4.9	−0.1
1930–1939						4.8	4.6	4.5	−0.3
1940–1949					4.5	4.2	4.1		−0.4
1950–1959				4.2	4.0	3.7			−0.5
1960–1969			4.0	3.8	3.6				−0.4
1970–1979		4.2	3.8	3.6					−0.6
1980–1989	4.1	3.8	3.5						−0.6
1990–1999	3.6	3.3							−0.3
2000–2008	3.7								
Change within age group	−0.4	−0.9	−0.5	−0.6	−0.9	−1.1	−0.9	−0.4	

Notes: Attitudes are measured by the summary measure described in Box 2.5 (page 39). A smaller number indicates a less traditional attitude.

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10 This difference is largely driven by more traditional attitudes of the 2000–2008 cohort towards two statements: 'Marriage is an outdated institution' and 'Children will usually grow up happier if they have a home with both a father and a mother'.

Table 2.12 presents analogous information to Table 2.11 but this time for attitudes to parenting and work. Here we see a similar pattern of people in the older age groups tending to be more traditional. As was the case for attitudes to marriage and children, all cohorts have experienced declines in the extent to which traditional views are held as they aged. Additionally, there is also a clear trend towards subsequent cohorts being less traditional than previous cohorts at any given age.

Table 2.12: Mean extent to which traditional attitudes are held towards parenting and work, by gender, birth cohort and age group, 2005 to 2023 (pooled) (1–7 scale)

Cohort	Age group								Change within cohort
Females	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
1905–1929							4.1	4.0	–0.1
1930–1939						3.8	3.7	3.6	–0.2
1940–1949					3.5	3.4	3.4		–0.1
1950–1959				3.3	3.2	3.1			–0.2
1960–1969			3.3	3.2	2.9				–0.4
1970–1979		3.2	3.1	2.9					–0.3
1980–1989	3.1	3.0	2.8						–0.3
1990–1999	2.9	2.6							–0.3
2000–2008	2.8								–
Change within age group	–0.3	–0.6	–0.5	–0.4	–0.6	–0.7	–0.9	–0.4	
Males									
1905–1929							4.1	4.1	0.0
1930–1939						4.0	3.9	3.8	–0.2
1940–1949					3.7	3.6	3.5		–0.2
1950–1959				3.5	3.4	3.3			–0.2
1960–1969			3.5	3.4	3.2				–0.4
1970–1979		3.4	3.3	3.1					–0.3
1980–1989	3.5	3.3	3.2						–0.3
1990–1999	3.2	3.0							–0.2
2000–2008	3.2								–
Change within age group	–0.3	–0.4	–0.3	–0.4	–0.6	–0.7	–0.6	–0.3	

Notes: Attitudes are measured by the summary measure described in Box 2.5 (page 39). A smaller number indicates a less traditional attitude.

Alignment of attitudes and behaviours

This final subsection investigates the question of whether people with more traditional attitudes also lead more traditional lifestyles. Table 2.13 presents the proportion of women and men in different living arrangements, separately by whether they hold traditional or non-traditional attitudes towards marriage and children. A person is classified as holding traditional attitudes if they have a value higher than 4 on the 1 to 7 scale of the summary measure. Given the vast differences in attitude across age groups and time (see previous subsections), we pool the data only from the two most recent years (2019 and 2023). Furthermore, we restrict the sample to persons aged between 25 and 54, when living in the 'traditional' family model—opposite-sex marriage with children—is the most common.

Table 2.13: Prevalence of living arrangements, by gender and whether the person holds traditional attitudes towards marriage and children—Persons aged 25 to 54, 2019 and 2023 (pooled) (%)

	Women		Men	
	Non-traditional	Traditional	Non-traditional	Traditional
Opposite-sex marriage, no children in household	8.7	10.9	8.0	10.1
Opposite-sex marriage with children	37.8	61.0	33.6	54.8
Opposite-sex cohabitation, no children in household	11.1	3.7	13.3	5.8
Opposite-sex cohabitation, with children	10.1	3.8	9.5	4.4
Same-sex marriage/ cohabitation (with or without children)	1.4	0.0*	2.2	0.0*
Separated/divorced/ widowed, no children in household	2.3	2.9	4.1	4.6
Separated/divorced/ widowed, with children	6.9	4.3	1.3	1.2*
Never married, no children in household	15.1	11.7	27.3	18.7
Never married, with children	6.7	1.8	0.8	0.4*
Total	100.0	100.0	100.0	100.0

The table shows that people with traditional attitudes towards marriage and children are indeed more likely to live in an opposite-sex marriage with children; 61% of women and 54.8% of men with traditional attitudes live in this arrangement. The second largest group among persons with traditional attitudes is never married without children, with 11.7% of women and 18.7% of men occupying this category. This is followed by people in opposite-sex marriages without children, with 10.9% of women and 10.1% of men with traditional attitudes towards marriage and children living in this arrangement. Other living arrangements are relatively rare among persons with traditional attitudes.

Among persons with non-traditional attitudes, living arrangements are more diverse. The opposite-sex marriage with children is again the most common arrangement, but much less prevalent overall, with 37.8% of women and 33.6% of men. The second largest group is again unmarried persons without children, with 15.1% of women and 27.3% of men. However, a larger share of people lives in opposite-sex cohabiting unions. Among women, opposite-sex cohabiting unions with children account for 10.1% of those with non-traditional attitudes, but only 3.8% of those with traditional attitudes. For men, these shares are 9.5% and 4.4%, respectively. Among women, being separated, divorced or widowed with children or being never married with children is also much more common among those with non-traditional attitudes. By contrast, among men, the prevalence of these arrangements is low regardless of their attitudes. Finally, 1.4% of women and 2.2% of men with non-traditional attitudes live in same-sex couples, whereas none of the persons with traditional attitudes in the HILDA sample do.

Table 2.14 presents the prevalence of different models of the division of labour within couples, separately by gender and whether the person holds traditional attitudes towards parenting and work. It shows that among women and men with traditional attitudes, the traditional division of labour is also the most common. Here, couples are classified as having a traditional division if the male partner does more than 60% of the couple's employment time (i.e., paid work and commuting) and

the female partner does more than 60% of the family work time (i.e., housework and care); 42.8% of women and 35% of men with traditional attitudes live in this arrangement.

The second most prevalent model among those with traditional attitudes is the egalitarian division, where both partners do between 40% and 60% of both employment and family work time, with 17.7% of women and 21.5% of men occupying this group. The category 'Equal employment, female does more family work', which designates couples where both do between 40% and 60% of employment time but the female partner does more than 60% of the family work, is also relatively prevalent among women and men with traditional attitudes.

Table 2.14: Prevalence of division of labour models, by gender and whether the person holds traditional attitudes towards parenting and work—Persons aged 25 to 54 living in heterosexual couple relationships, 2019 and 2023 (pooled) (%)

	Women		Men	
	Non-traditional	Traditional	Non-traditional	Traditional
Traditional division	26.3	42.8	27.4	35.0
Egalitarian division	21.3	17.7	21.1	21.5
Anti-traditional division	3.7	0.5*	3.0	3.0*
Equal employment, female does more family work	20.8	15.5	20.2	21.0
Equal employment, male does more family work	10.0	4.9*	10.5	3.5*
Other division	18.0	18.6	17.8	16.0
Total	100.0	100.0	100.0	100.0

Among persons with non-traditional attitudes, a traditional division is less frequent than it is among persons with traditional attitudes; nevertheless, it is still the most prevalent arrangement. More than one quarter of women (26.3%) and men (27.4 %) with non-traditional attitudes have a traditional division of labour. This group is dominated by parents with relatively young children. The egalitarian model is again the second most frequent arrangement, with 21.3% of women and 21.1% of men in this group. Here, the proportion of childless couples is considerably higher (although still in the minority), and if there are children, they are older on average than among non-traditional couples with a traditional division of labour.

The arrangement whereby both have about the same share of employment time but the female partner has more family work time is almost as frequent as the egalitarian division—20.8% of women and 20.2% of men. However, the arrangement whereby both have equal employment but the male partner does more family work is also relatively prevalent among non-traditional men and women.

The anti-traditional model, in which the female partner has more than 60% of the employment time and the male partner does more than 60% of the family work, is very rare in all groups, but close to non-existent among women with traditional attitudes towards parenting and work.

In sum, the HILDA Survey shows that attitudes towards both marriage and children and parenting and work have become less traditional over recent decades, but they often do not correspond to real-life practices. Comparing the two subject areas, attitudes towards marriage and children more closely align with living arrangements than attitudes towards parenting and work align with the actual division of labour within couples. An egalitarian division of labour is not much more prevalent among those with non-traditional attitudes than it is among those with traditional attitudes.

3

Household economic wellbeing

3. Household economic wellbeing

Roger Wilkins

The HILDA Survey places considerable emphasis on measuring and understanding the drivers of the economic wellbeing of Australians. Most important to this effort is the annual measurement of household incomes via a detailed set of questions asked of each household member aged 15 and over.

The HILDA Survey also regularly collects data on household expenditure and wealth, which are important complements to income data in obtaining a complete picture of economic wellbeing. Further, information is regularly collected on the experience of financial stress, the ability to raise funds at short notice, experience of material deprivation, perceived adequacy of household income, saving habits, saving horizon, attitudes to financial risk and satisfaction with one's financial situation.

This chapter examines the evolution and dynamics of economic wellbeing in Australia from several perspectives, considering not only household incomes, but also experiences of financial and housing stress. A particular focus in this year's report is intergenerational income mobility, involving comparisons between the incomes of parents with dependent children and the (later-observed) incomes of their children when they are adults. The data collected on household expenditure are also examined, with a particular focus on how the rising cost of living in 2022 and 2023 had an impact on spending patterns.

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[a] and deduction of income taxes in the financial year ended 30 June of the year of the wave (e.g., 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 the price level prevailing in the December quarter of 2023 (referred to as 'December 2023 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, superannuation, investments and any businesses they own. The 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.

[a] Following the Australian Bureau of Statistics' (ABS) practice in its Survey of Income and Housing (ABS, 2017), Commonwealth Rent Assistance is included as income, despite being a rental subsidy. Note that this approach is inconsistent with the Canberra Group's recommendation (United Nations, 2011).

Mean and median household disposable incomes grew very strongly between 2003 and 2009, both increasing by approximately $3,700 per year at December 2023 prices. Between 2009 and 2018, growth in both the mean and median was much weaker. Over the nine years from 2009 to 2018, the

mean household income grew by only $2,699, or 2.5%, while the median in 2018 was $2,929 lower than in 2009. Between 2018 and 2021 there was stronger growth in mean and median incomes, with the mean rising by $7,885 and the median rising by $8,415. However, while the mean income continued to grow between 2021 and 2022, it declined sharply between 2022 and 2023, to be below its 2020 level. Moreover, the median declined by $3,276, or 3.2%, between 2021 and 2022, and declined further between 2022 and 2023; similar to the mean, the median in 2023 was less than the median in 2020.

Table 3.1: Household annual disposable incomes, 2001 to 2023

	Mean ($, December 2023 prices)	Median ($, December 2023 prices)	Number of households	Number of people
2001	85,998	74,245	7,281,363	18,824,376
2002	87,372	75,632	7,357,079	19,039,091
2003	87,314	75,611	7,433,836	19,258,412
2004	90,285	78,437	7,505,562	19,468,324
2005	94,446	82,785	7,589,921	19,714,425
2006	99,652	85,808	7,686,360	20,013,530
2007	104,010	89,588	7,836,760	20,382,461
2008	106,540	91,771	8,009,920	20,809,743
2009	109,687	97,896	8,175,735	21,216,949
2010	110,105	94,417	8,298,873	21,521,079
2011	110,876	92,909	8,413,537	21,834,344
2012	112,432	97,361	8,578,027	22,221,454
2013	113,166	96,739	8,737,151	22,594,836
2014	112,887	95,171	8,882,149	22,929,929
2015	111,779	94,498	9,028,432	23,266,631
2016	111,856	95,392	9,196,869	23,656,158
2017	112,600	94,013	9,379,972	24,046,268
2018	112,386	94,967	9,564,837	24,423,561
2019	115,711	97,919	9,751,890	24,794,547
2020	117,119	99,887	9,873,658	24,993,932
2021	120,271	103,382	9,936,616	25,070,047
2022	122,199	100,106	10,155,519	25,508,508
2023	116,432	99,372	10,487,557	26,176,423

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 gender 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 primarily used the 'modified OECD' scale (Hagenaars et al., 1994) as applied by the ABS, 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 (e.g., the rent on a three-bedroom flat is typically less than three times 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).

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, above, for an explanation of how equivalised income is calculated and Box 3.3, page 49, 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 equivalised incomes across all individuals in the population, including children.

Patterns in average levels of income between 2001 and 2023 evident for incomes of households are also evident for equivalised incomes of individuals. This is unsurprising given that changes in household composition of the population between 2001 and 2023 have been relatively modest.

There was little net change in income inequality between 2001 and 2019. For example, the Gini coefficient, a common measure of overall inequality, remained between 0.29 and 0.31 over the entire 19-year period. However, the arrival of the COVID-19 pandemic led to sizeable movements in inequality. In 2020, the first year affected by the COVID-19 pandemic, there was a marked decline in inequality, despite only the last three-and-a-half months of the financial year ending 30 June 2020 potentially affected, that is, mid-March to 30 June 2020. Indeed, the Gini coefficient decreased from 0.304 in 2019 to 0.291 in 2020. The Gini coefficient subsequently increased slightly in 2021 and then increased substantially in 2022, to be at its highest level ever in the HILDA Survey period, at 0.323. This reflected growth in high incomes relative to middle incomes (as reflected by the ratio of the 90th percentile to the median) and declines in low incomes relative to middle incomes (as reflected by the ratio of the median to the 10th percentile). The Gini coefficient declined to 0.307 in 2023, but was still higher than in any year over the 2012 to 2021 period.

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- and middle-income levels are described by the mean and median, respectively, 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.

Table 3.2: Distribution of individuals' household equivalised income, 2001 to 2023

	Mean ($, December 2023 prices)	Median ($, December 2023 prices)	Ratio of 90th percentile to the median	Ratio of median to the 10th percentile	Gini coefficient
2001	50,918	44,869	1.93	2.11	0.304
2002	51,642	45,370	1.91	2.08	0.303
2003	51,921	46,376	1.87	2.11	0.299
2004	53,294	48,339	1.82	2.13	0.290
2005	55,714	50,006	1.84	2.08	0.293
2006	58,543	51,630	1.92	2.06	0.297
2007	61,805	54,788	1.91	2.19	0.309
2008	62,740	54,913	1.91	2.14	0.305
2009	65,022	58,755	1.83	2.20	0.294
2010	64,757	56,851	1.91	2.09	0.303
2011	65,514	56,966	1.97	2.11	0.310
2012	66,365	58,124	1.91	2.04	0.299
2013	66,762	58,013	1.93	2.04	0.302
2014	66,672	58,099	1.91	2.00	0.301
2015	66,344	58,198	1.92	2.00	0.298
2016	66,347	58,147	1.89	2.02	0.298
2017	66,999	57,795	1.92	2.01	0.305
2018	67,088	59,049	1.90	2.05	0.301
2019	69,352	61,427	1.87	2.10	0.304
2020	70,507	62,203	1.87	2.00	0.291
2021	72,823	64,982	1.85	2.10	0.298
2022	74,176	64,127	1.90	2.21	0.323
2023	70,793	63,060	1.89	2.19	0.307

Income differences by family type

Figure 3.1 compares median equivalised incomes across family types (defined in Box 3.4, below).[11] A reasonably consistent ordering by type of family is evident across the 23 years 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 type: non-elderly couples without dependent children, who have the highest incomes; couples with dependent children and non-elderly single 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 2023, with non-elderly couples without children faring somewhat better than other family types. However, this family type experienced the sharpest decrease in median income in 2023.

Box 3.4: Family types

The following eight family types are distinguished in this report: (1) non-elderly couple, defined to be a couple (married or de facto) without dependent children with at least one member of the couple under 65 years of age; (2) couple with at least one dependent child living with them (regardless of the ages of the members of the couple); (3) single parent living with at least one dependent child (again, regardless of the age of the single parent); (4) non-elderly (aged under 65) single male; (5) non-elderly single female; (6) older couple, where both people are over 65 years of age; (7) older (aged 65 and over) single male; and (8) older (aged 65 and over) single female. In some analysis, only four family types are distinguished: (1) couple without dependent children; (2) couple with dependent children; (3) single parent with dependent children; and (4) single person.

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 (where children residing in each parent's household exactly 50% of the time are allocated to the mother's household). 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.

11　The classification of family types does not distinguish single-parent families by whether the parent is male or female. Approximately 85% of single-parent families are headed by a female parent; consequently, sample sizes for male single-parent families are generally too small for statistically reliable separate analysis. Note that median incomes tend to be slightly higher for male-headed single-parent families, but rates of poverty and financial stress are similar to those found for female single-parent families. Rather than exclude male single-parent families from analysis, they are grouped with female single-parent families.

Figure 3.1: Median equivalised income, by family type
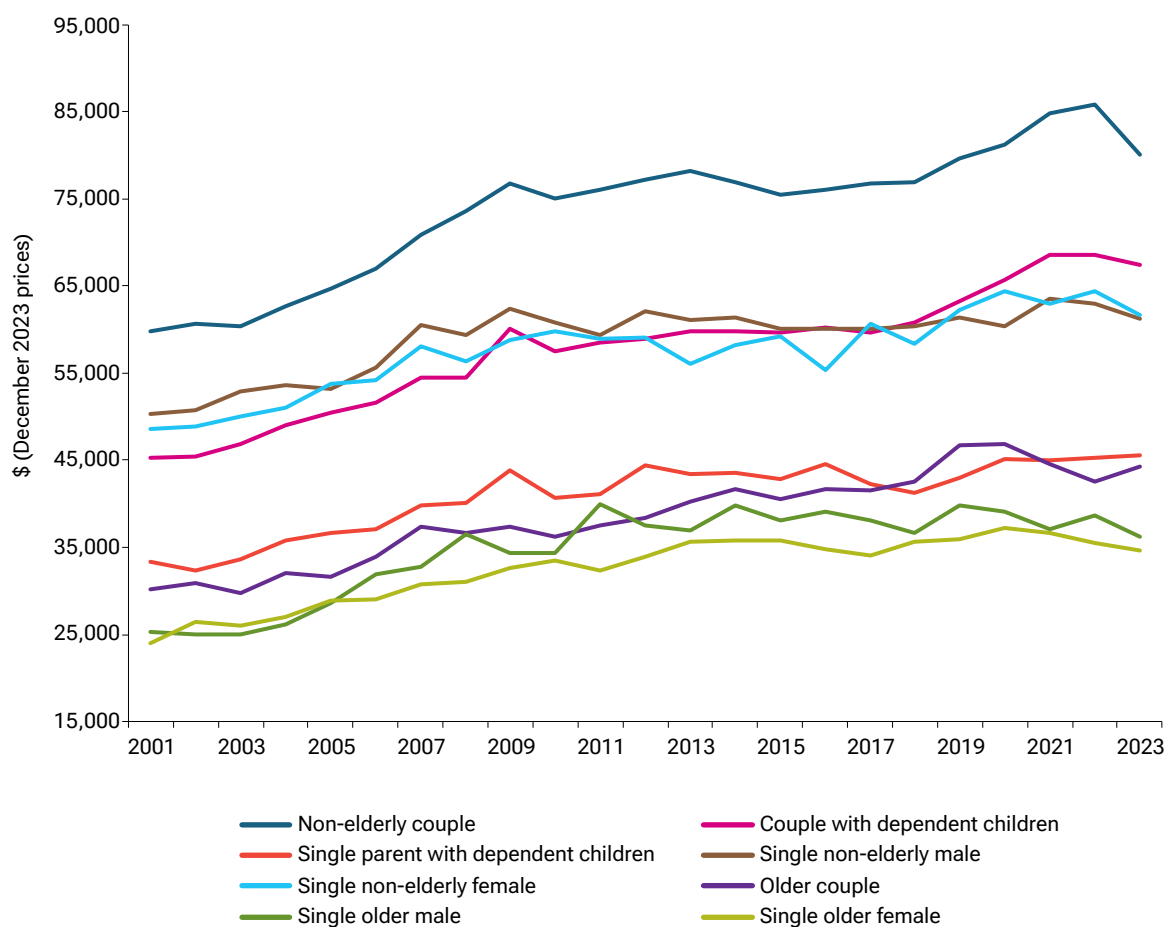
Income differences by region

Figure 3.2 compares mean equivalised incomes over the 2001 to 2023 period across the five mainland state capital cities as well the combined rest of Australia (see Box 3.5, page 52, for explanation of classification of region of residence).

In 2001, the mean income was highest in Sydney, followed by Melbourne, and then Brisbane and Perth, which had very similar mean incomes. The lowest mean incomes in 2001 were in Adelaide and the combined rest of Australia (which comprises all regions other than the mainland state capital cities). Mean incomes have broadly tended to converge among the mainland state capital cities, with the notable exception of Adelaide, which has consistently had a similar mean income to the combined rest of Australia. The gap in mean incomes between the mainland state capital cities other than Adelaide and the rest of the country has, moreover, tended to grow over the 23-year period. For example, the mean income in Adelaide relative to the mean income in Brisbane fell from 91% in 2001 to 85% in 2023.

Also notable in Figure 3.2 are the relatively large fluctuations in the mean income in Perth. The mean surged between 2010 and 2014, giving the city the highest mean income of the mainland state capital cities, but then fell between 2014 and 2016 before surging again between 2020 and 2022 and then sharply falling in 2023. Mean incomes decreased in all regions examined in Figure 3.2, but the decline was greatest in Perth, followed by Brisbane and Melbourne.

Figure 3.2: Mean equivalised income by region
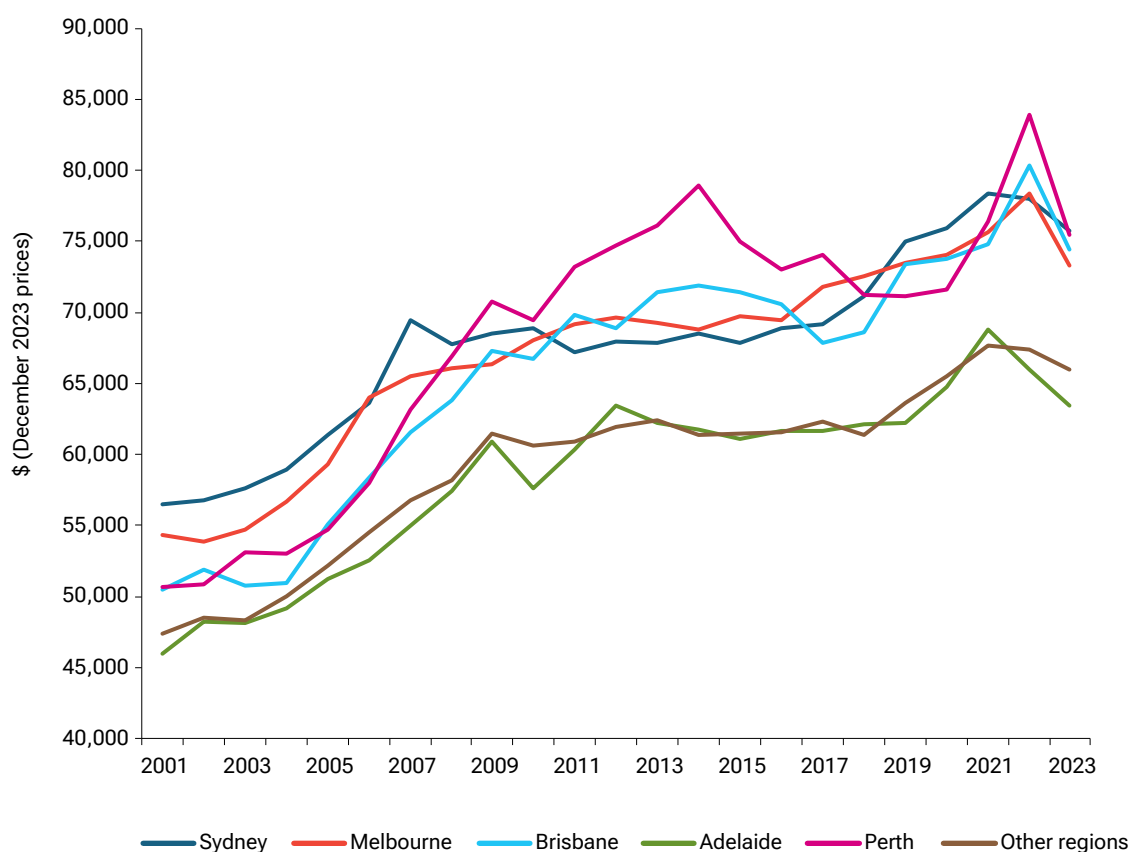
Income mobility and income changes

Table 3.3 takes advantage of the longitudinal information from the HILDA Survey to examine income mobility over the short to medium term. The upper panel examines the mean absolute change in percentile rank, noting that the maximum possible change is 99 (moving from the bottom percentile to the top percentile, or vice versa). The lower panel examines persistence in the bottom quintile, showing the proportion of people in the bottom quintile who remain in that quintile.

Both mobility measures are examined over three timeframes—two years, five years and 10 years—and for three sub-periods of the 2001 to 2023 period based on the initial year in which income is measured: 2001 to 2007, 2008 to 2014 and 2015 to 2022.

The estimates for the three time periods show that short-term income mobility has reduced slightly this century. The mean absolute change in percentile rank from one year to the next was highest in the 2001 to 2007 period, at 12.4, and lowest in the 2015 to 2022 period, at 11.6. This pattern is evident for medium-term (five-year) income mobility comparing 2001 to 2007 with 2008 to 2014, but medium-term mobility was the same in the 2015 to 2022 and 2008 to 2014 periods. For long-term (10-year) income mobility, little change in mobility is evident.

Consistent with the small decline in overall mobility, persistence in the bottom quintile has increased slightly over the two-year window, rising from 67.9% in the 2001 to 2007 period to 69% in the 2008 to 2014 and 2015 to 2021 periods. However, a decrease in persistence in the bottom quintile is evident over both the five-year and 10-year windows.

Table 3.3: Movements of individuals in the income distribution

	Initial years		
	2001–2007	**2008–2014** [a]	**2015–2022** [b]
Mean absolute change in percentile rank			
Over 2 years	12.4	11.9	11.6
Over 5 years	18.2	17.7	17.7
Over 10 years	21.8	21.9	–
Proportion of those in the bottom quintile remaining in the bottom quintile (%)			
For 2 years	67.9	69.0	69.0
For 5 years	39.5	39.2	37.8
For 10 years	23.2	22.0	–

Notes: [a] 10-year changes are for initial years 2008 to 2013 only. [b] Five-year changes are for initial years 2015 to 2018 only.

In Table 3.4, changes in individuals' equivalised incomes from one year to the next are examined since 2018, providing information on the experiences of individuals during the course of the COVID-19 pandemic and its aftermath. The proportion of the population experiencing a decline in income was lowest between 2020 and 2021, when 41.2% of people had a decrease in income and the median change was a $2,288 increase in income. Strikingly, large negative mean and median changes in income are evident between 2022 and 2023, with 54.6% of people experiencing a decrease in income. The median change was also negative between 2021 and 2022, when 52.2% of people experienced a decrease in income. However, the mean income change between 2021 and 2022 was a $1,352 *increase* in income, indicating that—despite the majority of people experiencing a decline in income—a significant number of people experienced large increases in income between 2021 and 2022. This is likely to have been a contributing factor to the rise in inequality in 2022.

Table 3.4: Changes in individuals' household equivalised incomes from one year to the next, 2018 to 2023

|	Mean change ($, December 2023 prices)	Median change ($, December 2023 prices)	Percentage experiencing a decrease in income
2018–2019	2,145	1,746	41.9
2019–2020	615	1,140	44.7
2020–2021	1,965	2,288	41.2
2021–2022	1,352	–639	52.2
2022–2023	–3,203	–1,284	54.6

Longer-term incomes

Figure 3.3 examines inequality of income measured over five years. For each five-year period available in the data (e.g., 2001 to 2005, 2002 to 2006, and so on), 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 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.

The Gini coefficient for five-year income increased by approximately 4.5% between 2002–2006 and 2010–2014, then declined slightly to 2015–2019, dropped sharply to 2017–2021, rebounded sharply in 2018–2022 and then remained unchanged in 2019–2023. The fluctuations in inequality of five-year income after 2015–2019 can be attributed to the effects of the COVID-19 pandemic. However, the fluctuations prior to the pandemic stand in contrast to the finding of little change in inequality of one-year income. This reflects the fact that inequality of five-year income is affected by the extent to which people move up and down the income distribution from one year to the next. The greater the mobility in incomes, the lower the five-year income inequality relative to one-year income inequality. Thus, the rise in five-year income inequality up to the 2010–2014 period, combined with the broadly stable level of inequality of one-year income, is consistent with declining mobility of incomes over this period (which is indeed supported by the evidence in Table 3.3).

Figure 3.3: Inequality of five-year income (Gini coefficient)
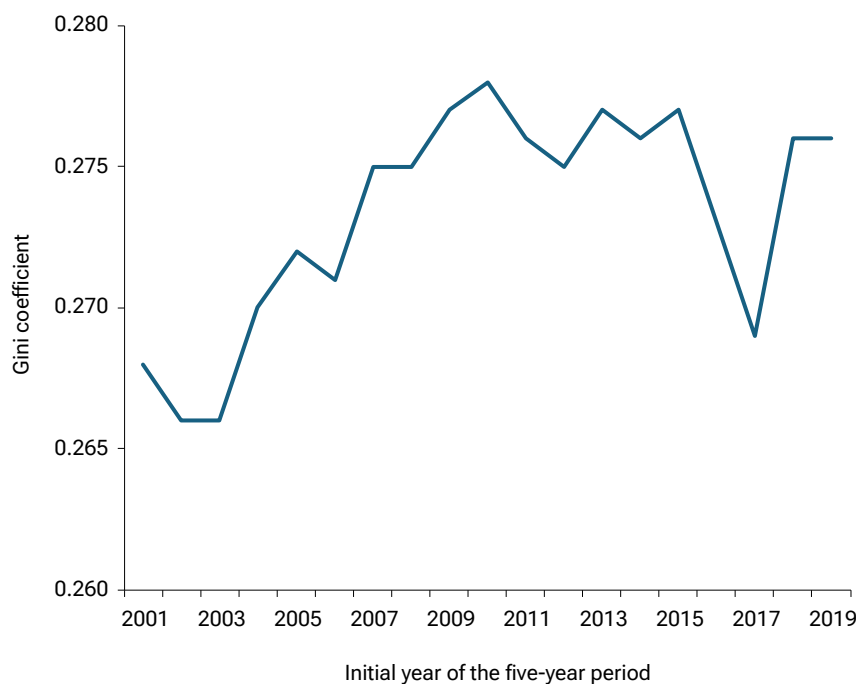
The distribution of total equivalised income received over the full 23-year history of the HILDA Survey is examined in Table 3.5, which presents the same distributional statistics presented in Table 3.2 for one-year income. The top row examines all people resident in Australia for the entire 23 years, while the bottom two rows focus on two cohorts: those aged 25 to 34 in 2001 (born 1967 to 1976) and those aged 35 to 44 in 2001 (born 1957 to 1966). For both of these cohorts, estimates apply to those living in Australia for the entire 23-year period. Both of these cohorts can be interpreted to have been of 'working age' for the entire 23-year period (notwithstanding that those aged 43 or older in 2001 were aged over 65 in 2023).

Overall, the mean equivalised 23-year income is $1,496,293 (at December 2023 prices), while the median is $1,375,928. The Gini coefficient is 0.234, compared with the average one-year value of 0.310. For the two birth cohorts, we see higher mean and median incomes, but overall lower inequality within each cohort. Lower inequality is to be expected because inequality attributable to different lifecycle stages is largely eliminated when examining specific birth cohorts. Comparing the two cohorts, the older group has higher mean and median incomes, and also higher inequality than the younger group.

Table 3.5: Distribution of income measured over 23 years

	Mean ($, December 2023 prices)	Median ($, December 2023 prices)	Ratio of 90th percentile to the median	Ratio of median to the 10th percentile	Gini coefficient	Average of 1-year Gini coefficient
All people	1,496,293	1,375,928	1.63	1.76	0.234	0.310
People aged 25 to 34 in 2001	1,595,002	1,473,764	1.56	1.61	0.213	0.276
People aged 35 to 44 in 2001	1,624,137	1,516,573	1.60	1.78	0.225	0.288

Intergenerational income mobility

At its essence, examination of intergenerational mobility concerns the extent to which an individual's economic fortunes as an adult depend on the economic fortunes of their parents. It examines the extent to which children who grew up in poor households are themselves poor in adulthood and, likewise, the extent to which children who grew up in rich households are themselves rich in adulthood. Key among the reasons for interest in intergenerational mobility is the argument (e.g., Becker and Tomes, 1986) that equality of opportunity is lower the more strongly correlated are incomes of parents and their children.

Various approaches have been adopted by researchers to study intergenerational income mobility, but so-called 'direct measures' are generally regarded as most accurate. Direct measures involve measuring the incomes of parents and children at similar ages—generally when aged between approximately 30 and 50 years. This means that incomes of children must be measured many years after the incomes of parents are measured. Hence, long-running longitudinal household surveys are ideally suited to investigating this issue. And with 23 years of longitudinal data now available, the HILDA Survey is suitable for producing direct measures of intergenerational income mobility.

The approach taken in this report is to examine individuals aged 15 to 17 years in 2001, and compare their parental equivalised income in 2001 with their own household equivalised income in 2023, when they were aged 37 to 39.[12] Variations are also considered, including measuring income over three years (2001 to 2003 and 2021 to 2023) rather than one year, and examining labour market earnings rather than total equivalised incomes. The use of 'three-year income' reduces the period between measurement of parent and child income or earnings, but reduces 'attenuation bias' compared with one-year income (Bowles, 1972). In all analyses, the focus is on rank in the income distribution rather than the dollar value of income, where the parental income rank and child income rank are measured only among the individuals being examined—that is, those aged 15 to 17 in 2001.[13]

Table 3.6 examines the associations between the quintile of parental equivalised income (when the child was aged 15 to 17) and the quintile of the child's equivalised income (when the child was aged 37 to 39). The upper panel examines one-year income, while the lower panel examines three-year income.[14]

The top row of the table examines those who were in the bottom quintile (20%) of the one-year parental income distribution as children (in 2001). It shows that in 2023, when these individuals were aged 37 to 39, 31.5% were in the bottom quintile of the income distribution for their age, 18% were in the second-bottom quintile, 23.7% were in the middle quintile, 12.8% were in the fourth (second-top) quintile and 13.9% were in the top quintile. By contrast, the bottom row of the upper panel of Table 3.6 shows that, for those in the top quintile of the one-year income distribution as children (in 2001), only 12.3% were in the bottom quintile when aged 37 to 39, while 27.4% were in the top quintile. The lower panel of the table shows a similar pattern for three-year income. There are consequently clear indications of a positive correlation between parental income and the income of children in later life.

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12 The approach taken here is similar to that of Murray et al. (2018), who examine Waves 1 to 15 of the HILDA Survey, and who in turn follow Chetty et al. (2014), who examine intergenerational income mobility in the US using tax records data.
13 For child income/earnings, rank is ascertained separately for each single-year age group (37, 38 and 39) because of the strong positive association between age and income/earnings in the 37 to 39 age range.
14 Three-year income is calculated by taking the average of equivalised income over the three years. If income was missing in one or two of the three years, the average was taken over the years in which income was not missing. Hence, the sample size is slightly larger for three-year income (459) than for one-year income (406).

Table 3.6: Income quintile when an adult, by parental income quintile when a child (%)

One-year income (Sample size: 406)						
Equivalised income when an adult (in 2023)						
Parental equivalised income when a child (in 2001)	Bottom quintile	Second quintile	Middle quintile	Fourth quintile	Top quintile	Total
Bottom quintile	31.5	18.0	23.7	12.8	13.9	100.0
Second quintile	28.8	23.0	20.1	12.4	15.7	100.0
Middle quintile	17.4	16.5	25.4	20.3	20.4	100.0
Fourth quintile	13.2	22.0	14.9	29.2	20.7	100.0
Top quintile	12.3	19.5	15.9	24.9	27.4	100.0
Three-year income (Sample size: 459)						
Equivalised income when an adult (in 2021–2023)						
Parental equivalised income when a child (in 2001–2003)	Bottom quintile	Second quintile	Middle quintile	Fourth quintile	Top quintile	Total
Bottom quintile	32.8	24.9	18.9	11.2	12.3	100.0
Second quintile	28.8	17.7	21.5	16.8	15.3	100.0
Middle quintile	21.6	20.7	18.4	19.1	20.2	100.0
Fourth quintile	8.7	16.4	26.9	30.5	17.6	100.0
Top quintile	12.3	18.0	16.1	20.8	32.7	100.0

Table 3.7 focuses on simple correlations in percentile ranks between parental and child incomes, but considers differences between males and females, from both the parental and child perspective. Male and female children are examined separately, and the distinct roles of fathers' and mothers' labour market earnings in influencing child labour market earnings are considered. The reported correlation coefficients (often referred to as Pearson correlation coefficients; see the Technical Appendix for a brief explanation) potentially range in value from –1 (perfectly negatively correlated) to 1 (perfectly positively correlated). A value of 0 indicates no correlation. Thus, a positive number implies that children with higher income parents tend to have higher incomes themselves as adults.

Three interesting patterns emerge.[15] The first is that the intergenerational correlation in income appears to be slightly stronger for male children than for female children. The correlation for one-year equivalised income is 0.211 for males and 0.195 for females, while the correlation for three-year equivalised income is 0.279 for males and 0.229 for females. The second pattern evident is that the correlation between parent and child labour market earnings is, overall, higher for mothers' earnings than fathers' earnings. The correlation coefficient between father one-year earnings and child one-year earnings is 0.116, whereas it is 0.183 for mother earnings, while the correlation coefficient between father three-year earnings and child three-year earnings is 0.136, whereas it is 0.215 for mother earnings.

The final interesting pattern is that the intergenerational correlation in labour market earnings is higher for fathers than mothers for males, while it is higher for mothers than fathers for females. For example, the correlation coefficient between father three-year earnings and child three-year earnings is 0.236 for male children and is not significantly different from 0 for female children, whereas the correlation coefficient between mother three-year earnings and child three-year earnings is 0.181 for male children and 0.241 for female children.

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15   Note, however, that formal tests of the statistical significance of differences between coefficient estimates are not conducted for this analysis.

Table 3.7: Correlation between parental and child rankings in the earnings or income distribution

	Parental equivalised income	Father's earnings	Mother's earnings
Correlation coefficients			
One-year income			
All children	0.203	0.116	0.183
Male children	0.211	0.202	0.163
Female children	0.195	*ns*	0.183
Three-year income			
All children	0.255	0.136	0.215
Male children	0.279	0.236	0.181
Female children	0.229	*ns*	0.241
Sample sizes			
One-year income			
All children	406	274	364
Male children	183	123	166
Female children	223	151	198
Three-year income			
All children	459	173	419
Male children	212	144	193
Female children	247	154	226

Notes: The upper panel of the table reports rank correlation coefficients. The lower panel of the table reports the sample sizes used to produce each estimated correlation coefficient. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Studies typically attempt to control for parent age, and potentially other confounding factors, by estimating regression models of child rank as a function of parent rank and parent age (and potentially other factors). Table 3.8 presents estimates from such regressions.

The table shows that the finding in Table 3.7 that the intergenerational correlation in equivalised income is stronger for male children than for female children is robust to controlling for parental age, as is the finding that the earnings of female children are more strongly correlated with mother earnings than father earnings. However, the evidence is more mixed for the earnings of male children. While the correlation with father three-year earnings is slightly larger than the correlation with mother three-year earnings, for one-year earnings, only the correlation with mother earnings is statistically significant. Indeed, the estimate for the rank correlation between father three-year earnings and the three-year earnings of their male children is the only statistically significant estimate for father earnings.

Table 3.8: Rank correlations between parent and child income, controlling for parental age

	Parental equivalised income	Father's earnings	Mother's earnings
One-year income			
All children	0.164	*ns*	0.144
Male children	0.214	*ns*	0.161
Female children	*ns*	*ns*	0.134
Three-year income			
All children	0.219	*ns*	0.170
Male children	0.304	0.173	0.163
Female children	0.127	*ns*	0.180

Notes: The table reports estimated rank correlation coefficients obtained from an ordinary least squares regression model of child income or earnings rank (in 2023 or 2021–2023) as a function of parent rank, parent age and parent age squared (in 2001 or 2001–2003). See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Table 3.9, presenting simple correlation coefficients (as in Table 3.7), investigates the sensitivity of intergenerational correlations in income to the children's ages at which parental and child income is measured and to the time span between measurement of their respective incomes, as well as whether there has been change over the HILDA Survey period in the intergenerational correlation in income.

Panel A of the table compares across three groups of children based on their age group in 2001: 15 to 17, 10 to 12 and 5 to 7. As in Table 3.7, parental income is measured in 2001 (or 2001 to 2003 for three-year income) and child income is measured in 2023 (or 2021 to 2023 for three-year income). Differences by age group will reflect both the measurement of parental income at a different child age and the measurement of child income at a different age (32 to 34 for children aged 10 to 12 in 2001 and 27 to 29 for children aged 5 to 7 in 2001).

Panel A indicates that correlations between child and parent incomes tend to be stronger when incomes are measured at earlier child ages, although this finding is largely confined to comparing children aged 15 to 17 when parent income is measured with children who are younger when income is measured, that is, there are not clear differences between children aged 10 to 12 in 2001 and children aged 5 to 7 in 2001. This might suggest that parental income when a child is young is more important to 'transmission' of advantage and disadvantage than parental income when the child is older.

Panel B provides some evidence that the intergenerational correlation of incomes has increased over the HILDA Survey period. Over an 18-year time span, the intergenerational correlation coefficient for one-year income was 0.210 for children aged 15 to 17 in 2001, compared with 0.323 for children aged 15 to 17 in 2006. For three-year income, the respective correlations are 0.341 and 0.371. Over a 13-year time span, when we can compare across three groups of children—those aged 15 to 17 in 2001, those aged 15 to 17 in 2006 and those aged 15 to 17 in 2011—the correlation coefficient for one-year income rises from 0.301 to 0.346 as we move from the earliest cohort to the most recent cohort. However, over this time span, the trend increase in the intergenerational correlation of incomes is not apparent for three-year income.

The combined analysis presented in Panels A and B allows us to also consider how intergenerational correlations are affected by the time span between measuring parent and child incomes. For example, comparing the first row of Panel A with the first row of Panel B shows the effects for children aged 15 to 17 in 2001 of moving from a 23-year span to an 18-year span, while the first row in the lower panel of Panel B shows the effects of moving to a 13-year span. In general, the correlations are higher when the time span is shorter. For example, for children aged 15 to 17 in 2001, the correlation coefficient for one-year income is 0.203 over a 23-year timeframe, 0.210 over an 18-year timeframe and 0.301 over a 13-year timeframe. This suggests that the role of parental income in determining child income becomes less important as the child moves further into adulthood. Put another way, the parental income effect appears to dissipate somewhat over time.

Table 3.9: Sensitivity of intergenerational income correlations to child age at which parental income is measured and time span between measurement of parents' and children's incomes

|	One-year income			Three-year income		
	All children	**Male children**	**Female children**	**All children**	**Male children**	**Female children**
Correlation coefficients						
Panel A						
Children aged 15–17 in 2001: Outcomes in 2023	0.203	0.211	0.195	0.255	0.279	0.229
Children aged 10–12 in 2001: Outcomes in 2023	0.289	0.300	0.282	0.350	0.330	0.369
Children aged 5–7 in 2001: Outcomes in 2023	0.290	0.245	0.342	0.350	0.304	0.410
Panel B						
18-year span						
Children aged 15–17 in 2001: Outcomes in 2018	0.210	0.233	0.185	0.341	0.337	0.338
Children aged 15–17 in 2006: Outcomes in 2023	0.323	0.302	0.344	0.371	0.309	0.427
13-year span						
Children aged 15–17 in 2001: Outcomes in 2013	0.301	0.234	0.369	0.407	0.400	0.414
Children aged 15–17 in 2006: Outcomes in 2018	0.311	0.275	0.348	0.327	0.301	0.359
Children aged 15–17 in 2011: Outcomes in 2023	0.346	0.356	0.345	0.392	0.347	0.453
Sample sizes						
Panel A						
Children aged 15–17 in 2001: Outcomes in 2023	406	183	223	459	212	247
Children aged 10–12 in 2001: Outcomes in 2023	442	197	245	506	233	273
Children aged 5–7 in 2001: Outcomes in 2023	410	204	206	485	244	241
Panel B						
18-year span						
Children aged 15–17 in 2001: Outcomes in 2018	459	212	247	489	231	258
Children aged 15–17 in 2006: Outcomes in 2023	435	194	241	501	231	270
13-year span						
Children aged 15–17 in 2001: Outcomes in 2013	479	227	252	534	253	281
Children aged 15–17 in 2006: Outcomes in 2018	537	262	275	600	294	306
Children aged 15–17 in 2011: Outcomes in 2023	516	260	256	610	308	302

Income tax share of personal incomes

Income tax has a substantial impact on the disposable incomes of many members of the community, particularly those with relatively high (gross) incomes. In this section, we consider how the average income tax 'burden' has evolved since 2001. Figure 3.4 shows the average tax rates—equivalent to the share of gross income paid in income tax—for the entire Australian population aged 15 and over, in total and by age group.

The figure provides a good summary of how the 'tax burden' varies across age groups. Average tax rates are lowest for those aged 75 and over, followed by persons aged 65 to 74 and then persons aged 15 to 24. The low rates for people aged 65 and over reflect lower employment participation, but also the concessional tax treatment of retiree incomes. Average tax rates are highest for those aged 25 to 54, although since 2011 the average tax rate of the 25 to 34 age group has been somewhat lower than that of the 35 to 44 and 45 to 54 age groups. Thus, it is now people aged 35 to 54 who on average contribute the highest share of their income to income taxes.

Over the entire population aged 15 and over, the average tax rate was approximately 11% up until 2006, following which it steadily declined until 2011, when it reached a low of 8.5%. Since 2011, there has been a trend rise in the average tax rate, with a particularly large increase occurring in 2023, when it reached a high of 11.7%, the highest observed over the 2001 to 2023 period. Average tax rates for all age groups other than the 75 and over group have followed a similar pattern, albeit at different levels. For example, in 2023, the share of income paid in income tax was in excess of 17% for people aged 35 to 54, while for those aged 65 to 74 it was 3.6%.

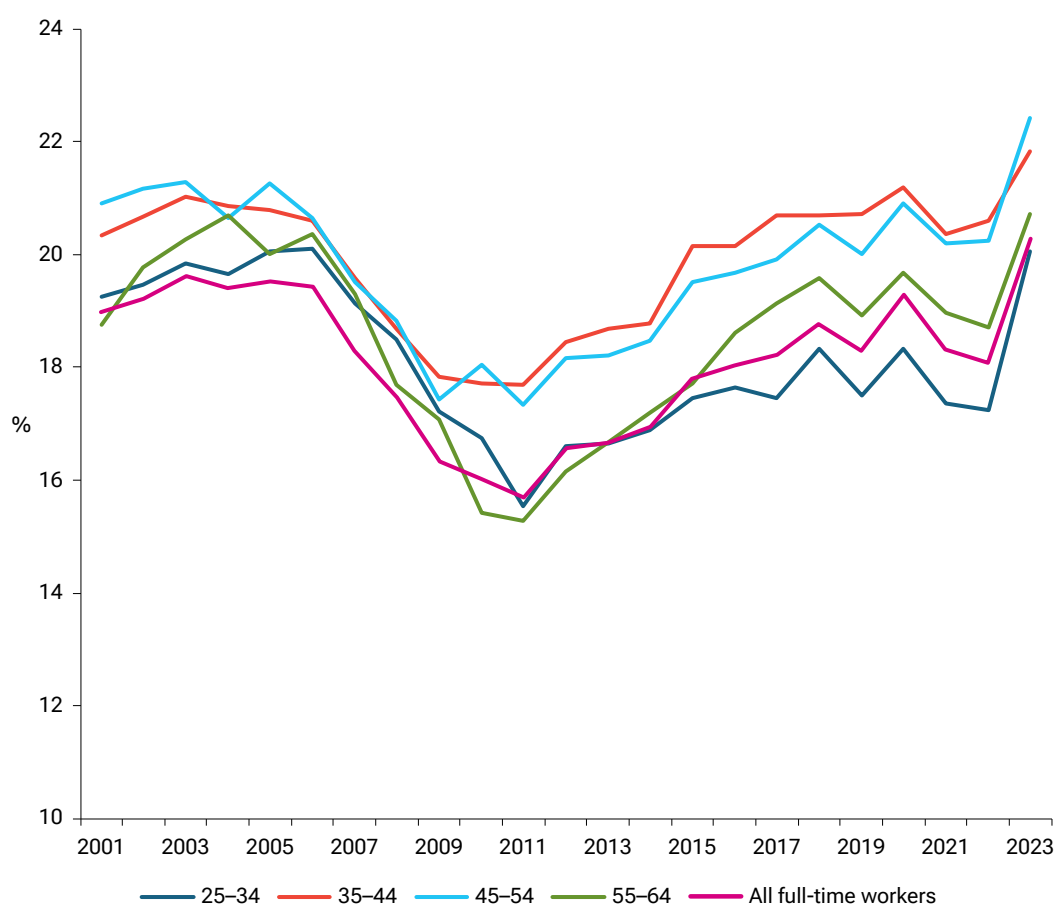**Figure 3.4: Average tax rates of persons aged 15 and over**
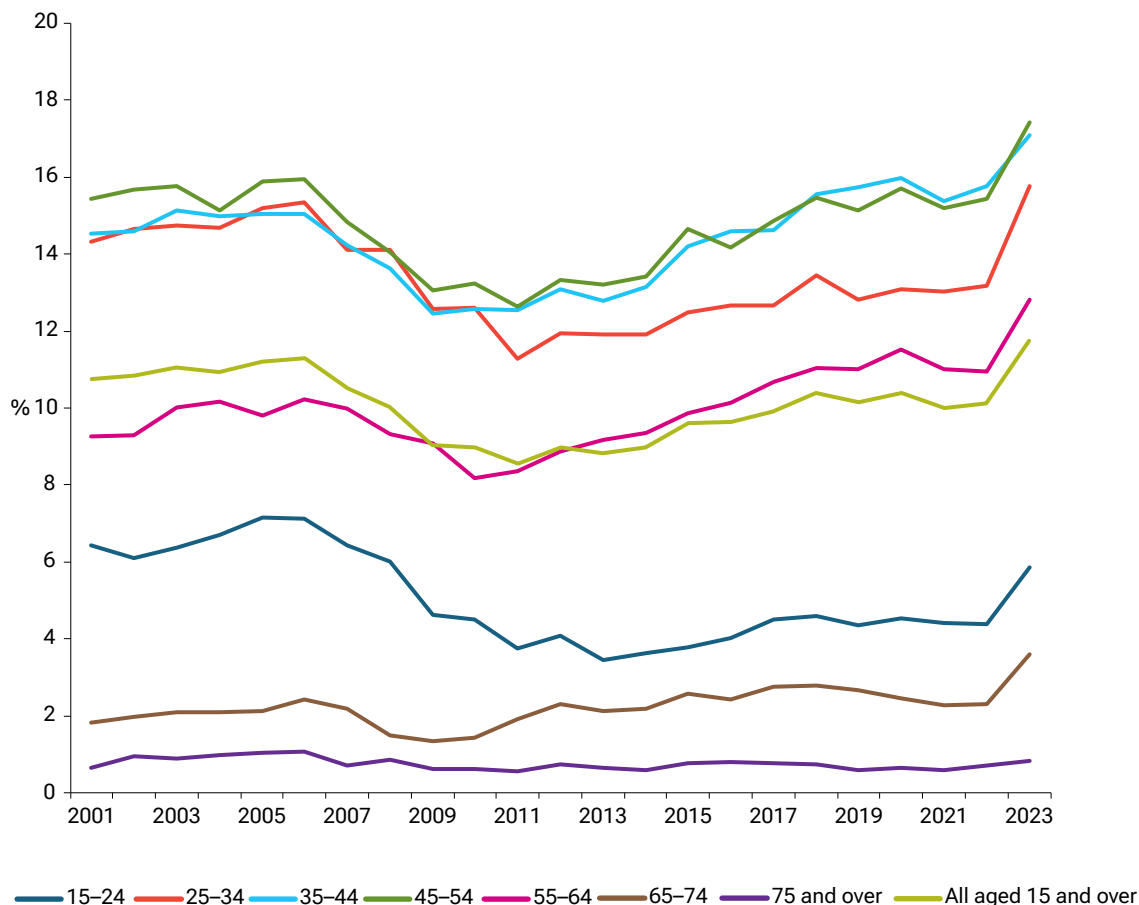
Note: Individuals with negative income or negative income taxes (due to tax credits such as dividend imputation credits) have had their tax rate set to 0.

Figure 3.5 focuses on full-time workers, for whom average tax rates tend to be higher by virtue of their relatively high incomes compared with most other members of the community. Patterns over time are similar to those for the overall population, but average tax rates are considerably higher and have exhibited greater fluctuation. In 2001, the average share of income paid in income tax by full-time workers was 19%, rising to 19.6% in 2003, decreasing very slightly to 2006 and then falling substantially over the following five years, reaching a low of 15.7% in 2011. Between 2011 and 2020 the average tax rate steadily rose, reaching 19.3% before falling in the subsequent two years to be 18.1% in 2022. Between 2022 and 2023 there was a particularly sharp increase in the average tax rate of full-time workers, with the 2023 level of 20.3% the highest it had been in the 2001 to 2023 period. Income tax rates did not change between 2022 and 2023, so this increase reflects the strong nominal (but not real) growth in incomes between 2022 and 2023, which in turn led to 'bracket creep'—that is, a greater share of individuals' income being taxed at the higher marginal tax rates.

As with Figure 3.4, similar patterns are observed for each age group, although the gap between full-time workers aged 35 to 54 and other full-time workers widened after 2009 due to a smaller decline in their average tax rate between 2009 and 2011. In 2023, full-time workers aged 45 to 54 had the highest average tax rate, 22.4%, followed by full-time workers aged 35 to 44, who had an average tax rate of 21.8%.

Figure 3.5: Average tax rates of full-time workers

Notes: Individuals with negative income or negative income taxes (due to tax credits such as dividend imputation credits) have had their tax rate set to 0. 'All full-time workers' includes those aged under 25 and over 64.

Income poverty

A wide variety of definitions or measures of poverty have been employed by economic and social researchers. As in previous volumes of this report, we examine two measures commonly applied to the study of poverty in developed countries, both of which conceive of poverty as *relative* deprivation or socio-economic disadvantage, and which measure deprivation in terms of inadequacy of *income* (see Box 3.6, below). Consistent with the approach of the Organisation for Economic Co-operation and Development (OECD) and other international bodies, the first measure defines relative income poverty as having a household income below 50% of median income. The second measure is similarly defined, but relates to income net of housing costs—that is, income after deducting housing costs.

Box 3.6: Relative 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 apply two alternative definitions of relative poverty. Under the first definition, a person is in relative income poverty if household equivalised disposable income is less than 50% of the median household equivalised disposable income. The second measure is similarly defined but relates to income net of housing costs—that is, income after deducting housing costs.

The 'after-housing' poverty measure addresses a criticism of the measure based on total income—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 (particularly those with little or no mortgage debt) have low housing costs, while renters often have high housing costs. 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. For example, this is the approach favoured by the Australian Council of Social Service and the Social Policy Research Centre at the University of New South Wales in their two-yearly poverty report (Davidson et al., 2020).

Note that, while the after-housing measure addresses the issue of variation in housing costs across people, it has its own problems. First, 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. Indeed, part of the amenity associated with higher expenditure on housing may be lower expenditure requirements for other items, such as transport.

A second problem is that the OECD equivalence scale used to adjust household incomes for household composition (see Box 3.2, page 48) is intended to apply to *total* income, not income after deduction of housing costs. A significant part of the economies of scale of households that underpin the OECD scale derive from sharing housing costs among household members. It is therefore likely that poverty is relatively overestimated among smaller households and underestimated among larger households when examining after-housing poverty—that is, the downward adjustment of the incomes of larger households is too small when applying the OECD scale to after-housing income. For this reason, as per last year's report, poverty estimates for after-housing income are also produced using an equivalence scale that reduces the economies of scale. Essentially, the assumed economies of scale are reduced by 50% for people aged 15 and over, while the income 'burden' of children aged under 15 is maintained at 60% of a person aged 15 and over. This means that total household income is divided by 1 plus 0.75 (instead of 0.5) for each person aged 15 and over after the first person, plus 0.45 (instead of 0.3) for each child aged under 15.

This alternative equivalence scale provides an indication of how inferences are affected by taking into account the lower economies of scale available for after-housing-costs income, but note that further research is required to determine the appropriate scale for this income measure. Nonetheless, it is notable that the poverty measure that uses this equivalence scale produces results consistent with other indicators of financial resources, such as the measure of financial stress also examined in this chapter.

Cross-sectional poverty rates

Figure 3.6 presents relative income poverty rates in each year covered by the HILDA Survey. Our income measure is equivalised income; thus, the relative poverty lines presented in Table 3.10 can be interpreted as the minimum annual income after taxes and government benefits (and after deduction of housing costs in the case of the measure based on income net of housing costs) 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.

As with previous reports, the after-housing poverty measure is also implemented using a different equivalence scale (see Box 3.6, page 63). This scale, recognising that much of the economies of scale underpinning the OECD scale stem from the sharing of housing costs, reduces the economies of scale by dividing household income by 1 plus 0.75 for each person aged 15 and over after the first person, plus 0.45 for each child aged under 15.

The estimated poverty rate is approximately 1 to 2 percentage points higher for income net of housing costs than for total disposable income when using the standard OECD equivalence scale. From around 2011 to 2021, this is also true for the after-housing measure using the adjusted equivalence scale. However, in the first decade of this century, and in 2022 and 2023, this poverty measure produced a poverty rate that was mostly between the two other poverty measures.

For all three measures, the proportion of the population below the relative poverty line has fluctuated over time, ranging between 10% and 13.6% for total income, 11.4% and 14.6% for after-housing income using the OECD equivalence scale, and 10.9% and 14.2% for after-housing income using the adjusted equivalence scale. All measures trended downwards between 2007 and 2014, but then trended upward up until 2019. Poverty fell sharply in 2020, reflecting the early effects of the income supports introduced in March and April of 2020, but rebounded in 2021 and continued to rise in 2022. The poverty rate based on total income declined slightly in 2023, but the two after-housing poverty measures continued to rise in 2023, reflecting growth in housing costs between 2022 and 2023.

Figure 3.6: Percentage of the population in relative income poverty

Table 3.10: Poverty lines for selected household types, 2001 and 2023 ($, December 2023 prices)

	Total income		Income net of housing costs		Income net of housing costs, adjusted equivalence scale	
	2001	2023	2001	2023	2001	2023
Single person	22,435	31,530	19,153	25,711	15,561	21,009
Couple	33,652	47,295	28,730	38,567	25,676	34,665
Single parent with 2 children	35,896	50,448	30,645	41,138	31,900	43,068
Couple with 2 children	47,113	66,213	40,222	53,994	38,124	51,472

Poverty by family type

Figure 3.7 shows that relative poverty rates vary substantially by family type (see Box 3.4, page 50), although there is greater variation for total income than for income net of housing costs. Particularly notable is that poverty rates for older people are considerably reduced in moving from a poverty measure based on total income to a poverty measure based on income net of housing costs. This reflects the low housing costs of many older people. Indeed, only single-parent families stand out as having a consistently high poverty rate once the adjusted equivalence scale is used. That said, older people have experienced the sharpest rises in poverty in recent years, irrespective of the poverty measure. The rise has been particularly large for single older men. Non-elderly couples without dependent children have consistently low poverty rates, irrespective of the year or poverty measure.

Figure 3.7: Relative poverty rates by family type

Total income

Income after deducting housing costs, adjusted equivalence scale

Legend:
- Non-elderly couple
- Couple with dependent children
- Single parent with dependent children
- Single non-elderly male
- Single non-elderly female
- Older couple
- Single older male
- Single older female

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 3.8 presents child relative poverty rates for dependent children aged under 18, in total and separately for children in couple-parent families and children in single-parent families.

The overall child poverty rate for total income is consistently below the community-wide poverty rate, in most years below 10%. However, the poverty rate for income after deducting housing costs is slightly higher than the community-wide rate, indicating that housing costs tend to be larger for families with children.

Consistent with the evidence in Figure 3.7, poverty is considerably more prevalent among children in single-parent families than among children in couple-parent families. In most years, the poverty rate for children in single-parent families is over twice the poverty rate for children in couple-parent families. The poverty rate is also more volatile from one year to the next for single-parent families. This is largely because many single-parent families have incomes placing them just under or just above the poverty line, so that relatively small changes in income can produce relatively large changes in poverty rates. That said, over the entire 23 years to 2023, the poverty rate has hovered around 20% for total income and around 30% for income after housing costs (using the adjusted equivalence scale). In 2022, the poverty rate based on income after housing for children in single-parent families reached its highest ever level in the HILDA Survey period, reaching 36.2%, with only a slight decline in this poverty rate in 2023.

Figure 3.8: Child poverty rates by family type—Dependent children aged under 18

Long-term poverty

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 3.11 considers the amount of time people spend in poverty over a 10-year period. Poverty measures based on both total income and income net of housing costs (with the adjusted equivalence scale) are examined, and separate estimates are produced for men and women in each of two age groups (18 to 55 at the start of the period and 65 and over at the start of the period) and in each of two 10-year periods (2001 to 2010 and 2014 to 2023). The first age group broadly corresponds to people who were 'working-age' adults for the entire period (aged 27 to 64 at the end of the period) and the second age group broadly corresponds to people who were of 'retirement age' for the entire period.

Table 3.11: 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	
People aged 18–55 at the start of the 10-year period						
Total income						
2001–2010						
Men	73.0	16.8	5.1	2.6	2.5	100.0
Women	68.2	19.6	5.7	3.5	3.1	100.0
2014–2023						
Men	74.5	15.4	4.7	2.5	2.9	100.0
Women	72.0	16.0	6.7	2.7	2.6	100.0
Income net of housing costs						
2001–2010						
Men	63.5	23.6	6.6	3.2	3.0	100.0
Women	57.8	26.3	8.4	4.1	3.4	100.0
2014–2023						
Men	64.9	20.9	6.9	4.4	2.8	100.0
Women	61.6	22.1	7.3	5.8	3.2	100.0
People aged 65 and over at the start of the 10-year period						
Total income						
2001–2010						
Men	29.7	24.1	11.7	11.4	23.0	100.0
Women	23.1	23.7	15.9	8.7	28.6	100.0
2014–2023						
Men	37.2	25.3	16.7	7.5	13.3	100.0
Women	28.2	25.0	16.3	9.6	20.8	100.0
Income net of housing costs						
2001–2010						
Men	48.8	30.6	10.5	4.0	6.1	100.0
Women	46.7	36.8	7.4	3.3	5.7	100.0
2014–2023						
Men	51.4	29.2	6.8	7.7	5.0	100.0
Women	48.7	29.4	6.8	7.8	7.3	100.0

Notes: Income net of housing costs is equivalised using the adjusted equivalence scale (see Box 3.6, page 63). Cells may not add up to row totals due to rounding.

Considering first the younger age group, for the poverty measure based on total income, 73% of men and approximately 68% of women aged 18 to 55 in 2001 did not experience income poverty in that year or in any of the subsequent nine years, necessarily implying that 27% of men and approximately 32% of women did experience poverty in at least one of those years. For 16.8% of men and 19.6% of women, poverty was experienced in only one or two years, and a further 5.1% of men and 5.7% of women experienced poverty in three or four of the 10 years. Highly persistent or recurrent poverty was confined to the 5.1% of men and 6.6% of women who were in poverty in at least five of the 10 years.

The 10 years from 2014 to 2023 saw slightly lower proportions of working-age people experience poverty at any stage over the 10-year period, although very persistent poverty (in seven or more of the 10 years) increased slightly for men from 2.5% to 2.9%.

For the measure of poverty based on income net of housing costs, higher proportions of both men and women of working age experienced poverty in at least one of the 10 years, but patterns are otherwise similar to those found for the total-income poverty measure. The main exception is that, comparing the 2001 to 2010 period with the 2014 to 2023 period, the proportion of men experiencing poverty in seven or more years decreased slightly for the net-of-housing-costs measure, whereas it increased slightly for the total-income measure.

For people aged 65 and over at the start of the 10-year period, poverty is both more prevalent and more persistent. Indeed, for women, it was more common to be in poverty (based on total income) in seven or more of the 10 years from 2001 to 2010 than it was to avoid poverty in all 10 years—28.6% were in poverty in seven or more years, whereas only 23.1% were never in poverty.

Similar to what is found when examining total disposable income 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 2014 to 2023 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 23% to 13.3% for men, and from 28.6% to 20.8% for women.

In contrast to working-age adults, the proportion of older people experiencing poverty at some stage of the 10-year period is lower for income net of housing costs than for total income. This is unsurprising given the high rate of outright home ownership among this age group. As with the total-income poverty measure, the proportion experiencing poverty over 10 years based on income net of housing costs was lower in the later decade. However, in contrast to the total-income poverty measure, the proportion of older people in poverty for five or more of the 10 years based on income net of housing costs was higher in the 2014 to 2023 decade, rising from 10.1% to 12.7% for older men and from 9% to 15.1% for older women.

Table 3.12 considers the long-term poverty experiences of children 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 table examines children born in the period from 1 July 2000 to 30 June 2014. Three birth cohorts are compared: those born between 1 July 2000 and 30 June 2005; those born between 1 July 2005 and 30 June 2010; and those born between 1 July 2010 and 30 June 2014.

The upper panel of the table, examining poverty based on total income, shows that 68.7% of children born between 1 July 2000 and 30 June 2005 were not living in poverty in any of their first 10 years of life, while this increased to 72.3% for those born between 1 July 2005 and 30 June 2010 and to 74.6% for those born between 1 July 2010 and 30 June 2014. For the earliest cohort, 18.6% were in poverty for one or two years, 7.7% were in poverty for three or four years, 3.5% were in poverty for five or six years, and 1.6% were in poverty for seven or more of the 10 years. For the most recent cohort, there were lower proportions in poverty in one to four years, but a higher proportion in poverty in five or more of the 10 years.

For the poverty measure based on income net of housing costs, there was similarly a lower rate of experience of any poverty in the first 10 years of life for the most recent cohort and the highest rate for the earliest cohort. However, highly persistent poverty was most prevalent among the middle cohort, with the proportion in poverty in seven or more years 5.8% for the earliest cohort, 6.5% for the middle cohort and 5.3% for the most recent cohort.

Table 3.12: Experience of poverty in the first 10 years of life (%)

	Number of years in poverty					Total
	0	1 or 2	3 or 4	5 or 6	7 or more	
Before-housing costs poverty measure						
Born 1 July 2000 to 30 June 2005	68.7	18.6	7.7	3.5	1.6	100.0
Born 1 July 2005 to 30 June 2010	72.3	17.3	5.4	3.0	2.0	100.0
Born 1 July 2010 to 30 June 2014	74.6	13.8	5.8	4.0	1.8	100.0
After-housing costs poverty measure						
Born 1 July 2000 to 30 June 2005	48.1	29.4	9.4	7.2	5.8	100.0
Born 1 July 2005 to 30 June 2010	55.7	20.4	10.0	7.4	6.5	100.0
Born 1 July 2010 to 30 June 2014	57.7	21.7	7.8	7.6	5.3	100.0

Notes: Income net of housing costs is equivalised using the adjusted equivalence scale (see Box 3.6, page 63). Cells may not add up to row totals due to rounding.

Financial stress

While income approaches remain the most widely used basis for defining and measuring inadequacy in material living standards, other measures potentially provide useful—and even superior—information on individuals' economic wellbeing. Measures of 'financial stress' provide one such piece of alternative information.

Experience of financial stress refers to an inability to meet basic financial commitments because of a shortage of money. Measures of financial stress therefore provide direct evidence of the adequacy of economic resources of individuals and households. In each wave, the self-completion questionnaire (SCQ) contains a question on whether, *because of a shortage of money,* the respondent had experienced each of seven events, such as not paying the rent or mortgage on time or going without meals, which facilitates the construction of measures of financial stress. (Box 3.7, page 70, itemises all seven events.)

Figure 3.9 shows the prevalence of each of these seven indicators of financial stress among people aged 15 and over between 2001 and 2023.[16] Inability to pay electricity, gas or telephone bills on time and asking for financial help from friends or family are the most commonly occurring of the seven indicators, followed by inability to pay the rent or mortgage on time. In most years, inability to heat the home is the least-common indicator.

Prevalence rates tended to decline for all indicators up until around 2008, and then increased up to 2011. Between 2011 and 2017, the prevalence of each indicator tended to remain steady or steadily decline. Between 2019 and 2020, there was a significant drop in the proportion of people reporting asking for financial help from friends or family, but upticks in the proportion asking for help from welfare or community organisations and the proportion unable to pay the mortgage or rent on time.
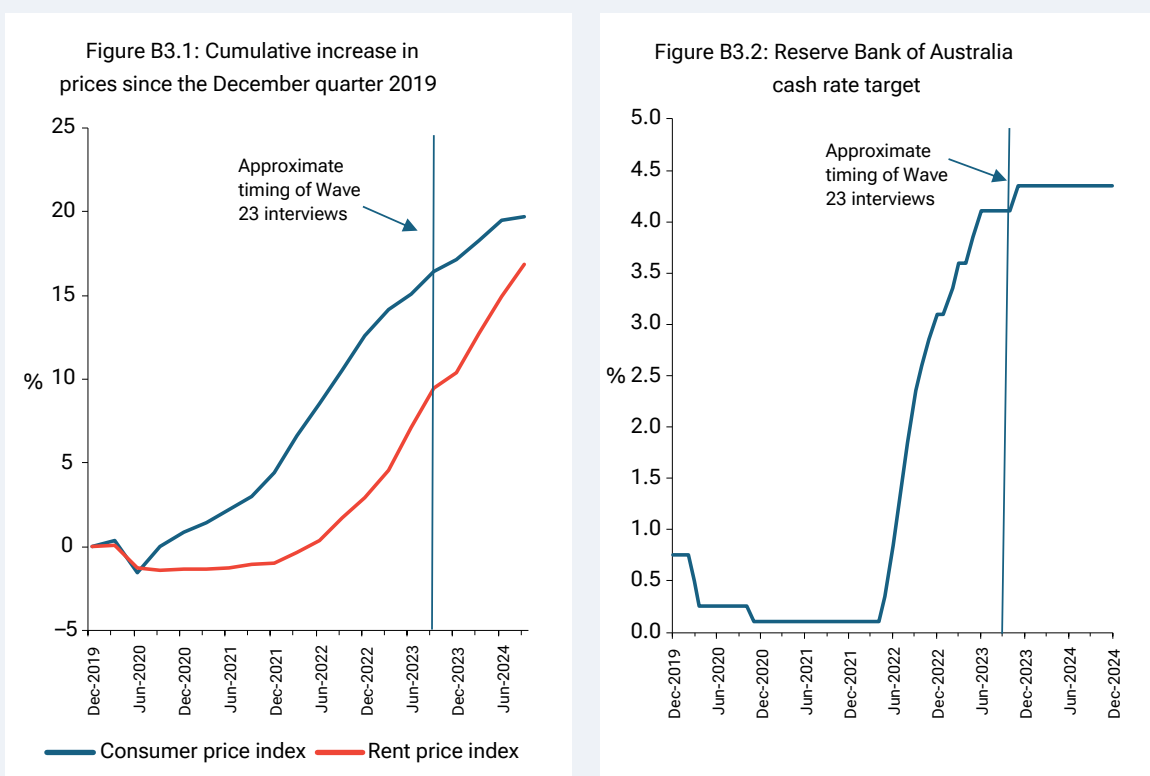
Since 2021, there have been increases in rates of all of the indicators of financial stress, with rises mostly occurring between 2022 and 2023. The biggest increase has been in asking for help from family or friends. Rising cost-of-living pressures, particularly in 2023 (see Box 3.8, page 71), are no doubt a contributor to the rise in prevalence of indicators of financial stress.

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16   Estimates are not available for 2010.

Box 3.8: Timing of the recent rise in the cost of living

Figures B3.1 and B3.2 show how key measures of the cost of living have evolved since the December quarter of 2019. The Consumer Price Index increased by approximately 16% between the December quarter of 2019 and the September quarter of 2023 (noting that most of the Wave 23 interviews were conducted between July and October of 2023). Over the same period, the rent price index increased by approximately 9.4%.

The Reserve Bank of Australia's (RBA) 'cash rate target' is the primary determinant of mortgage interest rates in Australia. It increased considerably between April 2022 and July 2023, with one further increase occurring after most interviews had been conducted in Wave 23, in November 2023. Note, however, that important to evaluating the effects of the increases in the cash rate is the share of home debt subject to a fixed interest rate. Fixed interest rates on mortgages were generally considerably lower than variable interest rates in the second half of 2022 and in 2023. Ung (2024) reports that the proportion of outstanding home debt subject to a fixed interest rate peaked at approximately 37% in early 2022 and was still at approximately 30% at the end of 2022. However, this had fallen to approximately 20% by the middle of 2023.

Figure B3.1: Cumulative increase in prices since the December quarter 2019

Figure B3.2: Reserve Bank of Australia cash rate target

Sources: Australian Bureau of Statistics (ABS) (2025) and Reserve Bank of Australia (RBA) (2025).

Figure 3.10 examines the proportion of people aged 15 and over in a household experiencing a measure of financial stress—specifically, experiencing two or more of the seven indicators shown in Figure 3.8. The figure presents estimates for all people and for each of eight family types (see Box 3.4, page 50, for an explanation of the family types).

Levels of prevalence of financial stress are very different across family types. Single-parent families stand out as particularly prone to financial stress, while non-elderly single people also have relatively high prevalence rates. The trend in financial stress over time is quite similar across most family types, tending to decrease in prevalence up until 2008, increasing between 2008 and 2011, remaining relatively stable up until 2022 and then increasing in 2023.

Figure 3.9: Proportion of people experiencing each indicator of financial stress
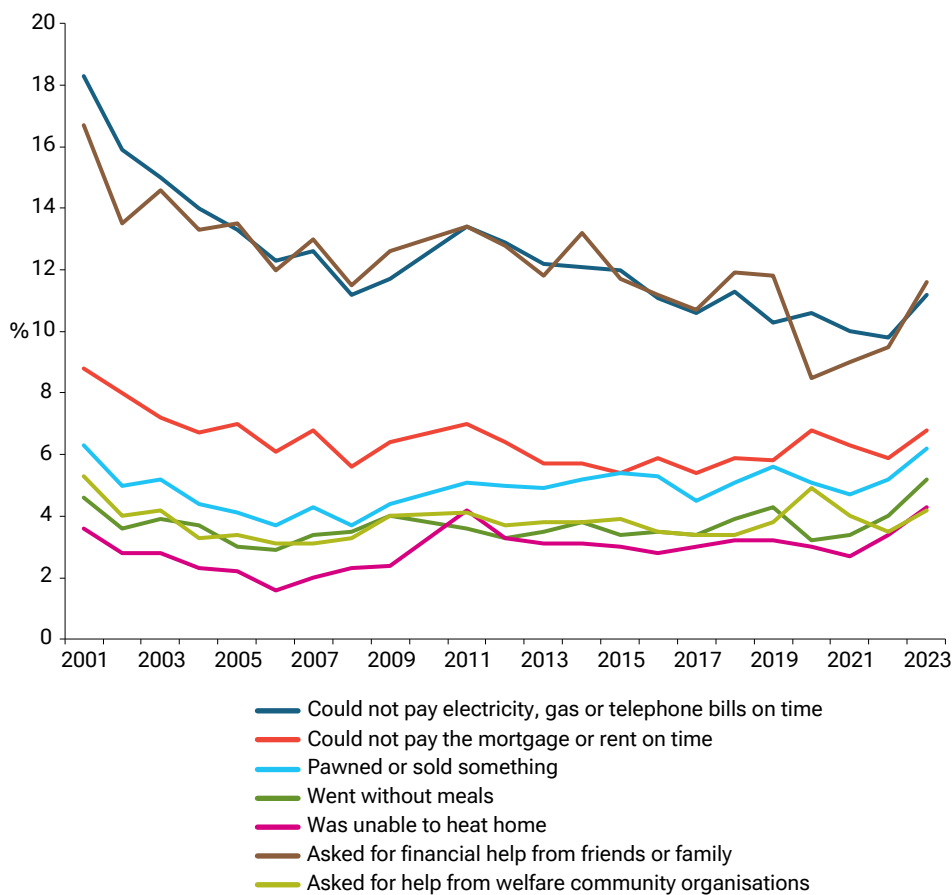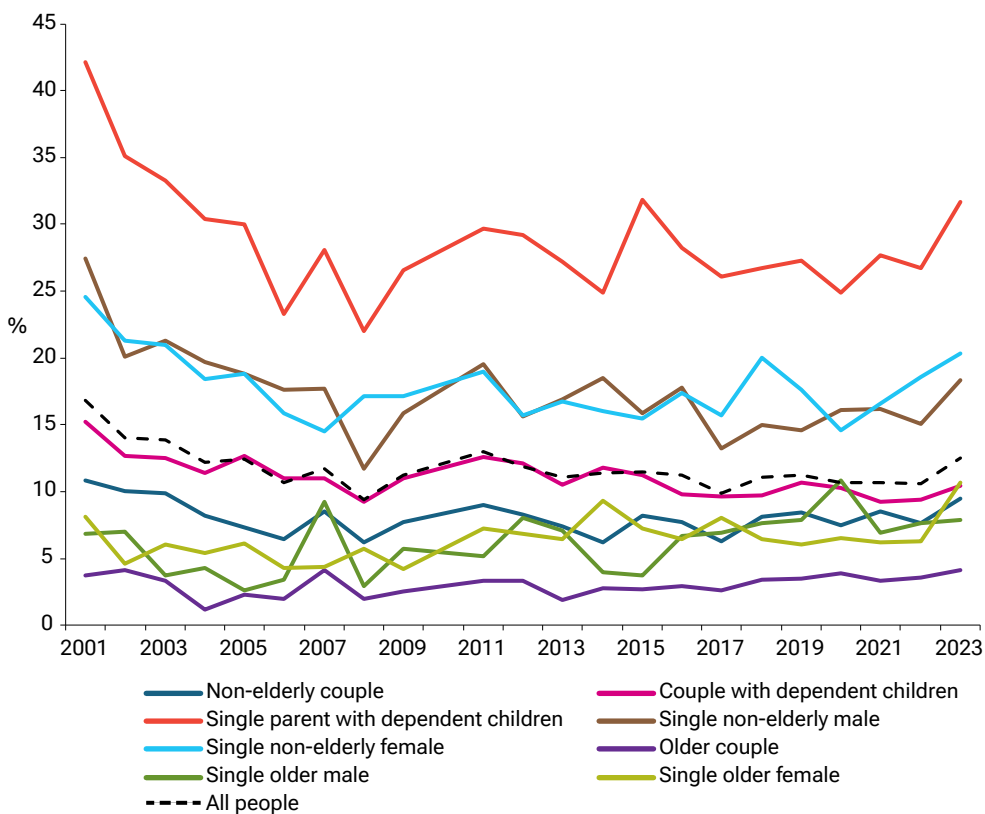

- Could not pay electricity, gas or telephone bills on time
- Could not pay the mortgage or rent on time
- Pawned or sold something
- Went without meals
- Was unable to heat home
- Asked for financial help from friends or family
- Asked for help from welfare community organisations

Figure 3.10: Proportion of people experiencing two or more indicators of financial stress, by family type

- Non-elderly couple
- Couple with dependent children
- Single parent with dependent children
- Single non-elderly male
- Single non-elderly female
- Older couple
- Single older male
- Single older female
- All people

Similar to the finding on poverty rates when examining income net of housing costs with the equivalence scale adjusted for reduced economies of scale (Figure 3.6), older people have very low rates of financial stress. This may reflect not only their low housing costs, but also their relatively high wealth beyond housing (see Wilkins et al., 2020) and their lower expenditure needs (the latter partly a reflection of government in-kind assistance and subsidies targeted to older people). Also of note is that the rise in income poverty among older men evident in Figure 3.7 has not translated into a rise in financial stress, possibly reflecting their ability to draw on savings.

Housing stress

A further indicator of low economic wellbeing is housing stress, a situation where a family with a modest income faces housing costs that are very high relative to income. A widely accepted definition of housing stress (see Box 3.9, below) is a situation in which housing costs are more than 30% of household income, and the household is in the bottom 40% of the income distribution. The main housing costs are rent and mortgage repayments, but in principle there are other housing costs, such as council rates, body corporate or owners' corporation fees, repairs and maintenance costs, and home building insurance, which arguably should be included. However, studies of housing stress typically do not include maintenance, repair and insurance costs, while the HILDA Survey did not collect data on expenditure on council rates and body corporate fees until Wave 22. These additional housing costs are therefore not included in the housing costs measure employed in this report.

Box 3.9: Housing stress

Various measures of housing stress have been proposed, but a common measure (e.g., Rowley and Ong, 2012) is the so-called '30–40' rule: a household is in housing stress if housing costs are more than 30% of income and household income places the household in the bottom 40% of the income distribution.

A point of contention in the implementation of the 30–40 rule is whether to use gross (pre-tax) or disposable (post-tax) income, particularly for the determination of the ratio of housing costs to income. However, given that disposable income is more relevant to a household's living standard than gross income, and that different households with the same gross income will have different disposable incomes (e.g., a single parent with the same gross income as a couple who each earn half the household's income will have a lower disposable income), the disposable income criterion is employed in this report.

Figure 3.11 presents the proportion experiencing housing stress each year, in total and disaggregated by family type. Among all people, the prevalence of housing stress peaked in 2011 at 10.9% and again reached this level in 2018. The rate of housing stress steadily decreased between 2018 and 2021, reaching a low of 7.4% in 2021, but has since climbed to 10.6% in 2023. Rising rents and interest rates have been key drivers of the recent growth in housing stress, a trend that is likely to have continued into 2024 (see Box 3.8, page 71).

In common with the findings for financial stress (and indeed for poverty), single-parent families have the highest rates of housing stress. They experienced particularly large increases in housing stress prevalence between 2009 and 2010, between 2016 and 2017, and between 2022 and 2023. Since 2010, the rate of housing stress among single-parent families has remained considerably above the 2009 rate.

Single older men and women had relatively low rates of housing stress at the start of this century, but have both experienced rising rates of housing stress since then. Growth in housing stress has been particularly high for single older men, who in 2023 had the highest rate of housing stress after single-parent families.

Couples without children, both elderly and non-elderly, have the lowest levels of housing stress. Couples with dependent children have also had relatively low rates of housing stress in recent years, although there was a substantial rise between 2021 and 2023.

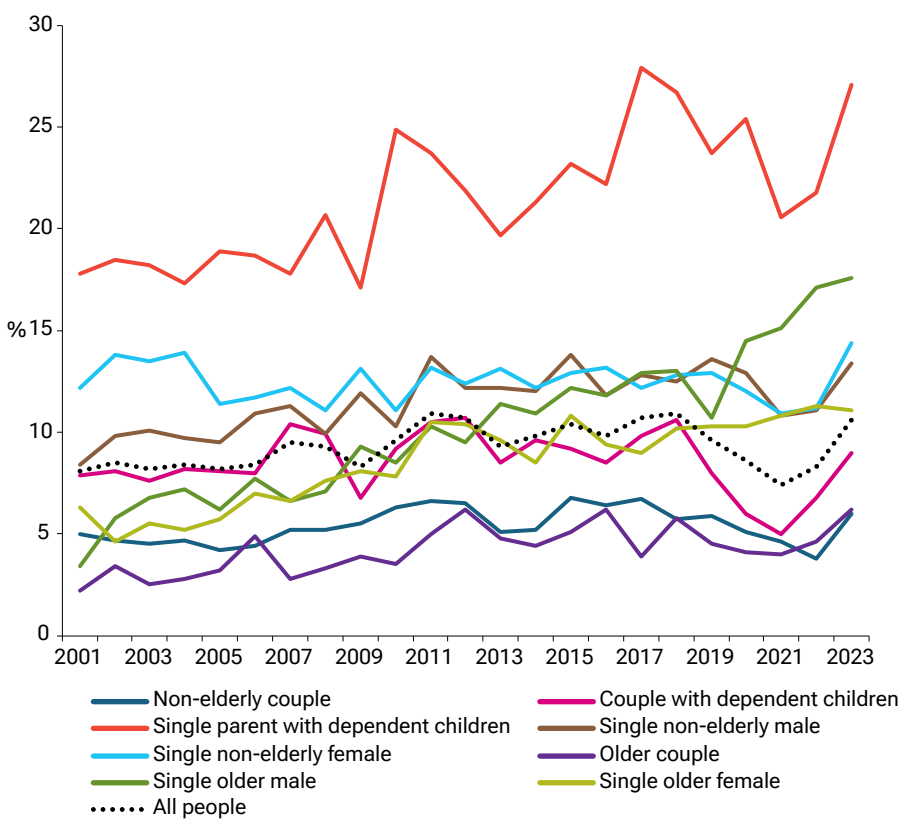**Figure 3.11: Proportion of people experiencing housing stress, by family type**

Legend:
- Non-elderly couple
- Couple with dependent children
- Single parent with dependent children
- Single non-elderly male
- Single non-elderly female
- Older couple
- Single older male
- Single older female
- All people

Figure 3.12 Proportion of people experiencing housing stress, by housing tenure type

Legend:
- Social housing
- Private rental
- Owner with mortgage
- Owner outright
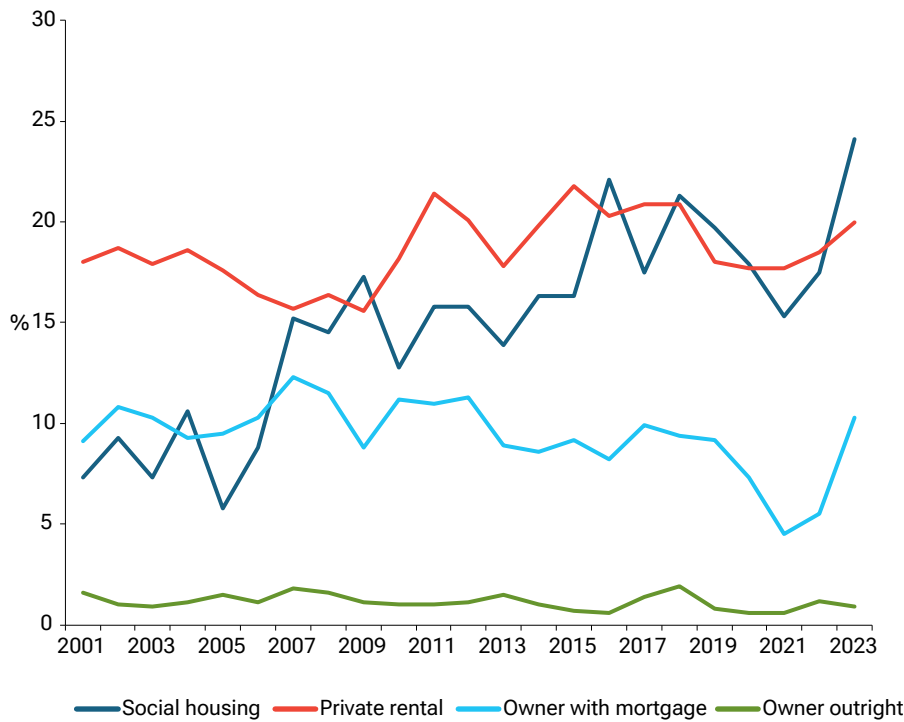
Figure 3.12 compares rates of housing stress by housing tenure type, showing that housing stress is highest for renters and lowest for those who own their home outright. Housing stress among renters of social housing was relatively low up until 2005, but has since increased considerably. Indeed, sharp rises in housing stress among renters of social housing between 2021 and 2023 meant they had their highest ever rate of housing stress in 2023—24.1%—which was also higher than for any of the other housing tenure types in that year. For owners with a mortgage, the rate of housing stress has been considerably lower than for renters over most of this century. It reached an all-time low of 4.5% in 2021, but subsequently increased to 10.3% in 2023, the highest it had been since 2012.

Receipt of Australian Government cash benefits

Reliance on Commonwealth Government income support payments (often received in conjunction with non-income support payments) remains a significant concern for policy-makers in Australia (see Box 3.10, below, for a brief explanation of the Australian social security system). It is associated with significant demands on government budgets and reduced economy-wide market output. Moreover, reliance on income support payments is often associated with long-term poverty, social exclusion and other adverse outcomes for recipients and their children.

That said, the social security system provides an important '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 reliance on benefits.

The HILDA Survey is an important data source for understanding income support receipt, since the longitudinal nature of the data enables the study of the duration, intensity and dynamics of benefit receipt. Importantly, it is possible to identify entrenched reliance and the factors associated with it. The HILDA Survey is therefore a key data source for policy-makers seeking to address long-term reliance on income support.

Box 3.10: The Australian social security system

The Australian social security system contains two broad categories of cash benefits. In the first category are benefits known as *income support payments,* which are intended to represent the primary source of income for recipients. Income support payments comprise the Age Pension, Disability Support Pension, Carer Payment, Parenting Payment (Single and Partnered), JobSeeker Payment, Youth Allowance and Department of Veterans' Affairs Service Pension, as well as several other less common payment types. In the second category are *supplementary government benefits* (non-income support payments), which include Family Tax Benefit (Parts A and B) and Carer Allowance. Studies of reliance on government benefits in Australia typically focus on receipt of income support payments but include non-income support payments in assessments of the extent of reliance on government cash benefits of income support payment recipients. This is the approach taken in this report.

Income support receipt and reliance on Australian Government cash benefits over a one-year timeframe

Figures 3.13 and 3.14 respectively present cross-sectional estimates of income support receipt and benefit reliance for 'working-age' people, defined here as people aged 18 to 64. In the financial year ending 30 June 2023, 25.1% of individuals aged 18 to 64 were living in a household that received income support at some stage of the year. This is substantially lower than the peak of 31.9% reached in 2020 during the COVID-19 pandemic. It is also considerably lower than at the start of the HILDA Survey in 2001, when 38.8% of people were living in a household that had received income support.

Figure 3.14 presents estimates of benefit reliance for two definitions (as explained in Box 3.11, page 76): more than 50% of annual household income comes from benefits, and more than 90% of annual household income comes from benefits. As would be expected, the proportion of the population classified as benefit-reliant is higher for the 50% threshold than for the 90% threshold. In terms of trends over time, both of the two measures show a sharp decline in reliance between 2004 and

2007. Since 2007, there has been a slow trend decline in the proportion receiving more than 50% of household income from benefits, but the proportion receiving more than 90% of household income from benefits has remained broadly unchanged. Both measures, however, show a sizeable decline in reliance between 2020 and 2023 following the COVID-19 spike in 2020.

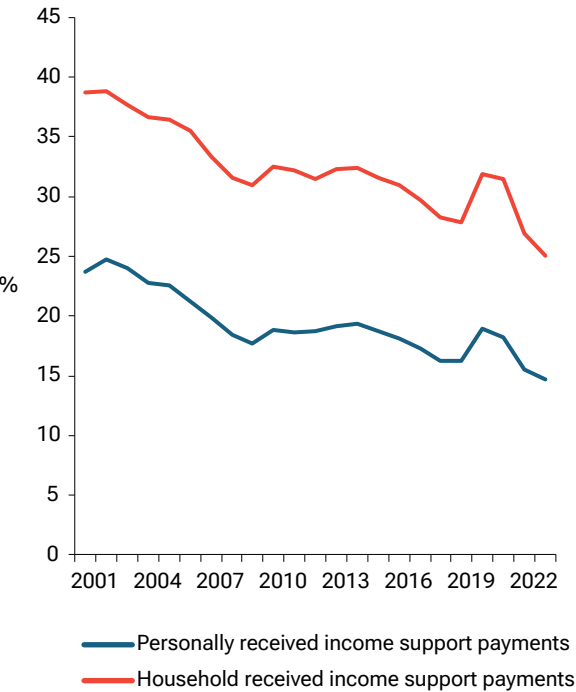**Figure 3.13: Receipt of income support payments by persons aged 18–64**

- Personally received income support payments
- Household received income support payments

Figure 3.14: Reliance on Australian Government cash benefits among persons aged 18–64

- More than 50% of household income from cash benefits
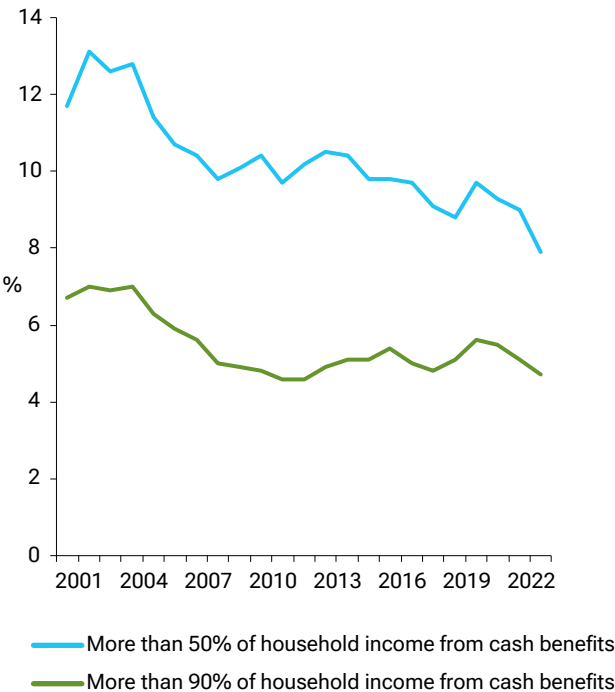- More than 90% of household income from cash benefits

Figure 3.15, examining family types (see Box 3.4, page 50), shows that benefit reliance among working-age people is very much associated with living in single-parent families. For each year from 2001 to 2023, the figure presents the proportion of individuals in each family type obtaining more than 50% of financial-year household income from government benefits. Single-parent families have considerably higher rates of benefit reliance than other family types, although there was some decline in single-parent-family benefit reliance between 2002 and 2008, falling from 45.2% to 32.3%, and then again between 2021 and 2023, reaching an all-time low of 24.6%.

**Box 3.11: Definitions of reliance on Australian Government cash benefits**

Reliance on government benefits is usually conceived of as a situation in which the payments—in Australia often referred to as social security payments—represent the primary or main source of income for a household. In this report, two alternative specific definitions of benefit 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.

Individuals in couple families, with or without dependent children, have the lowest rates of benefit reliance, and have also exhibited declines in benefit reliance over most of the 2001 to 2023 period. Overall, the proportion of people who were benefit-reliant fell from 8.6% in 2003 to 2.9% in 2023 for couples with dependent children, and from 11% in 2002 to 3.4% in 2023 for couples without dependent children.

Single men and women have benefit-reliance rates somewhat higher than couples and have exhibited a slight trend increase in benefit reliance since the mid-2000s. In 2023, benefit reliance among both single men and single women was 15.4%, up from 11.1% for men and 13.7% for women in 2008. Overall, the gap between couples (with or without dependent children) and single people (without dependent children) has risen over the HILDA Survey period.

Figure 3.15: Reliance on Australian Government cash benefits of people aged 18 to 64 years, by family type
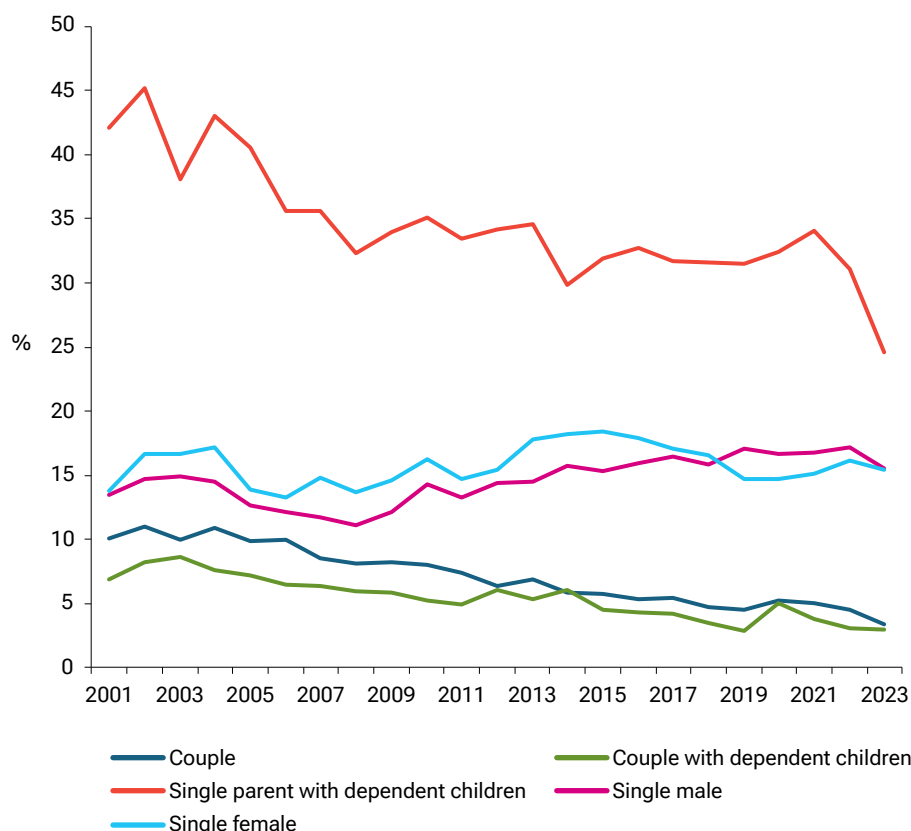
Note: A person is defined to be benefit-reliant if more than 50% of their household annual income comes from Australian Government benefits.

Income support receipt and reliance on Australian Government cash benefits over 10 years

The longitudinal nature of the HILDA Survey data provides significant insights into long-term contact with the income support system. Table 3.13 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 (personal contact), and the proportion who at some stage were living in a household in which at least one member received an income support payment (household contact).

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 gender and age group and, as in the analysis of poverty presented in Table 3.7, two 10-year periods are examined: 2001 to 2010 and 2014 to 2023.

The bottom-right cell of the top panel of the table shows that 63.9% of the working-age population had direct (personal) or indirect (household) contact with the income support payment system at some stage between 2001 and 2010. Moreover, 40.5% 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 (see Figure 3.12, page 74), this indicates that the income support system was indeed providing temporary rather than long-term support for many recipients and was potentially a very important safety net. Contact with the income support system was lower over the 10 years from 2014 to 2023 (lower panel of Table 3.13), but still substantial, with 55.6% having household contact and 33.7% having personal contact.

Rates of household contact with the income support system are high across all age groups. Personal contact with the income support system varies more by gender, age group and indeed time period than does household contact.

For men, over the 2001 to 2010 period, personal contact was highest for those initially (in 2001) aged 18 to 24 and lowest among those initially aged 25 to 34. The rate of personal contact then increases as we move up the age distribution, rising from 26.1% for the 25 to 34 age group to 35.7% for the 45 to 55 age group. In the 2014 to 2023 period, rates of personal contact show a similar pattern by age, the exception being that the 25 to 34 and 35 to 44 age groups have the same rate of personal contact in this period. Also notable is that, at odds with the broader decline in contact with the income support system, males initially aged 18 to 24 had a higher rate of contact in the more recent period than males initially aged 18 to 24 in the earlier period. This mainly reflects growth in receipt of benefits for full-time students (Youth Allowance—Student or Apprentice, Austudy and Abstudy).

In both of the 10-year periods, rates of personal contact with the income support system are higher for women than men in all age groups, but particularly among those aged under 45. This is at least partly due to women being a high proportion of single parents. That said, the gap between men and women was considerably smaller in all age groups in the 2014 to 2023 period than in the earlier period, mostly due to greater declines in women's personal contact with the income support system in the 25 to 44 age range.

Table 3.13: Income support receipt over 10 years, by gender 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	
2001–2010					
Men					
Personal receipt	46.2	26.1	29.3	35.7	32.8
Household receipt	79.0	58.2	60.6	60.0	62.5
Women					
Personal receipt	61.1	50.8	46.6	41.5	48.2
Household receipt	73.9	60.0	64.8	66.1	65.2
People					
Personal receipt	53.4	38.3	38.1	38.7	40.5
Household receipt	76.5	59.1	62.8	63.1	63.9
2014–2023					
Men					
Personal receipt	49.3	22.8	22.8	28.2	29.0
Household receipt	75.5	48.8	43.0	55.3	53.8
Women					
Personal receipt	61.0	36.7	31.1	33.9	38.3
Household receipt	75.3	47.4	51.1	62.9	57.3
People					
Personal receipt	55.0	29.8	27.2	31.1	33.7
Household receipt	75.4	48.1	47.3	59.2	55.6

The *extent* of working-age individuals' contact with, and reliance on, the income support system over a 10-year period is examined in Table 3.14. 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, 70.1% of men and 63.6% of women had contact with the system in three or fewer of the 10 years, while over the 2014 to 2023 period, 75% of men and 69.4% of women had contact with the system in three or fewer of the 10 years.

Table 3.14: Receipt of Australian Government cash benefits over 10 years—People aged 18 to 55 at the beginning of the 10-year period (%)

	2001–2010		2014–2023	
	Men	Women	Men	Women
Number of years of household income support receipt				
0	37.5	34.9	46.3	42.7
1–3	32.6	28.7	28.7	26.7
4–6	12.3	14.0	9.3	10.2
7–9	8.6	11.2	6.3	8.9
10	9.0	11.2	9.4	11.5
Total	100.0	100.0	100.0	100.0
Mean proportion of household income from government benefits—All people	11.4	15.0	9.9	12.5
Proportion obtaining more than 50% of 10-year household income from government benefits	6.6	10.2	6.3	8.6

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

The bottom panel of Table 3.14 examines the extent of benefit reliance over a 10-year period, presenting the mean proportion of household income deriving from cash benefits over the 10 years for all people and the proportion of the population who were reliant on benefits over the 10-year period as a whole (defined as obtaining more than 50% of household income over the 10 years from benefits). On average, working-age men derived 11.4% of household income from benefit payments between 2001 and 2010, while working-age women on average derived 15% of household income from benefits. These figures dropped to 9.9% and 12.5%, respectively, in the 2014 to 2023 period. Comparing the same two 10-year periods, the proportion who were benefit-reliant over the 10-year period as a whole fell from 10.2% to 8.6% for women, and from 6.6% to 6.3% for men.

Income support receipt and reliance on cash benefits among people aged 65 and over

While many people continue to work in paid employment beyond 65 years of age (and the Age Pension age increased to 67 as of 1 July 2023), as shown in Figure 3.15, even in recent years most people aged 65 and over were retired. We would correspondingly expect reliance on Australian Government cash benefits to be relatively high among this age group.

Figures 3.16 and 3.17 show that income support receipt and benefit reliance is indeed considerably higher among people aged 65 and over than among people aged 18 to 64 (Figures 3.13 and 3.14). There has, however, been a substantial decline in income support receipt, particularly since 2014, while benefit reliance has also declined. In 2014, 79.4% of people aged 65 and over received an income support payment; by 2023, this percentage had dropped to 60.9%.

Using the 50% threshold, reliance on cash benefits of people aged 65 and over has tended to decline steadily over most of the HILDA Survey period. In 2002, 58.6% of this age group relied on welfare for more than 50% of their income; by 2023, this figure had fallen to 41.8%. Later retirement and increases

in superannuation holdings are the main drivers of this decline. Also evident is a decline in reliance using the 90% threshold, but most of the decline occurred between 2003 and 2008. Since 2008, the proportion reliant based on this measure has remained between approximately 26% and 29%.

Figure 3.16: Rates of retirement and personal income support receipt of persons aged 65 and over
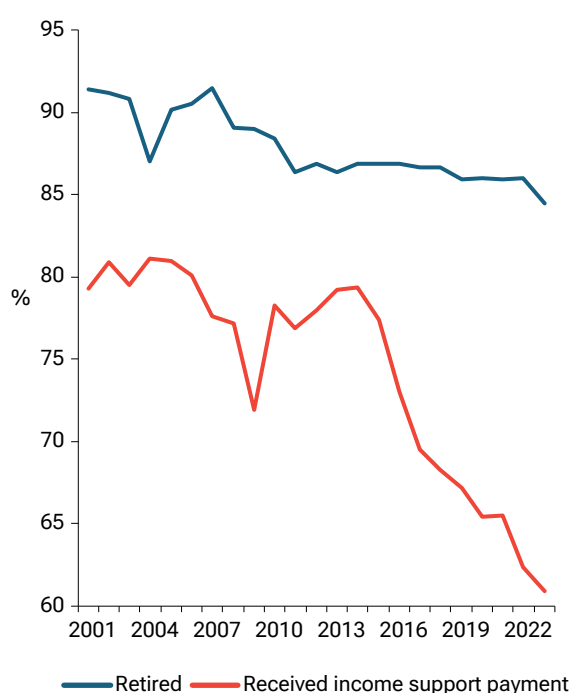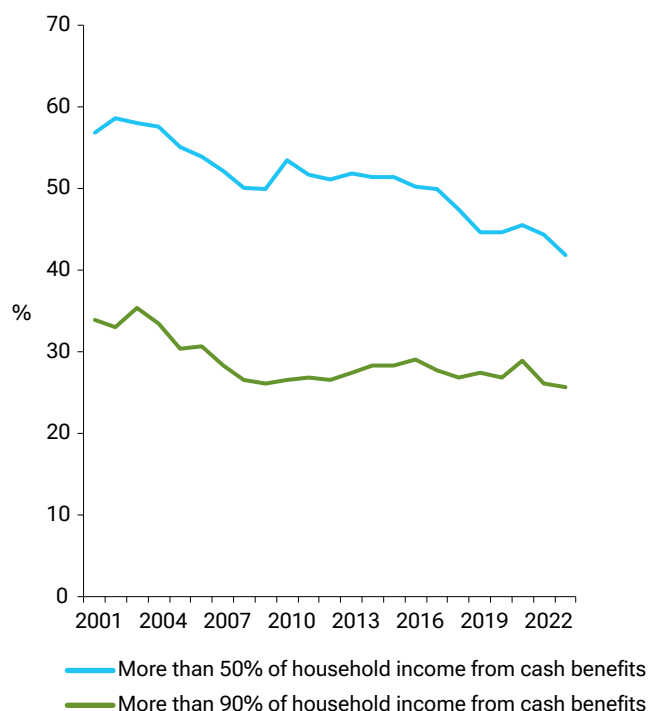

Figure 3.17: Reliance on Australian Government cash benefits among persons aged 65 and over

Household expenditure

The HILDA Survey has, from its inception, collected information on household expenditure. Most of the information is collected in the SCQ. The items measured have changed over time, but in all waves since 2006 they have included expenditure on: groceries; alcohol; tobacco; meals eaten out; taxis and public transport; motor vehicle fuel; motor vehicle repairs and maintenance; clothing; telephone and internet services; health insurance; other insurance; fees paid to health practitioners; medicines; electricity and gas bills; education fees; child care; home repairs, renovations and maintenance; rent on primary residence; and mortgage repayments.

As long as this list is, the HILDA Survey does not attempt to measure all components of household expenditure, and therefore does not provide a comprehensive picture of household expenditure decisions. Expenditure on entertainment and sport, personal and household services such as haircuts and cleaning, health and beauty products, cars, computers and related devices, home audio-visual equipment, household appliances and household furniture are among the items not captured.[17]

These limitations notwithstanding, it is likely the household expenditure data collected by the HILDA Survey can provide insights into economic circumstances and behaviour, particularly in the context of substantial changes in the cost of living (first downward, and then sharply upward; see Box 3.8, page 71) since the onset of the COVID-19 pandemic.

17 Expenditure on infrequently purchased items, such as motor vehicles, holidays and consumer durables, is not amenable to accurate measurement via an annual SCQ. Wilkins and Sun (2010) show that, when the HILDA Survey attempted to measure some of these expenditure items (between 2006 and 2010), it produced considerable underestimates of expenditure compared with the Australian Bureau of Statistics' (ABS) Household Expenditure Survey. Expenditure on entertainment was also found to be under-reported. In 2022, the HILDA Survey began collecting expenditure on council rates and owners' corporation/body corporate fees.

Table 3.15 presents mean household expenditure on each of 21 expenditure items in 2006, 2019, 2020, 2021, 2022 and 2023. The average for each item is measured across all households, including those households with no expenditure on the item (e.g., home owners will not have any expenditure on rent). Note also that all values are expressed at December 2023 prices, which means that Table 3.15 does not show the increases in nominal (dollar) expenditures deriving from the recent surge in inflation—the price level increased by 6.1% in the year to 30 June 2022 and 6% in the year to 30 June 2023. Rather, the table shows how *real* expenditure has changed—for example, identifying whether cost-of-living pressures have caused people to reduce their real consumption of some items.

Table 3.15: Mean household expenditure on various items, 2006 to 2023 ($, December 2023 prices)

	2006	2019	2020	2021	2022	2023	Change 2006 to 2023 (%)	Change 2021 to 2023 (%)
Groceries	12,819	11,421	11,886	11,845	11,520	11,998	–6.4	1.3
Alcohol	2,034	1,798	1,923	1,929	1,783	1,770	–13.0	–8.2
Tobacco products	1,055	1,079	1,244	1,182	982	919	–12.9	–22.3
Public transport, taxis and ride-sharing services	558	786	588	522	621	706	26.5	35.2
Meals eaten out	3,413	4,066	3,622	3,827	4,125	4,359	27.7	13.9
Motor vehicle fuel	3,642	2,560	2,251	2,288	2,785	2,866	–21.3	25.3
Men's clothing and footwear	761	600	579	522	530	607	–20.2	16.3
Women's clothing and footwear	1,214	927	907	861	871	930	–23.4	8.0
Children's clothing and footwear	578	430	393	407	394	409	–29.2	0.5
Telephone and internet charges	2,683	2,469	2,423	2,212	2,122	2,192	–18.3	–0.9
Private health insurance	1,230	1,820	1,741	1,751	1,715	1,694	37.7	–3.3
Other insurance	1,723	2,062	2,037	2,046	2,017	2,270	31.7	10.9
Fees paid to health practitioners	1,177	1,077	963	1,082	1,081	1,167	–0.8	7.9
Medicines	612	545	521	514	521	530	–13.4	3.1
Electricity, gas and other heating fuels	1,830	2,049	2,011	1,900	1,848	1,888	3.2	–0.6
Home repairs, renovations and maintenance	3,674	3,414	3,187	3,791	3,921	3,371	–8.2	–11.1
Motor vehicle repairs and maintenance	1,328	1,125	1,086	1,074	1,028	1,077	–18.9	0.3
Education fees	1,281	1,966	1,736	1,673	1,527	1,657	29.4	–1.0
Home rent	4,632	6,914	6,741	6,729	6,593	6,510	40.5	–3.3
Home mortgage repayments	9,850	10,979	10,800	10,303	11,762	12,404	25.9	20.4
Child care	463	747	756	812	775	641	38.4	–21.1
All expenditure items	56,557	58,834	57,395	57,270	58,521	59,965	6.0	4.7

Over the 2006 to 2023 period as a whole, there were substantial real increases in expenditure on rent (+40.5%), child care (+38.4%), private health insurance (+37.7%), other insurance (+31.7%), education fees (+29.4%), meals eaten out (+27.7%), public transport, taxis and ride-sharing services (+26.5%) and home mortgage repayments (+25.9%). There were substantial real decreases in expenditure on children's clothing and footwear (–29.2%), women's clothing and footwear (–23.4%), motor vehicle fuel (–21.3%), men's clothing and footwear (–20.2%), motor vehicle repairs and maintenance (–18.9%), telephone and internet charges (–18.3%), medicines (–13.4%), alcohol (–13%), tobacco products (–12.9%), home repairs and maintenance (–8.2%) and groceries (–6.4%). Only expenditure on fees paid to medical practitioners and electricity, gas and other heating fuels saw little real change between 2006 and 2023.

Over the first two years of the pandemic (2020 and 2021), the data show that average expenditure on groceries and alcohol rose, while expenditure on meals eaten out and transport declined. Expenditure on both mortgage repayments and rent also declined during the first two years of the pandemic.

Considering the potential effects of cost-of-living pressures in 2022 and 2023 on expenditure patterns, we see large increases in mean expenditure on motor vehicle fuel (+25.3% to $2,866) and mortgage repayments (+20.4% to $12,404), consistent with growth in fuel prices and interest rates in 2022 and 2023. Mean expenditure on home rent declined by 3.3% between 2021 and 2023, which may seem surprising given the increase in the rent price index over this period (see Box 3.8, page 71). However, note that the increase in the rent price index between 2021 and 2023 was actually slightly smaller than the increase in the Consumer Price Index (approximately 11% versus approximately 13%), so that the *real* rent price index actually declined. Note further that the proportion of households renting declined slightly over this period from 32.3% to 31.6%, thus acting to reduce average expenditure on rent across *all* households.

In addition to mortgage repayments and motor vehicle fuel, large increases in mean real expenditure between 2021 and 2023 are evident for public transport, taxis and ride share services (+35.2%), men's clothing and footwear (+16.3%), meals eaten out (+13.9%) and insurance other than private health insurance (+10.9%). However, with the exception of insurance, these increases to a significant extent reflect the effects of the opening up of society in 2022 following the COVID-19 vaccine rollout in 2021.

The items that had the biggest declines in mean expenditure between 2021 and 2023 are tobacco products (–22.3%), child care (–21.1%), home repairs, renovations and maintenance (–11.1%) and alcohol (–8.2%). The decline in expenditure on child care is likely to primarily reflect increases in child-care subsidies over this period. Notably, real grocery expenditure increased by 1.3% between 2021 and 2023, despite the opening up of society and the corresponding increase in expenditure on meals eaten out.

A perhaps surprising finding in Table 3.15 is that real expenditure on electricity, gas and other heating fuels declined between 2019 and 2022. However, the ABS Consumer Price Index shows that real electricity prices actually declined by approximately 15% over this period (ABS, 2025). Increased adoption of home solar panels may also have been a factor in the decline.

Tables 3.16 and 3.17 consider the share of household income spent on 'non-discretionary' items and on food eaten at home (excluding take-away food). Non-discretionary items are defined to be all items in Table 3.15 other than alcohol, tobacco and meals eaten out (thus, food expenditure is a subset of non-discretionary expenditure). These non-discretionary items account for approximately 95% of the expenditure measured by the HILDA Survey, but it should be noted that many of the expenditure items not captured by the HILDA Survey are 'discretionary' in nature. Expenditure on food eaten at home is not separately identified from non-food groceries in the SCQ, but it is measured in the household questionnaire (with the exception of the 2006 to 2010 period). The analysis of food expenditure presented here therefore draws on the information collected in the household questionnaire.

Table 3.16: Mean share of household income spent on non-discretionary items by household type (%)

All non-discretionary items									
	2006	**2013**	**2019**	**2020**	**2021**	**2022**	**2023**	**Change 2006–2021 (percentage points)**	**Change 2021–2023 (percentage points)**
Non-elderly couple	53.2	48.7	47.3	45.9	43.3	42.9	46.4	–9.9	3.1
Couple with dependent children	55.2	52.7	51.7	48.2	46.5	47.1	51.8	–8.7	5.3
Single parent with dependent children	60.2	56.9	55.9	56.1	53.8	54.4	58.5	–6.4	4.7
Single non-elderly person	70.5	67.9	66.0	62.2	60.8	62.3	66.1	–9.7	5.3
Older couple	55.5	54.4	51.9	50.7	51.8	52.9	52.8	–3.7	1.0
Single older person	64.7	62.7	61.3	61.9	62.0	63.6	67.0	–2.7	5.0
Other household type	45.2	43.5	40.1	38.0	37.8	39.7	44.1	–7.4	6.3
All households	58.0	55.2	54.1	52.0	50.6	51.4	55.1	–7.4	4.5

Food eaten at home									
	2005	**2013**	**2019**	**2020**	**2021**	**2022**	**2023**	**Change 2005 to 2021**	**Change 2021 to 2023**
Non-elderly couple	11.3	10.1	9.3	9.0	8.5	8.1	8.4	–2.8	–0.1
Couple with dependent children	12.6	10.6	9.4	9.3	9.3	9.3	9.8	–3.3	0.5
Single parent with dependent children	15.0	13.3	13.2	12.4	12.6	13.0	13.0	–2.4	0.4
Single non-elderly person	14.5	12.4	12.2	12.6	12.2	11.7	13.0	–2.3	0.8
Older couple	19.9	17.4	15.7	14.7	16.0	17.7	16.5	–3.9	0.5
Single older person	18.9	16.8	15.8	17.2	18.2	18.5	17.5	–0.7	–0.7
Other household type	11.6	11.6	9.9	9.1	8.7	9.2	10.4	–2.9	1.7
All households	13.9	12.2	11.4	11.3	11.4	11.5	11.8	–2.5	0.4

Across all households, the share of household income spent on non-discretionary items decreased by 7.4% between 2006 and 2021. This is consistent with rising incomes facilitating growth in the proportion of expenditure on discretionary items. However, the rise in the cost of living in 2022 and 2023 saw the share of income spent on non-discretionary items rise by 4.5% compared with 2021.

Expenditure on food eaten at home (excluding take-away) likewise decreased as a share of income between 2005 and 2021, by 2.5%. There was a slight increase of 0.4% between 2021 and 2023, despite the increase in expenditure on meals eaten out (Table 3.15).

Comparing across household types in Table 3.16 (see Box 3.12, page 84), the share of income spent on non-discretionary items is consistently highest for single people (in both age groups) and is also relatively high for single-parent households. Patterns of change over time are similar across household types, although older households experienced a smaller decline in the share of income spent on non-discretionary items between 2006 and 2021. The food expenditure share of income is higher for older households across the entire 2005 to 2023 period. Changes in the food expenditure share of income between 2005 and 2021 and between 2021 and 2023 are broadly similar across household types, although older couples experienced a relatively bigger decline between 2005 and 2021 compared with other household types.

Table 3.17 compares changes in the share of income spent on non-discretionary items and on food eaten at home across household income quintiles. Unsurprisingly, the income shares are highest for the bottom income quintile and lowest for the top quintile. However, the decline in the share of income spent on food between 2005 and 2021 is greatest for the bottom two income quintiles and smallest for the top quintile. The change in the income share of non-discretionary expenditures is not clearly ordered by income quintile, but it is nonetheless notable that the top income quintile had the smallest decline between 2006 and 2021.

Between 2021 and 2023, the bottom two quintiles had the largest increases in both the share of income spent on non-discretionary items and the share of income spent on food. These patterns are consistent with the cost-of-living 'crisis' biting hardest for lower-income households.

Table 3.17: Mean share of household income spent on non-discretionary items by income quintile (%)

All non-discretionary items									
	2006	2013	2019	2020	2021	2022	2023	Change 2006–2021 (percentage points)	Change 2021–2023 (percentage points)
Bottom quintile	80.2	77.0	76.8	72.8	72.4	73.8	78.6	–7.8	6.2
Second quintile	62.8	59.6	57.0	55.5	53.1	54.9	59.5	–9.7	6.4
Middle quintile	54.9	52.6	51.6	48.8	48.1	49.4	52.1	–6.8	4.0
Fourth quintile	51.3	47.8	45.5	42.9	41.4	42.1	45.0	–9.9	3.6
Top quintile	39.3	37.3	37.2	36.0	33.9	33.9	37.6	–5.4	3.7
Food eaten at home									
	2005	2013	2019	2020	2021	2022	2023	Change 2005 to 2021	Change 2021 to 2023
Bottom quintile	25.0	22.3	21.7	20.5	21.8	22.6	22.5	–3.2	0.7
Second quintile	14.6	13.0	11.8	11.6	11.4	11.7	12.3	–3.2	0.9
Middle quintile	11.5	10.2	9.1	9.5	9.0	9.1	9.4	–2.5	0.4
Fourth quintile	9.2	8.1	7.5	7.5	7.1	7.0	7.3	–2.1	0.2
Top quintile	6.7	5.6	5.2	5.4	5.2	4.9	5.3	–1.5	0.1

4

The labour market

4. The labour market

Inga Laß

A major focus of the HILDA Survey is people's labour market activity. 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 other work-related information. Perceptions and attitudes on a range of labour market issues, such as preferred hours of work, satisfaction with the current 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 most households' incomes, for many people 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.

In this chapter, we examine labour force status, earnings levels and dynamics, and then turn to trends in commuting times and working from home. Finally, analysis is presented of working time mismatch, that is, of over- and underemployment.

Labour force status

Standard statistical summaries of the labour force, such as those produced by the Australian Bureau of Statistics (ABS) in its monthly labour force statistics, divide the population aged 15 and over into 'employed', 'unemployed' and 'not in the labour force' (see Box 4.1, page 87). 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.

Figure 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 2023 period, for men and women separately. From 2001 until 2008, employment steadily rose and unemployment fell. Following the onset of the Global Financial Crisis (GFC) in late 2008, the labour market became more mixed.

For women, the employment rate was relatively stagnant, at approximately 68% to 70%, between 2009 and 2016, but then grew strongly, reaching 74.2% in 2019. For men, however, the proportion employed remained below the 2008 peak of 83.6% between 2009 and 2019, fluctuating between 81.1% and 83.2%, while the proportion of men unemployed remained above the 2008 trough.

With the onset of the COVID-19 pandemic in early 2020, employment of men and women fell sharply, to 78.5% for men and 71.7% for women. The proportion unemployed rose from 4.1% to 6.2% for men and from 2.9% to 4.1% for women. Significantly, the 2020 employment rate for men was the lowest observed this century and the proportion unemployed was the highest observed this century. However, employment recovered strongly in 2021 and 2022 for both men and women. In both 2022 and 2023, the male employment rate was 83.3%, the highest it had been since 2008 (and second only to 2008 this century). For women, the employment rate reached 76.2% in 2022, the highest it has ever been, before slightly declining to 75.6% in 2023.

Figure 4.1 also breaks down the employment rate of workers aged 18 to 64 by whether they are employed full-time or part-time (see Box 4.1, above), highlighting stark differences in employment patterns between men and women.

Among men, full-time work has been by far the more dominant type of employment, accounting for around 63% to 73% of all men aged 18 to 64 across the entire period. Men's full-time rate rose from 68.8% in 2001 to its peak at 73.4% in 2008, then trended downwards until 2019, when it stood at 68.4%. With the onset of the COVID-19 pandemic, men's full-time employment plummeted to 62.7% in 2020, before recovering to 67.4% in 2021 and 70% in 2022. However, subsequently, men's full-time rate declined again by 0.8 percentage points to reach 69.2% in 2023.

The proportion of men employed part-time has been low across the 2001 to 2023 period, but it did see an upward trend, from 11% in 2001 to 14.1% in 2023. It rose particularly sharply during the pandemic, to 15.8% in 2020, its highest level in the HILDA Survey period.

For women aged 18 to 64, the proportion employed full-time is considerably lower than for men. However, it increased significantly over the period, from 35.3% in 2001 to 40.7% in 2019. After a temporary decline to 38.5% in 2020, it surged over the next three years to a record high of 44.9% in 2023.

By contrast, part-time work is significantly more prevalent among women than among men. It also trended upwards over the period, from 28.9% in 2001 to an all-time high of 33.5% in 2019. However, since then, the part-time rate for women has steadily declined, to 30.7% in 2023.

Figure 4.1: Labour force status—People aged 18 to 64

Figure 4.2 examines one-year transitions between employment and non-employment of people aged 18 to 64 over the 2001 to 2023 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 generally have lower transition rates out of employment, in large part because of the effects of childrearing on women's employment participation. However, women's annual exit rates have decreased significantly over time, from 9.4% in 2002 to 6.2% in 2023.

Dramatic effects in the three years after the onset of the COVID-19 pandemic are evident, with a visible rise in the transition to non-employment in 2020, followed by a very large rise in the entry rate for both men and women in 2021 and 2022. By contrast, the year 2023 saw very significant declines in entry rates into employment.

Figure 4.2: Annual rates of movement into and out of employment—People aged 18 to 64
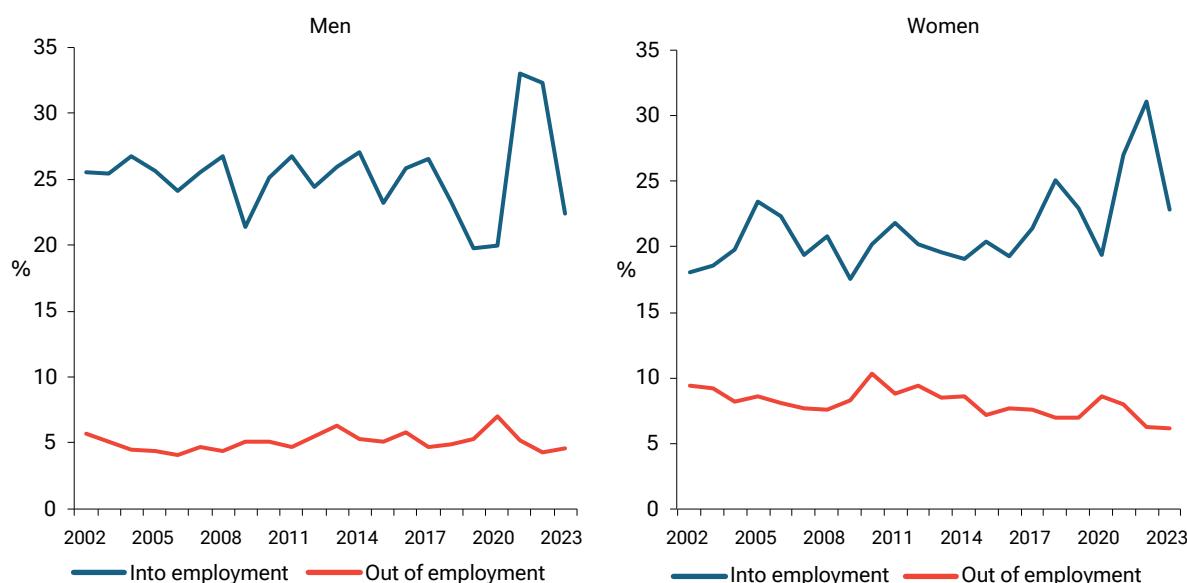
Notes: Years on the horizontal axis refer to the second year of the two-year transition period. For example, 2002 refers to transitions between 2001 and 2002. The rate of movement into employment is the proportion of those not employed in the first year who are employed in the second year. The rate of movement out of employment is the proportion of those employed in the first year who are not employed in the second year.

Figure 4.3 probes more deeply into labour market transitions by distinguishing between full-time and part-time employment. As in Figure 4.2, large effects of the COVID-19 pandemic are evident.

The top panel presents transitions from non-employment, showing that men have higher rates of transition to full-time employment than women, while, in most years, women have higher rates of transition into part-time employment than men. Between 2010 and 2014, there was a large increase in the male rate of transition from non-employment to part-time employment. However, it subsequently declined, reaching its lowest observed level of 8.1% in 2019 before surging strongly in 2020 and 2021. In 2022 and 2023, men's transition rates into part-time work declined again.

While there is considerable volatility in the proportion of non-employed men moving into full-time employment from one year to the next, there was a trend decline in this transition rate until the COVID-19 pandemic, from 15.2% in 2002 to the lowest point of 8.8% in 2020. However, men's entry rate into full-time employment subsequently rose sharply, to 17.3% in 2021 and 18.1% in 2022, before declining just as sharply to 10.9% in 2023.

For women, the top panel of Figure 4.3 shows a trend rise in the rates of movement from non-employment to both part-time and full-time employment up until 2018. Rates of movement then declined in 2019 and 2020 before increasing sharply in 2021. The increase in the female rate of movement from non-employment to part-time employment was especially large, with the rate reaching a record high of 22.3% in 2022—up from 14.2% in 2020. In 2023, the rates of movement into both full-time and part-time employment declined for women, with the drop being particularly marked for part-time employment.

Figure 4.3: Rates of movement between non-employment, part-time employment and full-time employment from one year to the next—People aged 18 to 64

From non-employment
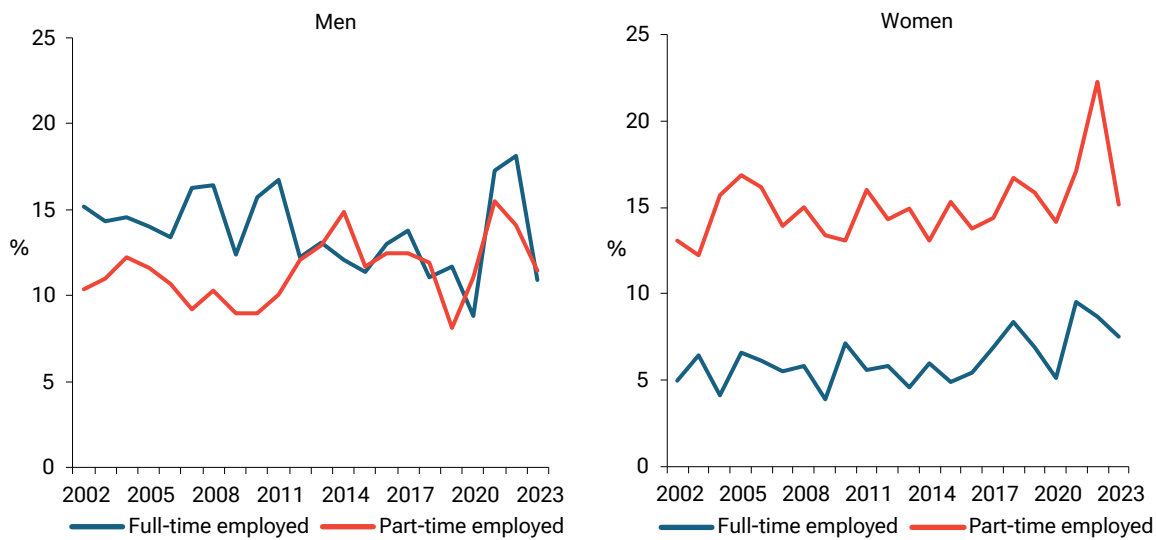
From part-time employment
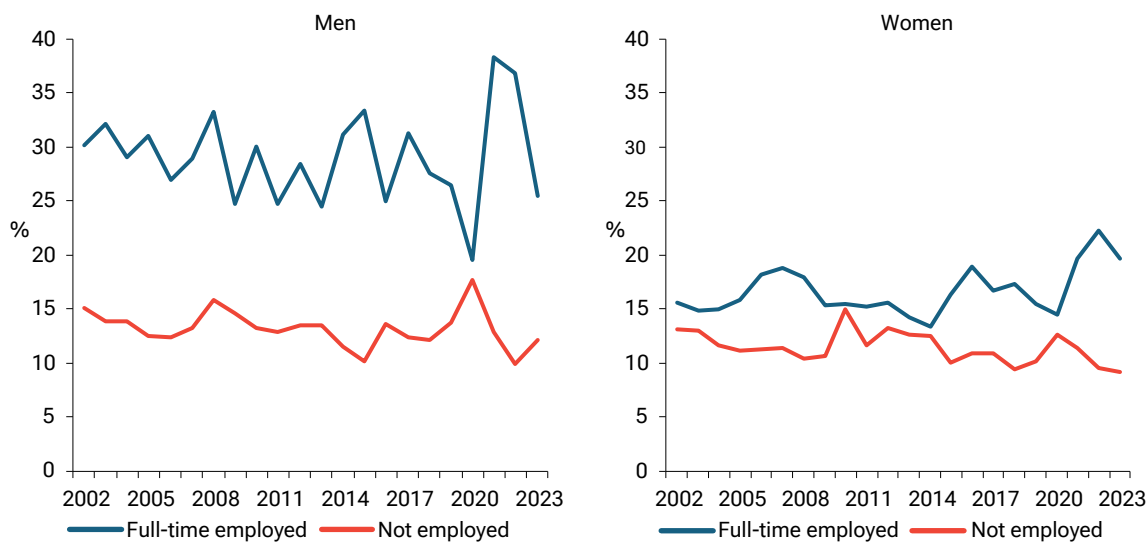
From full-time employment
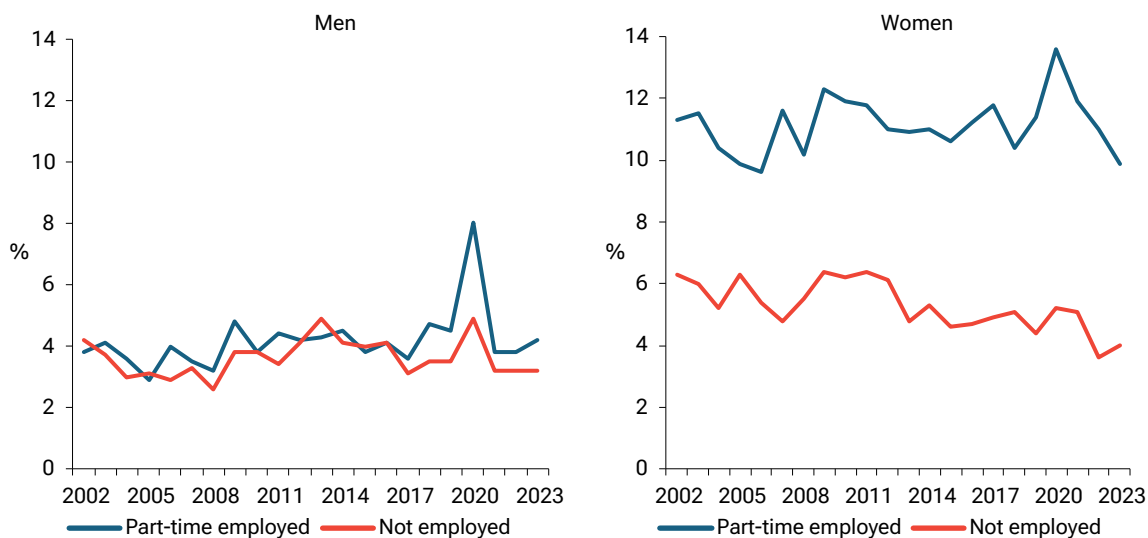
Note: Years on the horizontal axis refer to the second year of the two-year transition period. For example, 2002 refers to transitions between 2001 and 2002.

The second panel of Figure 4.3 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 generally have similar rates of movement from part-time employment to non-employment.

For both men and women, the rate of transition from part-time employment to non-employment increased in 2020 and decreased in 2021, and the rate of transition from part-time employment to full-time employment decreased in 2020 and increased in 2021. The magnitudes of these changes were considerably larger for men, particularly for movements into full-time employment: in 2020 the rate fell to a record low of 19.6% and in 2021 it rose to a record high of 38.3%, and was still at 36.8% in 2022. In 2023, the transition rates from part-time to full-time employment declined for both genders, but the decline was much more marked for men (from 36.8% to 25.5%) than for women (from 22.3% to 19.7%).

The bottom panel of Figure 4.3 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. In 2020, for both men and women, there was a large increase in the rate of movement from full-time to part-time employment as well as an increase in the rate of movement into non-employment. These increases were reversed in 2021, and rates of movement out of full-time employment remained low in both 2022 and 2023. Indeed, for women, the rate of movement from full-time employment to non-employment fell to a record low of 3.6% in 2022 before slightly increasing to 4% in 2023.

Labour market earnings

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 market value of that worker's labour. Earnings—the main income source for most working-age people—are also an important contributor to an individual's economic wellbeing.

Figures 4.4 to 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 male and female real earnings distributions over the 2001 to 2023 period, plotting the mean, median and Gini coefficient. Figure 4.4 examines weekly earnings in the main job of full-time employees, Figure 4.5 examines weekly earnings in all jobs of all employees and Figure 4.6 examines hourly earnings in all jobs of all employees (see Box 4.2, below, for an explanation of these measures).[18]

> **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.

Figure 4.4 shows that over the 2001 to 2023 period mean weekly earnings in the main job of full-time employees (expressed at December-quarter 2023 prices) increased from $1,681 to $2,107 (a 25.3% increase) for males and from $1,329 to $1,764 (a 32.7% increase) for females. The Gini coefficient, which provides a measure of inequality of earnings among employees (see Box 3.3, page 49), decreased by 1.4% for males but increased by 7.5% for females. The Gini coefficient for males actually

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18 Note that Figures 4.4 to 4.6 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.

increased by 6.4% between 2001 and 2011, but has since been trending downwards, falling from 0.299 in 2011 to 0.277 in 2023. For female full-time employees, the Gini coefficient peaked at 0.260 in 2019 and then saw declines in most subsequent years to arrive at 0.244 in 2023.

While there was considerable growth in mean and median weekly earnings of male full-time employees over the period as a whole, the rate of growth varied over time. For mean earnings, there was strong growth between 2002 and 2012 and between 2018 and 2020, but there was no net increase between 2012 and 2018, and there were sizeable drops in mean earnings in both 2021 and 2022. In 2023, mean earnings saw a very modest increase of 0.6%. Median earnings have followed a similar pattern, but the growth in 2023 was stronger than for mean earnings, at 3.5%.

In contrast to males, there was sustained growth in mean and median earnings of female full-time employees up until 2021. However, female full-time employees experienced very large declines in mean and median earnings in 2022. These declines, and those experienced by males, are likely to in part reflect withdrawal of the JobKeeper program in March 2021. In 2023, females' mean earnings rose by 1.2%, thus recovering more strongly than those of males, but were still below 2021 levels. By contrast, there was no growth in female median earnings between 2022 and 2023.

Figure 4.4: Weekly earnings in main job of full-time employees
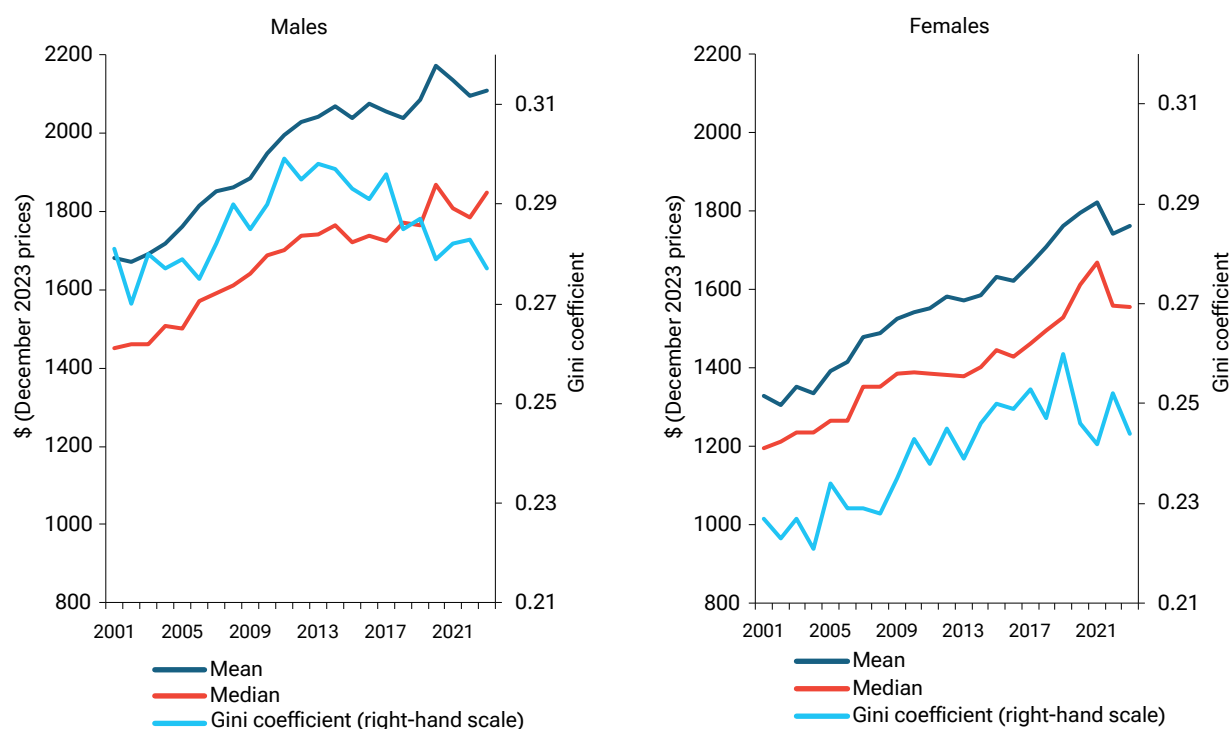
Note: Weekly earnings less than $100 at December 2023 prices have been excluded.

Figure 4.5 provides a sense of the total distribution of weekly earnings 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.

The growth in mean weekly earnings between 2001 and 2023 was 23.7% for males (rising from $1,515 to $1,874) and 37.7% for females (rising from $1,005 to $1,384). As with earnings of full-time employees, mean earnings fell in 2022 and recovered only partially in 2023.

The Gini coefficient for weekly earnings of all male employees rose sharply between 2007 and 2013, then trended downward until 2020, and then rose in both 2021 and 2022 before declining again in 2023.

The Gini coefficient for female employees remained relatively unchanged at approximately 0.35 until 2019, but then declined sharply in 2020 and has remained on a lower level of about 0.33 to 0.34 since.

Figure 4.5: Weekly earnings in all jobs of all employees
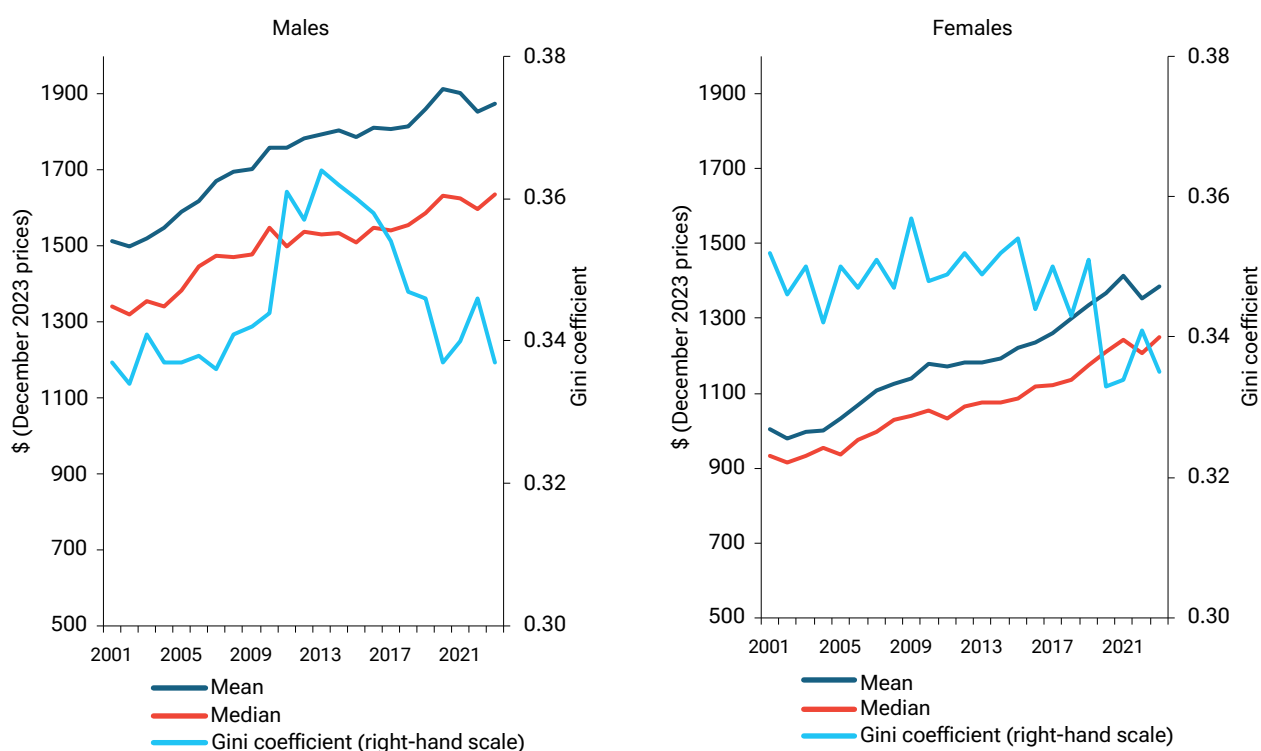
Figure 4.6 provides an overall picture of hourly rates of pay of all employees. Both males and females sustained consistent growth in mean hourly wages until 2020. However, after a sharp rise in 2020, in 2022, hourly earnings declined sharply for both male and female employees. In 2023, hourly earnings saw a recovery of 1.5% among females and 2% among males; yet they remained below their peak values of 2020.

Notwithstanding considerable volatility from year to year, the overall trend appears to be decreasing inequality in hourly earnings for female employees, with the Gini coefficient in 2023 (0.246) being the lowest value measured since 2004 (0.242). For males, there was a substantial increase in inequality in hourly earnings between 2007 and 2009, following which there was a trend decline sustained until 2020. Between 2020 and 2022, the Gini coefficient for male hourly earnings grew from 0.279 to 0.286 before declining again to 0.280 in 2023.

Figure 4.6: Hourly earnings in all jobs of all employees
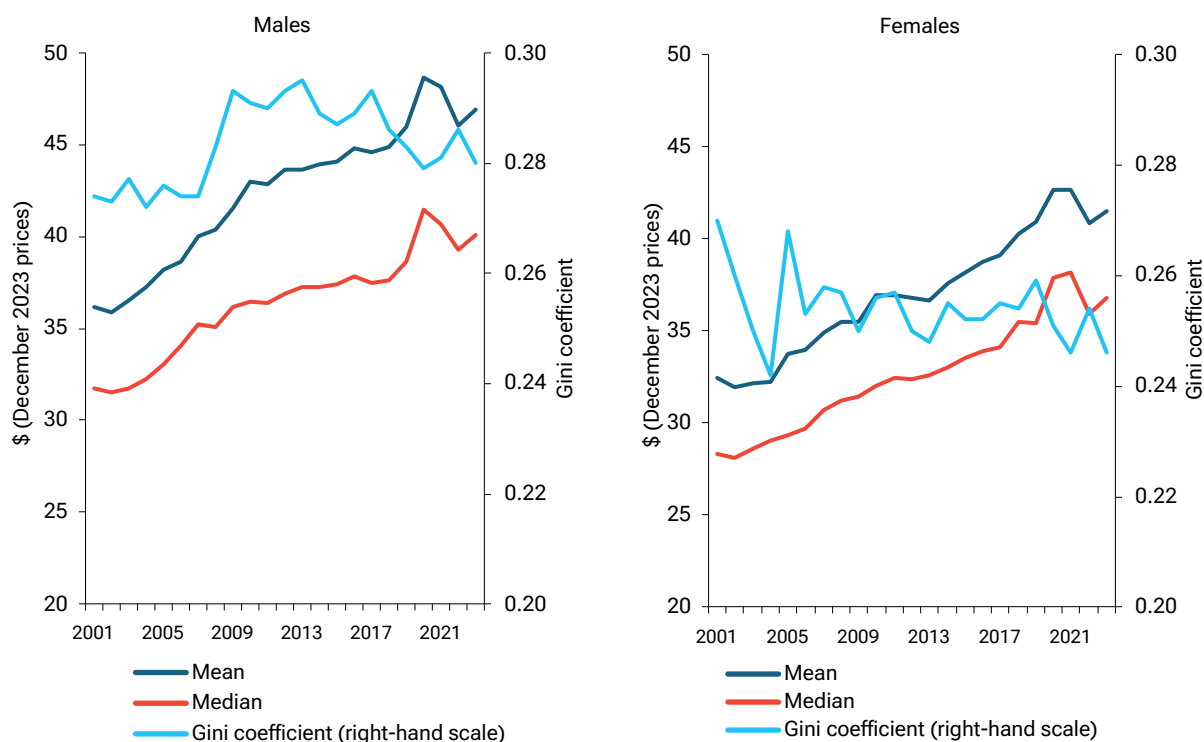
Note: Hourly earnings less than $2 and greater than $600 at December 2023 prices have been excluded.

So far, we have discussed trends for females and males separately. However, the difference in earnings between females and males—the gender pay gap—is also a measure of high and persistent policy interest. It is expressed as the gap between males' and females' earnings as a percentage of males' earnings. Table 4.1 provides the trend in the gender pay gap over time for the three earnings measures presented in this report—weekly earnings in main job for full-time employees, weekly earnings in all jobs, and hourly earnings in all jobs.

The table shows that the gender pay gap is by far the largest when focusing on weekly earnings in all jobs, which is in part a function of the much higher prevalence of part-time work among females. In 2023, weekly earnings in all jobs were 26.1% lower for females than they were for males. By contrast, the gender gap was smallest when focusing on hourly earnings in all jobs, at 11.6% in 2023.

Comparing trends in the gender pay gap over time provides a mixed picture depending on which measure is focused on. The gender gap in weekly earnings, both in the main job among full-time employees and in all jobs among all employees, saw significant declines over the 2001 to 2023 period. Specifically, the gap in earnings in the main job for full-time employees dropped by 4.6 percentage points, whereas that for weekly earnings in all jobs for all employees even declined by 7.5 percentage points. However, the gender gap on these measures increased notably in 2022 and in 2023 it was still above its lowest ever recorded level from 2021.

By contrast, the gender gap in hourly earnings increased significantly between 2001 and 2013 before declining between 2013 and 2018, reaching a similar level in 2018 (10.3%) as in 2001 (10.2%). After slight rises over the 2018 to 2023 period, the hourly gender pay gap in 2023 was 1.3 percentage points higher (11.6%) than at the beginning of the period.

These differences in trends suggest that the narrowing of the gender pay gap among weekly earnings since 2001 is due to an assimilation of the number of working hours among male and female workers (also see the section 'Working time mismatch', page 106), rather than to changes in hourly pay structures.

Table 4.1: Gender pay gap among employees, 2001 to 2023 (%)

	Weekly earnings, main job, full-time employees	Weekly earnings, all jobs, all employees	Hourly earnings, all jobs, all employees
2001	20.9	33.6	10.2
2002	21.8	34.6	11.1
2003	20.0	34.3	12.1
2004	22.2	35.3	13.4
2005	20.9	35.0	11.6
2006	21.9	34.1	12.1
2007	20.0	33.9	12.8
2008	20.1	33.5	12.2
2009	19.1	33.1	14.7
2010	20.8	32.9	14.1
2011	22.2	33.5	13.8
2012	22.0	33.8	15.8
2013	23.1	34.1	16.0
2014	23.3	33.8	14.6
2015	20.0	31.6	13.4
2016	21.8	31.7	13.5
2017	18.9	30.2	12.3
2018	16.1	28.5	10.3
2019	15.5	28.4	11.1
2020	17.3	28.6	12.3
2021	14.7	25.7	11.3
2022	16.8	26.9	11.2
2023	16.3	26.1	11.6
Percentage-point change 2001–2023	–4.6	–7.5	1.3

Commuting and working from home

Lengthy commutes have repeatedly been shown to be associated with reduced worker wellbeing (Chatterjee et al., 2020; Liu et al., 2022). This section analyses trends in commuting times in Australia over the 2002 to 2023 period, the relationship between working from home and commuting, and the characteristics of people with lengthy commutes. The analysis comprises all workers aged 15 years and older, including those with commuting times of zero (i.e., those who work entirely from home).

> **Box 4.3: Measuring commuting times in the HILDA Survey**
>
> Each year, the HILDA Survey collects data on the amount of time people spend in a 'typical week' on a number of activities, with one of these activities being 'travelling to and from the place of paid employment'. However, the information from Wave 1 is not directly comparable to subsequent waves. In 2001, respondents could only report their time use in hours, but since 2002 they have been able to report hours and minutes. Therefore, Wave 1 is excluded from the analyses in this section.
>
> To render results comparable across workers with different numbers of working days, daily rather than weekly commuting times will be reported in most parts of the section. Daily commuting times are derived by dividing the time spent travelling to and from work in a typical week by the usual number of days worked per week in the main job. The focus is on the main job because the exact working days for additional jobs are not known in the HILDA Survey. This leads to an overestimation of daily commuting times for the (small) group of multiple job holders who commute to their second job on different days than to their main job.
>
> Following previous studies of commuting (e.g., Rüger et al., 2011), we differentiate three groups of workers according to their daily commuting time: short-distance commuters (less than one hour); medium-distance commuters (at least one hour but less than two hours); and long-distance commuters (two or more hours).

Trends in time spent commuting

Figure 4.7 presents information on how weekly and daily commuting times have developed in Australia over the 2002 to 2023 period (see Box 4.3, above, for information on the measurement of commuting times). The figure shows that up until the COVID-19 pandemic, mean weekly commuting times increased considerably. In 2002, workers averaged 3.7 hours per week travelling to and from work, but by 2019 this number had risen to 4.6 hours, an increase of approximately 25%. Mean daily commuting times have followed the same trend, also increasing by 25% from about 49 minutes in 2002 to 61 minutes in 2019.

During the COVID-19 pandemic, which involved lockdowns and mandatory or recommended working from home, average commuting times declined significantly and in 2021 reached an all-time low for this century. Weekly commutes declined by a full hour, from 4.6 hours in 2019 to 3.6 hours in 2021. Similarly, daily commutes declined by 12 minutes from 61 minutes in 2019 to 49 minutes in 2021. The period after the pandemic saw a slight recovery in commuting times, yet in 2023, commuting times were still far below 2019 levels, at 3.8 hours per week or 52 minutes per day.

Figure 4.7: Mean weekly and daily commuting times
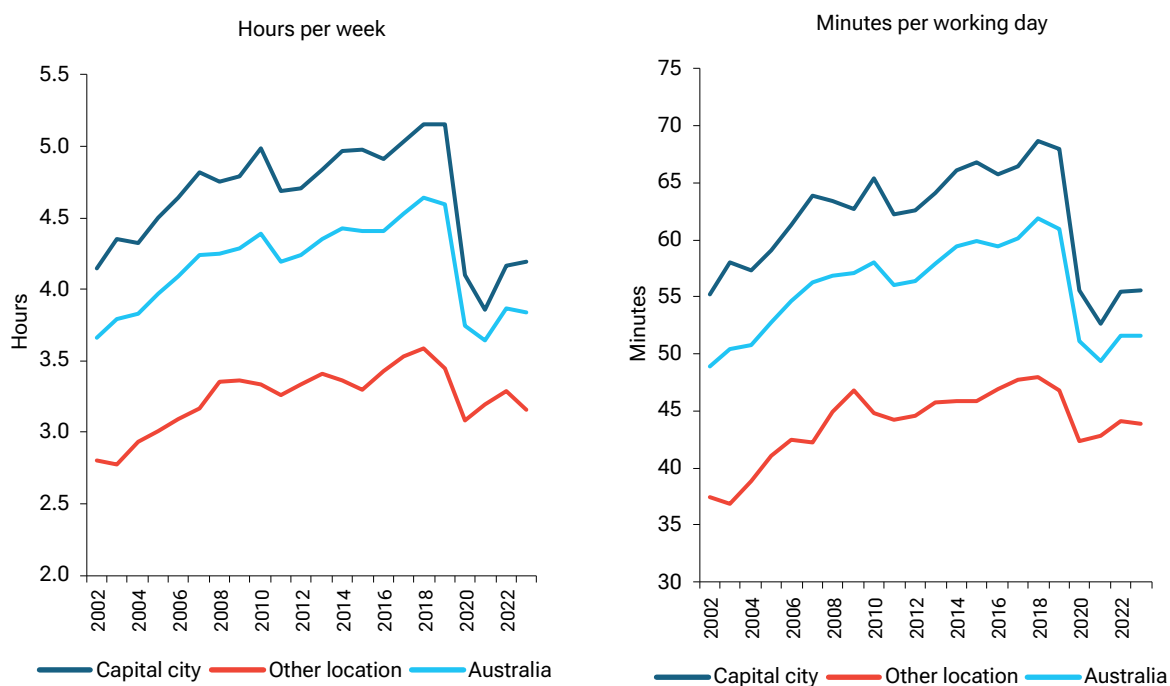
Note: Capital cities include Sydney, Melbourne, Brisbane, Adelaide and Perth.

Commuting times differ substantially between regions in Australia. Workers in cities may live relatively close to their workplace and benefit from more public transport options, but they will also often experience traffic congestion. Those in more rural areas will encounter less congestion but may often need to travel further to their workplaces. Therefore, Figure 4.7 also differentiates commuting times by geographical area, comparing workers living in the mainland state capital cities (Sydney, Melbourne, Brisbane, Adelaide and Perth) with those living in other parts of Australia.

Over the 2002 to 2023 period, those residing in the mainland state capital cities had consistently longer commutes than those living elsewhere. In 2023, workers in the mainland state capital cities spent an average of 56 minutes travelling to and from work each day, compared to 44 minutes for workers in other locations. However, the drop in commuting times during the COVID-19 pandemic was more pronounced in the mainland state capital cities. Average daily commuting times went from 68 minutes in 2019 to 53 minutes in 2021. This compares with a drop from 47 minutes to 43 minutes in other locations. Among the reasons for this difference is a stronger increase in the prevalence of working from home in the mainland state capital cities (see below).

After the marked drop during the pandemic, commuting times in the mainland state capital cities slightly increased but remained on a much lower level than they were pre pandemic. Overall, average commuting times in the mainland state capital cities were practically the same in 2023 as they were in 2002. By contrast, workers in other locations saw an increase in their commuting times over the 2002 to 2023 period, by 13% for weekly commutes and 17% for daily commutes.

Table 4.2: Mean daily commuting times, by location, 2002 to 2023 (minutes)

	2002	2010	2019	2020	2021	2022	2023	Percentage change 2002–2023
Sydney	60	73	73	60	52	57	59	–3
Rest of New South Wales	42	48	50	45	42	46	45	8
Melbourne	59	66	68	53	53	56	55	–7
Rest of Victoria	36	42	48	41	40	43	45	24
Brisbane	46	62	65	56	55	56	56	21
Rest of Queensland	38	45	46	43	46	46	46	20
Adelaide	45	54	59	48	50	46	50	11
Rest of South Australia	29	40	40	33	39	32	37	27
Perth	50	58	61	55	54	55	52	4
Rest of Western Australia	26	40	34	40	44	38	35	34
Tasmania	42	52	44	42	47	48	45	6
Northern Territory	34	33	34	40	34	29	30	–12
Australian Capital Territory	30	41	53	44	41	47	43	43
Total	49	58	61	51	49	52	52	6

Table 4.2 presents average commuting times separately for each of the mainland state capital cities, the rest of each state, Tasmania and the two territories. For reasons of space, it contains select years between 2002 and 2019 and then every year since 2019. The table shows that commuting times vary considerably between locations. In each year, average daily commuting times are longer in every mainland state capital city than in other areas of the same state. Within the group of mainland state capital cities, Sydneysiders have almost consistently had the longest average daily commutes, with 59 minutes in 2023. In 2019, just before the pandemic, Sydney reached the highest ever recorded mean commuting times of all areas, with 73 minutes per day. The order of the other mainland state capital cities varies over the period. In 2023, people in Brisbane had the second-longest commute (56 minutes), followed by workers in Melbourne, Perth and Adelaide. Of all groups, workers in the Northern Territory had the shortest commutes in 2023, spending an average of 30 minutes per day travelling to and from work.

Trends in commuting times over the 2002 to 2023 period have also varied considerably across the country, with the Australian Capital Territory and non-Perth Western Australia experiencing the largest increases (of 43% and 34%, respectively), whereas average commuting times in Sydney, Melbourne and the Northern Territory in fact decreased.

During the pandemic, that is, between 2019 and 2021, the declines in commuting times were most significant in Sydney (–30%), Melbourne (–23%) and the Australian Capital Territory (–21%), which are the areas where lockdowns were in place in 2021. These areas also saw notable rebounds of commuting times in 2022, but they were much smaller than the previous declines. Specifically, between 2021 and 2022, commuting times rose by 11% in Sydney, 7% in Melbourne and 13% in the Australian Capital Territory.

Working from home and commuting times

One way of offsetting lengthy commutes is working from home for part or all of the workweek. Figure 4.8 shows how the proportion of workers doing any work from home and the proportion doing most of their hours (i.e., more than 50%) from home has developed over the 2002 to 2023 period (see Box 4.4, page 99 for information on the measurement of working from home). It shows

that prior to the COVID-19 pandemic, the prevalence of working from home was very stable. About one quarter of workers worked at least some of their hours from home. By contrast, the proportion working most hours from home was much lower, around 5%. With the onset of the pandemic and the corresponding containment measures, the proportion of workers doing any work from home increased to 35% in 2020 and 38% in 2021. The rise in the proportion of workers doing most hours from home was even steeper—it increased to 20% in 2020 and 23% in 2021. The prevalence of working from home, and especially of extensive working from home, subsequently declined. However, levels in 2023 were still much higher than pre-pandemic levels. About 35% of workers did some work from home, and 15% worked most of their hours from home.

Box 4.4: Measuring working from home in the HILDA Survey

In the HILDA Survey all employed people are asked how many hours they *usually* work in a week, both in their main job and in all jobs. This same group is subsequently asked whether, in their main job, any of their *usual hours* are worked at home, and if yes, how many.

From this we construct measures of the proportions of employed people who, in their main job, worked any hours at home and of those who worked most hours at home (defined as more than 50% of their usual weekly work hours).

In 2023, we added another question to the Survey that asked those who work some of their usual working hours at home, how many of their workdays are worked entirely at home. Again, this question relates to the main job if workers have multiple jobs.

Figure 4.8: Proportion of employed persons working from home
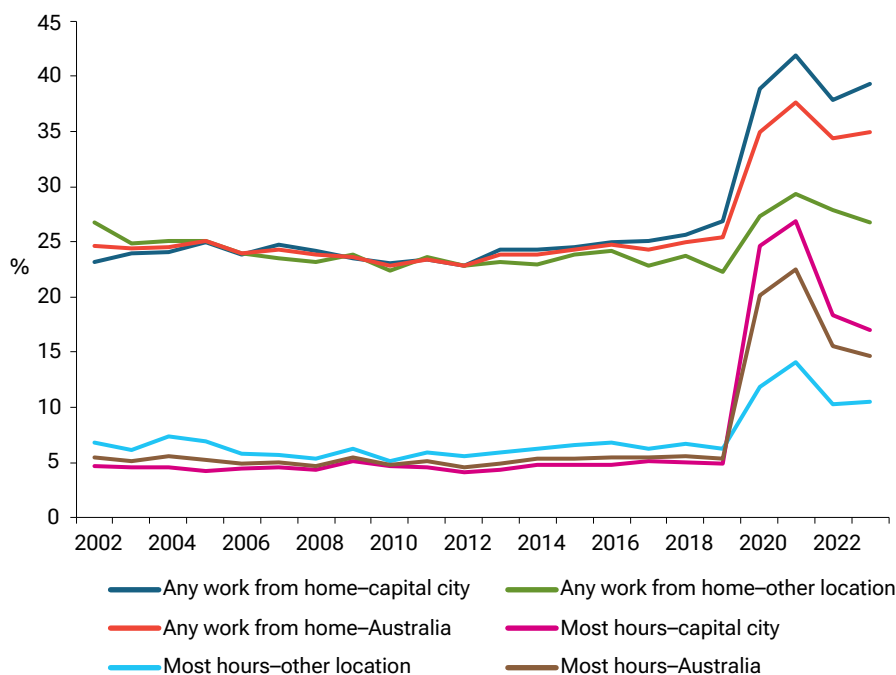
Figure 4.9 presents the number of days worked from home in 2023, for all workers (with at least one working day per week) and for those with a five-day workweek. As noted before with respect to Figure 4.8, 65% of workers do not work any of their usual hours from home. Another 7% work some hours from home, but not a full day per week. For example, a person may work a few hours at home in the evening after spending the day in the office. The remaining 27% work at least one full day at home. There is great variation in the precise number of days people work from home, with 7% working two days from home, 6% one day, 5% three days, and 4% each four or five days from home. Working six or seven days from home is very rare, at 0.3% and 0.5%, respectively.

For ease of interpretation, in Figure 4.9 the second bar from the left restricts the sample to workers with a five-day workweek. Among this group, the share of workers who do not work from home at all is lower, at 58%, but still represents the majority. About 8% work from home without doing full days. Of those 34% who do work from home at least one full day per week, most do so two days per week (10%), followed by one day and three days per week (7% each). Working four or five days per week is slightly less common, at 5% and 6%, respectively. This shows that hybrid work arrangements—where workers spend some of their days at the workplace and some days at home—are significantly more common in 2023 than working entirely from home.

Figure 4.9: Number of days worked from home, 2023
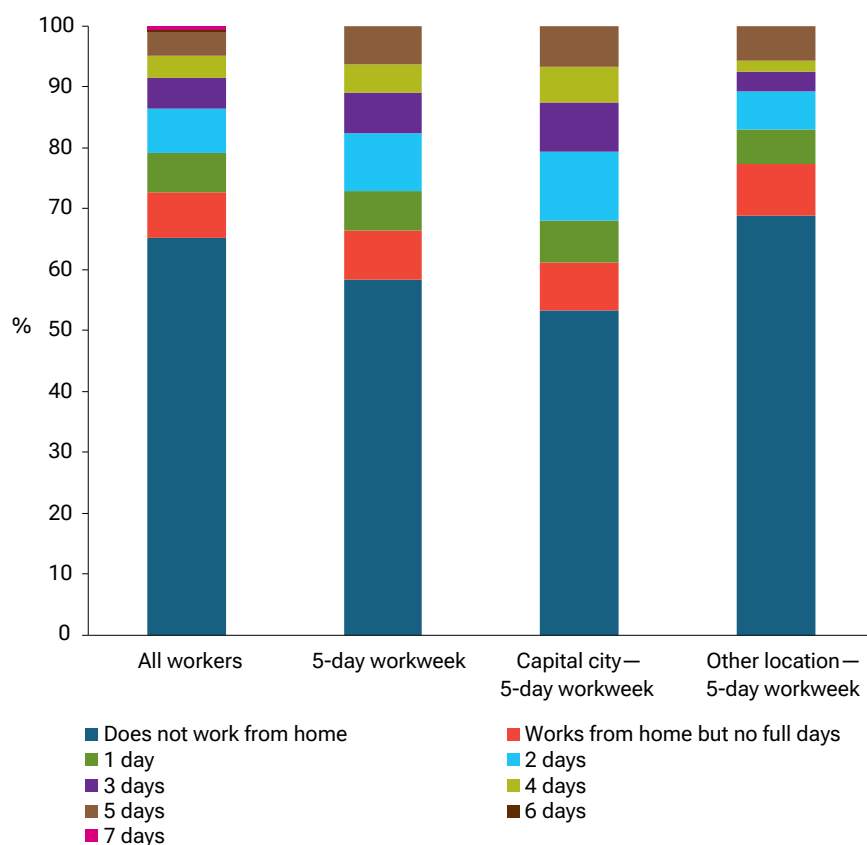
Notes: Sample restricted to workers working at least one day per week. Capital cities include Sydney, Melbourne, Brisbane, Adelaide and Perth.

The two rightmost bars of Figure 4.9 again differentiate between workers in the mainland state capital cities and those in other locations, focusing on those with five-day workweeks. They reconfirm that working from home is more common in the mainland state capital cities than it is in other locations, with only 31% of five-day workweek workers working from home in other locations, but 47% working from home in the mainland state capital cities. Correspondingly, working two, three or four days a week from home is significantly more common in the mainland state capital cities than in other locations.

Table 4.3: Mean weekly commuting times, by extent of working from home, 2023 (hours)

	Capital cities	Other locations	Australia
Share of working hours worked from home—All workers			
0%	4.3	3.2	3.9
1–19%	5.7	4.3	5.3
20–39%	5.2	4.3	5.0
40–59%	4.7	4.1	4.6
60–79%	3.0	2.8	3.0
80–100%	1.5	0.8	1.3
Total	4.2	3.2	3.9
Number of days worked from home—5-day workweek workers			
Does not work from home	5.1	3.5	4.5
Works from home but no full days	5.5	4.0	5.0
1 day	5.6	5.1	5.5
2 days	5.1	4.0	4.9
3 days	3.7	3.7	3.7
4 days	2.9	2.3	2.8
5 days	0.9	0.7	0.8
Total	4.6	3.5	4.3

Note: Capital cities include Sydney, Melbourne, Brisbane, Adelaide and Perth.

Total commuting times are strongly linked to the extent of working from home. Table 4.3 shows the relationship between both the share of time worked from home and the number of days worked from home, and the weekly hours spent commuting. Both measures provide roughly the same picture. Perhaps surprisingly, commuting times are highest for workers who work from home, but to a relatively small extent. For example, those working less than 20% of their hours from home on average spend 5.3 hours per week commuting, compared to 3.9 hours among those who do not work from home at all. Similarly, among five-day workweek workers, those working from home one day per week spend 5.5 hours commuting, compared to 4.5 hours for those who do not work from home at all.

Less surprisingly, the time spent commuting then declines significantly as both the share of time worked from home and the number of days worked from home increase. Those working five (and thus all) days from home have the shortest commutes, with less than one hour per week. The fact that their commuting time is not zero, even though they work all of their days from home, could in part be due to multiple job-holding; in the HILDA Survey, the working from home days are collected for the main job only, whereas commuting time is collected overall. Furthermore, some people whose workplace is the home might have factored in other work-related trips, such as visiting a client, when thinking about 'travelling to and from a place of paid employment'.

Lengthy commutes

Against the background of increasing public and scientific concern about the potential negative consequences of commuting for workers, this section focuses on the characteristics of workers with lengthy commutes. Three commute lengths are distinguished: short (less than one hour per day); medium (at least one hour but less than two hours per day); and long (two or more hours per day).

Figure 4.10 shows how the distribution of commuters according to this classification has changed over the 2002 to 2023 period. In line with the trend towards increasing commuting times, the share of workers with lengthy commutes initially increased, from approximately 12% in 2002 to 18% in 2019. In parallel, the share of workers with short commutes declined, from 62% to 52%.

With the onset of the COVID-19 pandemic, the share of workers with lengthy commutes declined significantly, from 18% in 2019 to 14% in 2020 and 13% in 2021, remaining at this lower level ever since. Correspondingly, the share of workers with short commutes increased from 52% in 2019 to 62% in 2021, before declining slightly to 60% in 2022 and 2023.

Figure 4.10: Proportion of employed persons with short, medium and long daily commutes

■ Short (less than 1 hour) ■ Medium (at least 1 hour but less than 2 hours) ■ Long (2 hours or more)
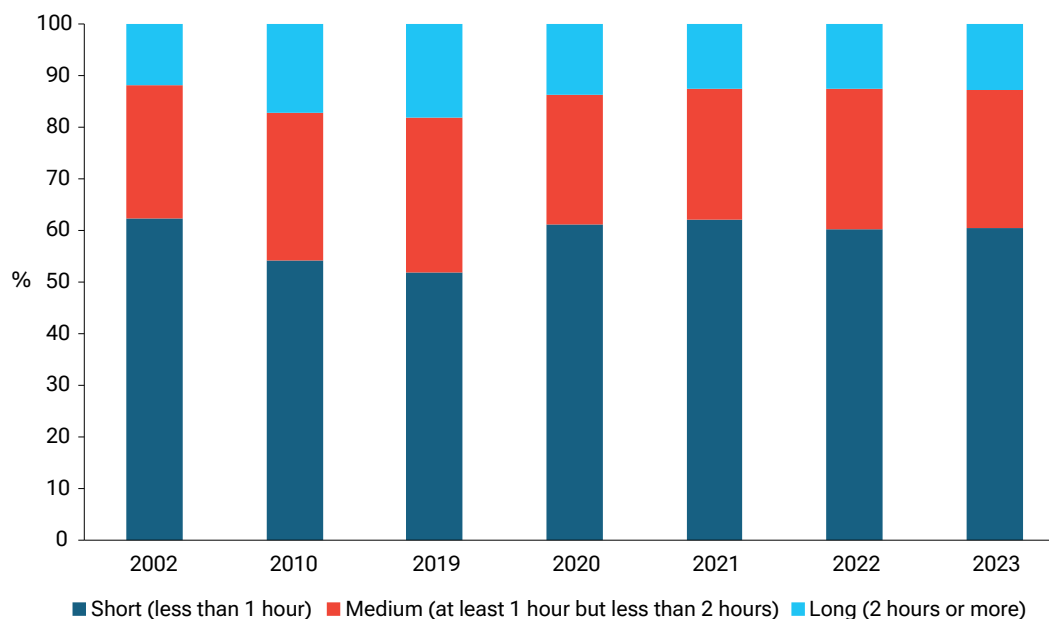
Note: Daily commute times refer to the total time spent travelling to and from work per day.

Not all workers are equally likely to have a lengthy commute. Table 4.4 presents results from a multinomial logistic regression analysis that shows the associations between worker and job characteristics and workers' probability of having short, medium and long commutes.

With respect to personal characteristics, the table shows that partnered mothers have a lower probability than single women of having long commutes. By contrast, fathers—both single and partnered—are most likely to have long commutes. Compared to young people aged 15 to 24 years, all other age groups except for workers aged 65 and over have elevated probabilities of long commutes. Persons with an educational qualification of Year 12 or above have a higher probability of having long commutes than those who completed Year 11 or less. Compared to persons living in the mainland state capital cities, those living in other locations have a strongly reduced probability of lengthy commutes. First Nations Australians and people born in 'other' countries have an increased probability of lengthy commutes compared to non-First Nations Australian-born persons.

With respect to job characteristics, lengthy commutes are more likely among those working full-time (in their main job) compared to those working part-time, those with multiple jobs and those with higher hourly wages. Occupation also matters: technicians and trades workers, clerical and administrative workers and labourers have an increased probability of lengthy commutes compared to managers, whereas sales workers and machinery operators and drivers have a lower probability. Both casual employees and the self-employed have a higher probability of having short commutes than workers on permanent contracts (see Box 4.5, page 104 for classification of employment contracts).

Finally, the table shows that up until the 2015 to 2019 period, the probability of having lengthy commutes increased compared to the 2002 to 2004 period. During the pandemic, the probability of having short commutes increased significantly and was even higher than 2002 to 2004 levels, while the probability of having long commutes declined to its 2002 to 2004 level. Finally, in the most recent 2022 to 2023 period, the probability of having short, medium and long commutes does not significantly differ from that in 2002 to 2004.

Table 4.4: Characteristics associated with length of commute among employed persons

	Short	Medium	Long
Family type (Reference category: Single female without children in household)			
Partnered female without children in household	*ns*	0.011	*ns*
Single mother	*ns*	*ns*	*ns*
Partnered mother	0.019	*ns*	−0.019
Single male without children in household	*ns*	*ns*	*ns*
Partnered male without children in household	−0.032	0.020	0.012
Single father	−0.074	0.040	0.034
Partnered father	−0.070	0.029	0.041
Age category (Reference category: 15–24 years)			
25–34 years	−0.058	0.035	0.023
35–44 years	−0.055	0.032	0.023
45–54 years	−0.048	0.031	0.017
55–64 years	−0.043	0.024	0.019
65 and older	*ns*	*ns*	*ns*
Educational level (Reference category: Year 11 and below)			
Year 12, Certificate III or IV, Diploma	−0.044	0.031	0.014
Bachelor's degree or higher	−0.069	0.056	0.012
Lives in another location *(Reference category:* mainland state capital cities*)*	0.172	−0.095	−0.077
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)			
First Nations	*ns*	−0.023	0.019
Main English speaking	*ns*	*ns*	*ns*
Other country	−0.022	−0.014	0.036
Full-time worker (in main job) *(Reference category: Part-time)*	−0.046	0.030	0.017
Hourly wage (in main job, measured in $10 units, December 2023 prices)	−0.004	0.002	0.002
Multiple job holder *(Reference category: Single job holder)*	−0.080	0.034	0.046
Occupation (Reference category: Manager)			
Professionals	−0.019	0.013	*ns*
Technicians and trades workers	−0.069	0.034	0.035
Community and personal service workers	*ns*	−0.016	*ns*
Clerical and administrative workers	−0.038	0.016	0.022
Sales workers	0.045	−0.029	−0.016
Machinery operators and drivers	*ns*	*ns*	−0.021
Labourers	*ns*	*ns*	0.016
Employment type (Reference category: Permanent employee)			
Fixed-term contract worker	*ns*	*ns*	*ns*
Casual worker	0.021	−0.019	*ns*
Self-employed	0.091	−0.068	−0.023
Period (Reference category: 2002–2004)			
2005–2009	−0.032	0.010	0.023
2010–2014	−0.057	0.023	0.034
2015–2019	−0.078	0.034	0.044
2020–2021	0.018	−0.015	*ns*
2022–2023	*ns*	*ns*	*ns*
Number of observations		182,334	

Notes: This table presents mean marginal effects from a multinomial logit regression model of the determinants of having a short, medium or long commute. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Spending a lengthy part of the day commuting may impact the way workers perceive their jobs; it may also have broader implications for other areas of life. Table 4.5 presents an assessment of certain statements by commuter type for the year 2023. The top panel reports average satisfaction scores with certain work-related aspects and the job overall, measured on a scale from 0 (totally dissatisfied) to 10 (totally satisfied).

Long-distance commuters appear to be less satisfied with the measured aspects compared to the other groups, especially the short-distance commuters. They are 0.3 points less satisfied than short-distance commuters with both working hours and the flexibility to balance work and non-work commitments. Satisfaction with total pay is also 0.1 of a point lower for long-distance commuters, although, as discussed, long-distance commuting is associated with higher wages. Lengthy commuting incurs costs both in terms of time and money, which may still not be fully compensated by the higher wages. Overall job satisfaction also declines with commuting distance, from 7.9 points among short-distance commuters to 7.7 points among long-distance commuters.

Table 4.5: Evaluation of different job- and life-related aspects, by commute length, 2023 (means)

	Short	Medium	Long	Total
Satisfaction with aspects of job (0–10 scale)				
Working hours	7.6	7.5	7.3	7.5
Flexibility to balance work and non-work commitments	7.8	7.6	7.5	7.7
Total pay	7.5	7.5	7.4	7.5
Job overall	7.9	7.9	7.7	7.9
Self-assessed percentage chance of …				
Leaving job voluntarily in next 12 months	23.0	24.5	27.2	23.9
Losing job in next 12 months	9.3	9.7	9.3	9.4
Looked for a new job in last 4 weeks (%)	15.5	17.6	19.8	16.6
Satisfaction with aspects of life (0–10 scale)				
Financial situation	7.2	7.2	7.1	7.2
Amount of free time	6.7	6.4	6.3	6.5
Neighbourhood lived in	8.0	7.9	7.8	7.9
Life	8.0	7.9	7.9	7.9

As the second panel of Table 4.5 shows, long-distance commuters also report higher chances of leaving their jobs voluntarily within the next year than short-distance commuters. This is in line with the findings in the third panel, which shows that long-distance commuters are more likely to have looked for a new job at some time in the last four weeks.

Lengthy commutes may also impact on areas of life beyond the work sphere. The bottom panel of Table 4.5 presents average satisfaction scores in four areas—the financial situation, the amount of free time, the neighbourhood and life overall—by commuter type. It shows that long-distance commuters tend to have lower satisfaction scores than short-distance commuters in all of these areas. The gap in satisfaction with the amount of free time is particularly large (0.4 points), whereas differences in the other areas are smaller, 0.1 to 0.2 points.

The fact that workers with lengthy commutes are less satisfied with their jobs and certain other areas of their lives and are more likely to intend to leave their jobs raises the question of how persistent long commutes are for individual workers. Table 4.6 presents year-to-year and five-year transition rates between the different commuter types; that is, it reflects the commuting situation of the different types of commuters one year later and five years later.

The table shows that short-distance commuting is the most persistent of the three commuter types. Of those who spent less than one hour per day travelling to and from work, 70% also did so in the following year, and 57% were still (or again) in this situation five years later. Long-distance commuting was the least stable of the three commuter types, but persistence in this state is still high. About 46% of long-distance commuters were still long-distance commuters the year after, and 32% were in this situation five years after. A quarter of long-distance commuters became medium-distance commuters from one year to the next, and 21% reduced their commuting to short-distance.

Another finding is that persons taking up employment were more likely to enter a job with a short commute than a medium or long commute. Simultaneously, short-distance commuters were slightly more likely than medium- and long-distance commuters to leave employment.

Table 4.6: One- and five-year transition rates between commute lengths, 2002 to 2023 (pooled) (%)

Current commute	One year later					Five years later				
	Short	Medium	Long	Not working	Total	Short	Medium	Long	Not working	Total
Short	70	16	6	9	100	57	20	8	16	100
Medium	30	49	15	7	100	35	39	14	13	100
Long	21	25	46	7	100	28	25	32	14	100
Not working	8	3	2	86	100	14	6	4	76	100
Total	34	17	10	39	100	34	18	10	38	100

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

Working time mismatch

Each year, the HILDA Survey collects comprehensive information on people's working time. Besides the actual number of working hours in the main and in all jobs, the Survey also contains questions about the number of hours workers would like to work if they could choose. This section investigates how well people's number of working hours aligns with their preferences, how many workers are over- and underemployed and how this has changed over time. Furthermore, it looks into the question of which workers are more likely to be over- and underemployed.

Box 4.6: Measuring working time mismatch in the HILDA Survey

In this report, two measures of working time mismatch are presented.

1) Classification of underemployed, overemployed and matched workers:

Each year in the HILDA Survey, workers are asked: *If you could choose the number of hours you work each week, and taking into account how that would affect your income, would you prefer to work fewer hours than you do now, about the same hours as you do now or more hours than you do now?*

In this report, persons who would like to work fewer hours than they do are referred to as 'overemployed', those who would like to work about the same hours are termed 'matched', and those who would like to work more hours are referred to as 'underemployed'.

Note that this classification is in line with previous literature (e.g., Guo and Wang, 2025) but deviates from the definition of underemployment of the ABS (2011b). The ABS classifies only part-time workers who want more hours as underemployed, and only if they are available to work more hours. Full-time workers are only classified as underemployed by the ABS if they worked part-time in the reference week for economic reasons.

2) Hours gap:

Workers who report they would like to work fewer or more hours than they do receive a follow-up question asking them how many hours a week, on average, they would choose to work in total. Again, respondents are asked to take into account how that would affect their income. From this desired number of working hours, we subtract the number of actual hours worked in all jobs to calculate the gap between the two measures. A negative gap means workers would like to work fewer hours than they currently do, a gap of zero means workers work the desired number of hours, and a positive gap means workers would like to work more hours.

Table 4.7 presents trends in the average preferred number of working hours, actual working hours and the gap between the two measures over the 2001–2023 period, separately by gender. It shows that among males, the preferred number of working hours has declined significantly over time. Whereas in 2001, males on average desired 40.4 weekly working hours, by 2023, this number had decreased to 38.1 hours, a 2.3-hour decline. Males' actual number of working hours has also declined,

and on an even larger scale: In 2001, males worked an average of 42.8 hours, whereas in 2023, this average was 3.3 hours lower, at 39.5 hours.

Females would like to work fewer hours on average than males, and they also actually work fewer hours than males. They have also seen a different trend over time compared to males: both the preferred number of working hours and the actual hours increased over time among females. The preferred hours increased by 1.1 hours from 30.1 to 31.2 hours, while the actual hours went up by almost 1 hour from 31.6 to 32.6 hours.

When comparing preferred and actual working hours, we see that actual hours exceed preferred hours for both males and females at each point in time, meaning workers of either gender on average would like to work less than they currently do. In most years, and especially at the beginning of the period, the hours gap was notably larger among males than among females (see also Box 4.6, page 106 for the calculation of this measure).

Whereas in each year, people would have liked to reduce their hours on average, the extent of the mismatch varied over time. Among males, the average hours gap has narrowed, since actual hours have declined more steeply than preferred hours. In 2001, males would have liked to work 2.4 hours less than they actually did. By 2014, this gap had shrunk to 0.7 hours. Afterwards, the hours gap saw another rise and ranged around 1.5 hours until 2019. The COVID-19 pandemic saw marked declines in both preferred and actual hours among males, but with actual hours declining more strongly, bringing down the hours gap to 0.8 hours. Since the pandemic, actual hours have risen more strongly than preferred hours, so that the hours gap rose to 1.4 hours in 2023.

Among females, the hours gap shrunk only slightly between 2001 and 2023 since preferred hours and actual hours increased by almost the same amount. However, just like for males, there was a notable decline in the gap between 2013 and 2014 and between 2019 and 2020.

Table 4.7: Trends in actual and desired working hours—Employed persons, 2001 to 2023

	Males			Females		
	Preferred hours	Actual hours (all jobs)	Hours gap	Preferred hours	Actual hours (all jobs)	Hours gap
2001	40.4	42.8	–2.4	30.1	31.6	–1.6
2002	40.3	42.9	–2.6	30.1	31.3	–1.1
2003	39.8	42.4	–2.6	29.9	31.2	–1.3
2004	39.2	42.1	–2.8	29.6	31.1	–1.5
2005	39.3	42.1	–2.8	29.6	31.3	–1.7
2006	39.2	41.8	–2.5	29.7	31.5	–1.9
2007	39.0	41.7	–2.7	29.8	31.8	–2.0
2008	39.4	41.8	–2.4	29.9	31.5	–1.7
2009	39.0	41.3	–2.2	30.0	31.5	–1.5
2010	39.1	41.1	–2.0	30.1	31.6	–1.5
2011	39.1	40.6	–1.4	30.1	31.3	–1.2
2012	38.9	40.5	–1.6	30.3	31.4	–1.1
2013	39.1	40.2	–1.2	30.2	31.3	–1.2
2014	39.4	40.1	–0.7	30.4	31.2	–0.8
2015	38.7	40.1	–1.4	30.3	31.2	–0.9
2016	38.4	39.8	–1.5	30.7	31.5	–0.8
2017	38.6	40.2	–1.6	30.9	31.6	–0.7
2018	38.7	40.1	–1.4	30.9	31.7	–0.8
2019	38.8	40.3	–1.5	30.7	31.7	–1.0
2020	37.7	38.6	–0.8	30.8	31.3	–0.5
2021	38.3	39.4	–1.1	30.7	32.0	–1.3
2022	37.9	39.7	–1.8	30.8	32.3	–1.5
2023	38.1	39.5	–1.4	31.2	32.6	–1.3
Change in percentage points/hours	–2.3	–3.3	1.0	1.1	0.9	0.2

Although the hours gap in Table 4.7 seems relatively small, such averages can hide large variations at the individual level, since the people who would like to work fewer hours and those who would like to work more hours cancel each other out when calculating averages. It is therefore important to investigate these groups separately.

As a first step, Figure 4.11 shows the trends in the prevalence of underemployed, overemployed and matched workers over the 2001 to 2023 period (see Box 4.6, page 106, for measurement of these concepts). It shows that across the period, matched workers—workers who work about the same number of hours as they would like to—are the clear majority. Furthermore, their share has increased by 8 percentage points over time, from 55% in 2001 to 63% in 2023. The second largest group are overemployed workers, that is, workers who would like to work fewer hours than they do. Close to one in four workers (23%) were overemployed in 2023. However, their share declined by 5 percentage points over the 2001 to 2023 period, from 28% in 2001. Finally, underemployed workers, that is, workers who would like to work more hours than they do, are the smallest group, accounting for 14% in 2023. Their share has declined only marginally over time, by around 2 percentage points from 16% in 2001.

Figure 4.11: Trends in over- and underemployment
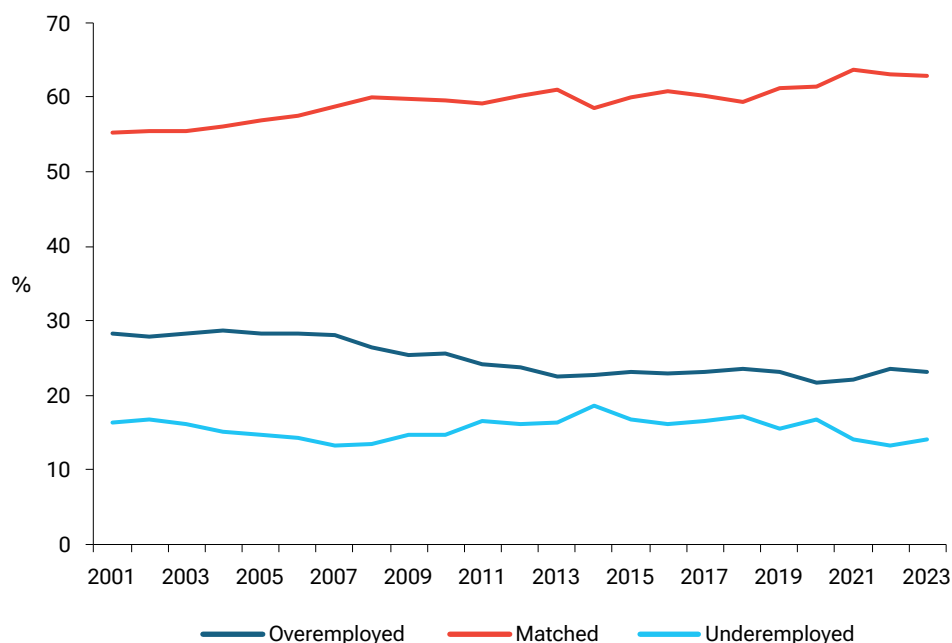
Table 4.8 presents trends in the prevalence of both under- and overemployment over the 2001 to 2023 period, separately by gender, along with the average size of the hours gap in each group. It shows that at the beginning of the period, overemployment was more prevalent among males than among females. In 2001, almost 30% of males were overemployed, compared to close to 27% of females. In the subsequent two decades, the prevalence of overemployment declined more among males, and by 2023, the gender difference had disappeared, with about 23% of males and females reporting being overemployed. Within the group of overemployed, workers on average desire a considerable reduction in their working hours. In 2023, overemployed males desired 12.8 fewer hours, and females desired 12.2 fewer hours. However, this hours gap has decreased over time—in 2001, overemployed men desired 14.3 fewer hours and females 13.3 fewer hours.

With respect to underemployment, the table shows a higher proportion of female workers than male workers wanting more hours. In 2023, 14.7% of females were underemployed, compared to 13.4% of males. Among both genders, the proportion underemployed has declined over time. In 2001, the prevalence of underemployment was 17.1% among females and 15.9% among males. The average hours gap for underemployed workers is also sizeable, although slightly smaller than for overemployed workers. On average, in 2023, underemployed females desired 10.3 more hours, and underemployed men 11.4 more hours. Whereas for males the hours gap in 2023 is almost the same as it was in 2001, it has declined notably for females, from 11.6 hours in 2001 to 10.3 hours in 2023.

Finally, we investigate the question of which type of workers are most likely to experience a certain type of working time mismatch. To this end, we ran multinomial logistic regression models that estimate the association between various personal and job characteristics and the probability of being overemployed, matched and underemployed. The results are presented in Table 4.9.

With respect to the family situation, the table shows that, compared to single females without children, partnered females, with and without children, are more likely to be overemployed and less likely to be underemployed. Of all family situations, partnered mothers are the most likely to be overemployed. By contrast, single males without children are significantly less likely to be overemployed and more likely to be underemployed. Both single mothers and fathers are more likely to be underemployed.

Table 4.8: Trends in over- and underemployment, by gender—Employed persons, 2001 to 2023

	Males				Females			
	Overemployed		Underemployed		Overemployed		Underemployed	
	%	Mean hours gap	%	Mean hours gap	%	Mean hours gap	%	Mean hours gap
2001	29.7	–14.3	15.9	11.6	26.7	–13.3	17.1	11.6
2002	30.7	–14.6	15.9	11.9	24.2	–13.0	17.7	11.4
2003	30.2	–14.4	15.1	11.7	25.8	–12.9	17.6	11.5
2004	31.0	–14.7	14.2	12.1	26.1	–12.9	16.4	11.1
2005	29.6	–14.5	12.8	12.1	26.8	–13.3	17.1	11.2
2006	29.2	–14.4	13.4	12.6	27.1	–12.7	15.1	10.4
2007	28.9	–14.5	11.9	12.0	26.9	–13.3	14.7	10.8
2008	27.6	–14.2	12.7	11.6	25.2	–12.9	14.5	11.1
2009	27.1	–14.6	13.6	12.5	23.7	–13.5	15.9	10.6
2010	26.0	–13.7	13.4	11.7	25.1	–13.2	16.4	10.8
2011	24.7	–13.8	15.9	12.3	23.7	–13.0	17.2	11.3
2012	24.3	–14.1	15.6	11.9	22.9	–12.8	16.6	11.0
2013	22.4	–13.7	16.4	12.0	22.8	–13.1	16.5	11.1
2014	22.4	–14.0	18.8	13.2	23.1	–12.5	18.6	11.1
2015	23.7	–14.0	15.8	12.3	22.4	–13.0	18.0	11.1
2016	23.1	–14.2	15.5	11.9	22.6	–12.2	17.1	11.3
2017	24.0	–13.6	14.8	11.2	22.4	–11.8	18.4	10.4
2018	23.9	–13.3	15.8	11.4	23.2	–12.1	18.7	11.0
2019	23.3	–13.5	14.4	11.5	23.2	–12.0	16.9	10.3
2020	21.5	–13.5	15.7	13.3	22.0	–12.0	17.8	12.2
2021	21.2	–13.1	13.9	12.5	23.2	–12.2	14.2	11.0
2022	23.6	–13.6	12.9	11.2	23.5	–12.0	13.9	9.6
2023	22.9	–12.8	13.4	11.4	23.3	–12.2	14.7	10.3
Change in percentage points/hours	–6.7	1.5	–2.5	–0.2	–3.4	1.1	–2.4	–1.3

Compared to the youngest age group of 15 to 24 years, all other age groups are more likely to be overemployed and less likely to be underemployed. Persons with a medium or high educational qualification are more likely to be overemployed than persons who have completed Year 11 or below. However, while highly educated people are less likely to be underemployed, medium-educated people are more prone to underemployment compared to those with a lower level of education.

Migrants from the main English-speaking countries are more likely to be overemployed than non-First Nations Australian-born persons, whereas persons born in other countries are less likely to be overemployed and more likely to be underemployed. Persons living in locations outside the mainland state capital cities are less likely to be overemployed and more likely to be underemployed than those in the cities.

Job characteristics also matter for the risk of a working time mismatch. While those working full-time in their main job and those working multiple jobs are more likely to be overemployed and less likely to be underemployed, those with higher hourly wages are less likely to be overemployed.

Compared to managers, all other occupations are less likely to be overemployed and more likely to be underemployed. Casual workers are less likely to be overemployed and more likely to be underemployed than permanent workers. By contrast, fixed-term contract workers and the self-employed are more likely to be both over- and underemployed.

Table 4.9: Characteristics associated with overemployment, underemployment and working time matches

	Overemployed	Matched	Underemployed
Family type (Reference category: Single female without children in household)			
Partnered female without children in household	0.049	–0.032	–0.017
Single mother	*ns*	–0.034	0.020
Partnered mother	0.073	–0.027	–0.046
Single male without children in household	–0.027	*ns*	0.031
Partnered male without children in household	*ns*	–0.015	0.022
Single father	*ns*	–0.032	0.033
Partnered father	*ns*	*ns*	*ns*
Age category (Reference category: 15–24 years)			
25–34 years	0.063	–0.058	*ns*
35–44 years	0.111	–0.080	–0.032
45–54 years	0.137	–0.093	–0.044
55–64 years	0.166	–0.076	–0.089
65 and older	0.146	*ns*	–0.142
Educational level (Reference category: Year 11 and below)			
Year 12, Certificate III or IV, Diploma	0.024	–0.029	0.005
Bachelor's degree or higher	0.058	–0.047	–0.011
Lives in another location *(Reference category: mainland state capital cities)*	–0.007	*ns*	0.005
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)			
First Nations	*ns*	–0.033	0.041
Main English speaking	0.014	–0.021	*ns*
Other country	–0.040	–0.019	0.059
Full-time worker (in main job) *(Reference category: Part-time)*	0.271	–0.076	–0.195
Hourly wage (in main job, measured in $10 units, December 2023 prices)	–0.003	0.004	*ns*
Multiple job holder (Reference category: Single job holder)	0.091	–0.060	–0.031
Occupation (Reference category: Manager)			
Professionals	–0.047	0.023	0.023
Technicians and trades workers	–0.109	0.014	0.095
Community and personal service workers	–0.121	0.041	0.080
Clerical and administrative workers	–0.084	0.047	0.037
Sales workers	–0.078	0.013	0.065
Machinery operators and drivers	–0.123	*ns*	0.124
Labourers	–0.147	0.032	0.115
Employment type (Reference category: Permanent employee)			
Fixed-term contract worker	0.016	–0.029	0.014
Casual worker	–0.039	–0.015	0.054
Self-employed	0.020	–0.029	0.009
Period (Reference category: 2001–2004)			
2005–2009	–0.014	0.025	–0.012
2010–2014	–0.044	0.039	0.005
2015–2019	–0.055	0.048	0.007
2020–2021	–0.065	0.073	–0.008
2022–2023	–0.060	0.077	–0.017
Number of observations		222,525	

Notes: This table presents mean marginal effects from a multinomial logit regression model of the determinants of being overemployed, underemployed or having a match between preferred and actual working hours. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

The table also reconfirms that the probability of being overemployed has decreased significantly over time, whereas the probability of underemployment increased until the 2015 to 2019 period before declining markedly since the pandemic.

Finally, the Matched column shows that the probability of having a working time match is highest among singles without children and partnered fathers, the youngest and oldest age groups, persons who have completed at a maximum Year 11, non-First Nations Australian-born people, part-time workers, single job holders, persons with a high hourly wage, clerical and administrative workers and community and personal service workers, workers on permanent contracts, and workers interviewed in the most recent years since the start of the COVID-19 pandemic.

5 Retirement

5. Retirement

Kyle Peyton

Retirement marks a significant life transition, and as Australians live longer and workforce participation patterns evolve, understanding the timing, motivations and economic wellbeing of retirees has become increasingly important. Since 2003, the HILDA Survey has included a dedicated retirement module every four years to track these changes. Beginning in Wave 15 (2015), the module expanded to collect data on superannuation balances at retirement and how retirees use their superannuation. This chapter examines key trends in retirement over the past two decades, drawing on these data to provide a comprehensive analysis of retirement patterns in Australia.

One of the most notable trends in recent years is the steady increase in the average retirement age. The gradual rise in the Age Pension eligibility age to 67 years, coupled with broader shifts in workforce participation, has led many Australians to remain in the labour force longer. At the same time, the composition of retiree households has evolved, with a growing share of retirees living alone or in non-traditional family arrangements. This chapter also explores the financial circumstances of retirees, analysing trends in superannuation balances, the role of housing wealth and patterns of household expenditure. The final section examines the predictors of retirement age among recent retirees, highlighting key differences between men and women.

Changes in the retired population from 2003 to 2023

> **Box 5.1: Classification of retired persons**
>
> In the HILDA Survey waves that include the retirement module, respondents aged 45 and over are asked to indicate their retirement status by selecting one of the following categories: 'completely retired' from paid employment, 'partly retired' from paid employment, 'not retired' from paid employment or 'never been in paid employment'. For the purposes of this chapter, retired persons are defined as those who are 'completely retired' from paid work and are no longer part of the labour force. Individuals who are 'partly retired' and remain in the labour force are not classified as retired in this analysis.

Figure 5.1 presents cross-sectional estimates of the proportion of men and women who are retired (see Box 5.1, above) in each year of the HILDA Survey that includes the special module on retirement, disaggregated by age group. The trends indicate a gradual decline in retirement rates across most age groups, particularly among those aged 60 to 69, reflecting broader shifts in labour force participation among older Australians. Despite these declines, most individuals aged 65 and over remain retired (see also, Chapter 3 of this report).

Retirement remains relatively uncommon among Australians aged 45–54, with only a small proportion classified as retired. The percentage of retirees in this cohort has remained low and relatively stable over the two decades. Among those aged 55 to 59, the proportion of retirees has declined steadily for both men and women. In 2003, approximately 40% of women and 23% of men in this age group were retired. By 2023, these figures had fallen to 14.5% for women and 12.3% for men. This shift is likely due to increasing labour force participation at older ages, as well as policy changes such as the gradual increase in the Age Pension eligibility age, which reached 67 in July 2023.

The decline in retirement rates is even more pronounced for those aged 60–64, particularly among men. In 2003, 69.5% of women and 48.5% of men in this age group were retired, but by 2023, these figures had dropped to 40.8% and 27.4%, respectively. This represents one of the most significant declines in retirement rates across all age groups, suggesting that individuals in this cohort are increasingly delaying retirement. A similar but less pronounced trend is observed for those aged 65 to 69, where the proportion of retirees declined from 85.9% to 65.5% for women and from 73.2% to 60.8% for men between 2003 and 2023.

Although retirement rates have declined for both men and women, gender differences persist. Women in the 55–69 age groups have generally experienced steeper declines in retirement rates compared to men, particularly in the 55–59 and 60–64 cohorts. This likely reflects an increase in female workforce participation and changing social norms regarding women's employment later in life. By contrast, for men, the decline in retirement rates has been more gradual, especially in the 60–64 and 65–69 cohorts.

Figure 5.1: Percentage of people aged 45 and over who are retired, by gender and age group
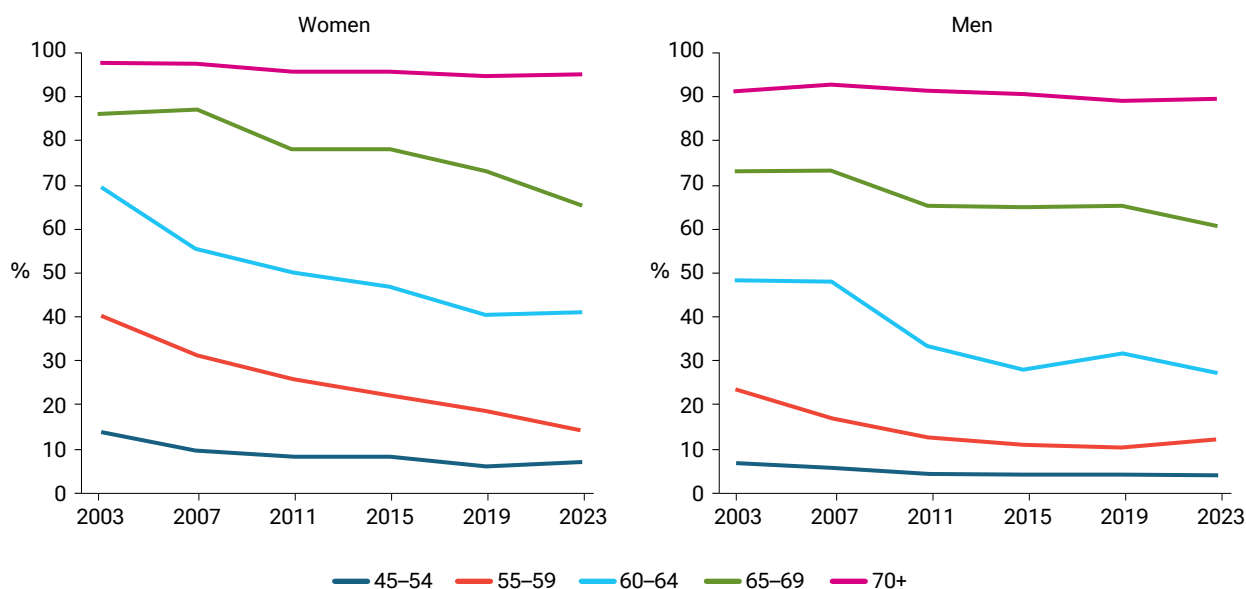
While Figure 5.1 presents trends in the broader retiree population, Table 5.1 focuses specifically on individuals who retired within the last four years, providing additional insight into shifting patterns in retirement timing. The average and median age at retirement have increased steadily over time for both men and women. Among women, the mean retirement age has risen from 58.8 years in 2003 to 63.6 years in 2023, while for men, it has increased from 59.9 years to 64.8 years over the same period. The median retirement age has similarly increased by five years for both men and women, reaching 64 and 65 years, respectively, in 2023.

Table 5.1: Age of retirement of people who retired within the last four years, 2003 to 2023

	2003	2007	2011	2015	2019	2023
Women						
Mean age at retirement (years)	58.8	59.3	60.6	61.7	62.9	63.6
Median age at retirement (years)	59	59	61	62	63	64
Proportion retiring in each age range (%)						
45–54	26.4	23.9	16.4	11.8	9.2	7.3
55–59	27.8	26.2	21.9	19.9	15.1	14.5
60–64	25.3	26.1	37.2	33.2	33.2	32.4
65–69	11.7	17.5	16.7	28.8	30	31.6
70 and over	8.8	6.3*	7.7	6.3	12.6	14.3
Men						
Mean age at retirement (years)	59.9	62	63.5	64.1	64.7	64.8
Median age at retirement (years)	60	61	64	65	65	65
Proportion retiring in each age range (%)						
45–54	19.3	7.7	7.5*	6.5	7.6*	3.8*
55–59	27.2	24.9	16.1	12	9.7	15.1
60–64	26.4	33.8	28.1	25.4	21.1	25.4
65–69	18.4	20.6	30.6	40.6	43.7	37.5
70 and over	8.8*	12.9	17.8	15.4	17.9	18.2

Notes: Estimates apply to the population of persons aged 45 and over who had retired within the last four years, inclusive of the current survey year. Cells may not add up to 100% due to rounding. * Estimate not reliable.

The distribution of retirement ages further illustrates these shifts. The proportion of women retiring before age 55 has declined from 26.4% in 2003 to just 7.3% in 2023. Similarly, the share of women retiring between 55–59 years old has fallen from 27.8% to 14.5%. By contrast, retirements at older ages have become more common, with the proportion of women retiring between 65–69 rising from 11.7% in 2003 to 31.6% in 2023. A similar trend is observed for men, with a decline in retirements before age 60 and an increase in retirements at 65 and older.

These trends among recent retirees complement the broader trends observed in the retiree population, reinforcing the shift toward later retirement ages. The findings suggest that more Australians are remaining in the workforce for longer, likely influenced by a combination of financial necessity, improved health, changing social expectations and policy reforms such as the increase in the Age Pension eligibility age.

Retirees' living arrangements have also changed over time, reflecting broader demographic and economic shifts. Table 5.2 presents the proportion of retired individuals across 11 household types, categorised by the presence of family members, as well as related and unrelated co-residents (see Boxes 2.1, 2.2, 2.3 in Chapter 2). Several notable trends in the living arrangements of retirees have emerged over the period.

Table 5.2: Proportion of retired individuals in each household type, 2003 to 2023 (%)

	2003	2007	2011	2015	2019	2023	Change 2003 to 2023 (%)
Couple with children	19.2	18.8	15.5	14.3	12.7	11.9	–7.3
Couple with dependent children	5.7	4.9	5.0	3.7	3.2	2.5	–3.1
Couple with dependent children and others	0.8*	1.0*	1.1	1.1	1.0	0.7	*ns*
Couple with non-dependent children, with or without others	12.7	12.9	9.4	9.6	8.6	8.7	–4.0
Single-parent household	7.3	8.7	7.9	8	8.7	8.2	*ns*
Single parent with dependent children	1.1	1.2	0.9	0.7	0.6	0.6*	–0.5
Single parent with dependent children and others	0.7*	0.6*	1.0	1.1	0.9	0.7	*ns*
Single parent with non-dependent children, with or without others	5.5	6.8	6.0	6.2	7.2	6.8	*ns*
Couple without children (with or without others)	49.4	49.0	49.6	50.4	49.6	49.9	*ns*
Single person	20.1	18.5	21.7	21.3	21.3	23.6	3.6
Other household type	4.0	5.0	5.3	5.9	7.7	6.4	2.4
Other family household	0.9	1.2	1.2	1.9	2.5	3.0	2.1
Multiple-family household	1.8*	2.3	2.7	2.8	4.5	2.7	*ns*
Group household	1.2	1.5	1.4	1.2	0.7	0.7	–0.5

Notes: '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. * Estimate not reliable. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

One of the most significant changes is the decline in the proportion of retirees living in couple households with children, which fell from 19.2% in 2003 to 11.9% in 2023. This decline is largely driven by a reduction in retirees living with non-dependent children, suggesting that adult children are increasingly leaving the parental home before their parents reach retirement. Similarly, the share of retirees living as a couple with dependent children has decreased from 5.7% in 2003 to 2.5% in 2023. The share of retirees living in single-parent households—whether as the parent of a child or residing with one—has remained relatively stable.

In contrast, the proportion of retirees in single-person households has increased from 20.1% in 2003 to 23.6% in 2023, a statistically significant rise of 3.6 percentage points. This trend likely reflects longer life expectancy, as well as increasing rates of divorce and widowhood among older Australians. Similarly, the share of retirees living in 'other family households' has more than tripled, increasing from less than 1% in 2003 to 3% in 2023. This category captures a diverse set of living arrangements, including retirees living with grandchildren, siblings or extended family members without forming a traditional nuclear family unit.

The share of retirees living in group households (where individuals live with unrelated housemates) has declined slightly, while the proportion in multiple-family households (where multiple related families share a home) has fluctuated but remained relatively stable over time. Meanwhile, the largest category—couples without children—has remained consistent at around 50% of all retirees. These findings highlight both stability and change in the living arrangements of retirees. While couple-only households remain the most common living arrangement, an increasing number of retirees are living alone or in non-traditional family households.

Reasons for retirement

The changing retirement ages and living arrangements of retirees reflect evolving social, economic and demographic factors shaping retirement decisions. While some individuals retire due to financial security or lifestyle preferences, others leave the workforce due to health concerns, job-related pressures or family obligations. In each wave of the HILDA Survey that includes the retirement module, respondents are asked about their reasons for retiring, allowing for a direct examination of trends in retirement motivations over the last 20 years. Figure 5.2 summarises these responses by classifying them into five broad categories (see Box 5.2, page 119) and presenting the proportion of recent retirees citing each as their main reason for leaving the workforce.

Figure 5.2: Main reason for retirement among those that retired within the last four years, 2003 to 2023
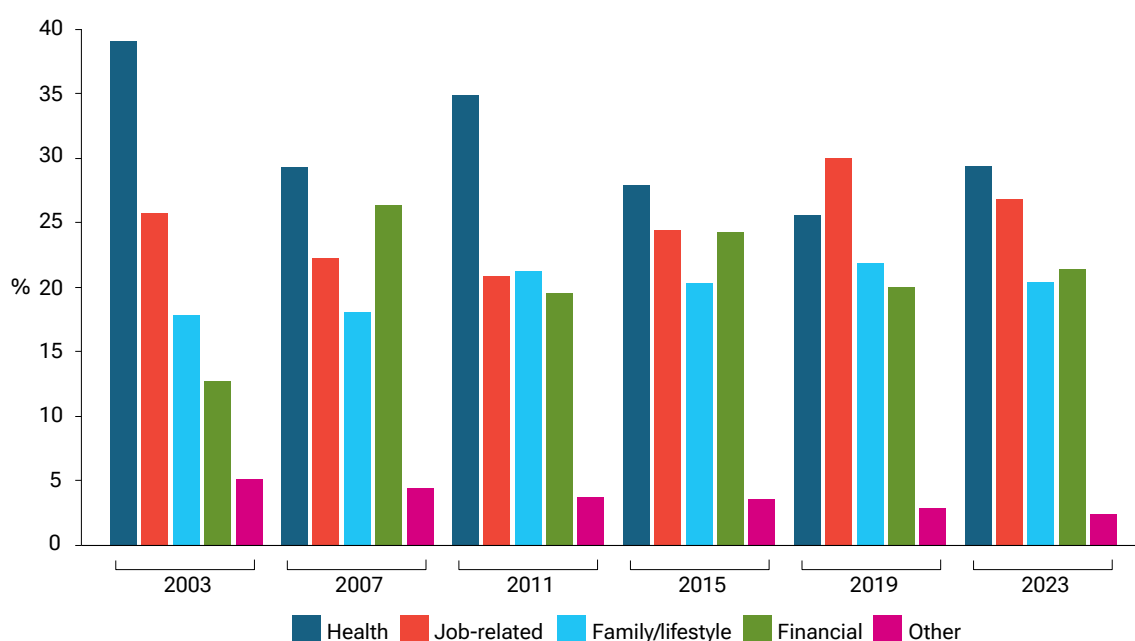
Health concerns have consistently been one of the most common reasons for retirement, particularly in the early years of the survey. In 2003, nearly 39% of recent retirees cited health as their primary reason for leaving the workforce. This proportion has declined in recent years, though it remains a significant factor, cited by 29% in 2023. The decline in health-related reasons for retirement may reflect improvements in life expectancy and health outcomes among older Australians, allowing individuals to remain in the workforce longer. Despite this decline, health remains the most frequently cited reason for retirement in 2023, highlighting its continued importance in shaping workforce exits. This suggests that while improvements in health outcomes have enabled many older Australians to work longer, health issues still play a central role in determining transitions to retirement.

Alongside health concerns, job-related factors—including redundancy, employer pressure or dissatisfaction with work—have also remained an important driver of retirement. The proportion of retirees citing job-related reasons fluctuated between 21% and 30% over the period, peaking in 2019 when nearly 30% of individuals who had retired between 2016 and 2019 cited job-related reasons as their primary motivation. Financial motivations, including superannuation rules, pension eligibility and financial security, have played an increasingly important role in shaping retirement timing. In 2003, only 12.7% of recent retirees cited financial reasons as their main motivation, but this figure doubled in 2007 (26.3%). While financial considerations declined somewhat in subsequent years, they have remained a key factor, with around 20–25% of retirees citing financial incentives or constraints as the primary reason for retirement in recent waves.

Box 5.2: Classification of reasons for retirement

In the HILDA Survey waves containing the retirement module, retired persons are asked to report their reasons for retiring. They are presented with 20 potential reasons and may also offer additional reasons not specified. Respondents who nominate more than one reason are then asked to identify the main reason. We classify the main reason for retirement into the following five categories.

(1) Financial reason: Became eligible for the age pension; offered reasonable financial terms to retire early or accept a voluntary redundancy; superannuation rules made it financially advantageous to retire; could afford to retire/had enough income; spouse's/partner's income enabled me to retire.

(2) Job-related reason: Made redundant/dismissed/had no choice; reached compulsory retirement age; could not find another job; fed up with working/work stresses, demands; pressure from employer or others at work.

(3) Health reason: Own ill health; ill health of spouse/partner; ill health of other family member; COVID-19.*

(4) Family and lifestyle reason: Partner had just retired or was about to retire; spouse/partner wanted me to retire; to spend more time with spouse/partner; to spend more time with other family members; to have more personal/leisure time; to have children/start family/to care for children.

(5) Other reason: Some other reason not listed.

*This reason was introduced in the 2023 wave of the retirement module.

The share of retirees citing family or lifestyle considerations—including retiring to spend more time with family or to coordinate retirement with a spouse—has remained relatively stable over the two decades. Approximately 20% of recent retirees, on average, have reported family and lifestyle reasons as their primary motivation, with relatively little fluctuation across survey waves. This suggests that while financial and job-related considerations play a larger role in shaping retirement timing, personal and family-oriented motivations remain a consistent factor for a subset of retirees. Few retirees cited 'other' reasons for retirement, with this category making up less than 5% of responses since 2007. This suggests that the five broad categories capture the vast majority of retirement motivations, with very few respondents providing reasons that do not fit within these classifications.

These patterns align with broader workforce trends, including rising labour force participation at older ages, delayed retirement, and changes to pension and superannuation policies. The persistence of job-related and financial motivations underscores the importance of economic security in retirement decisions, while the stability of family and lifestyle factors reflects the enduring personal and social dimensions of retirement. As financial considerations remain a key driver of retirement timing, understanding the economic wellbeing of retirees is increasingly important.

Economic wellbeing of retirees

As Australians continue to retire at older ages, particularly with the recent increase in the minimum Age Pension eligibility age to 67, financial security in retirement remains a central concern. Superannuation has become a critical source of income for retirees and plays an increasingly important role in supporting individuals during their transition to retirement. This section examines data on superannuation collected as part of the retirement modules in 2015, 2019 and 2023. These modules provide measures of superannuation balances for those who had retired within the last four years, as well as information on how retirees used their superannuation at the time of retirement (see Box 5.3, below).

Box 5.3: HILDA Survey measurement of superannuation at the time of retirement

In Waves 15, 19 and 23 of the HILDA Survey, superannuation balances at the time of retirement were obtained for individuals who had retired within the last four years, inclusive of the current survey year. Retirees with superannuation were asked whether they undertook any of the following actions with their superannuation around the time they retired.

(1) Converted superannuation into a regular income, such as an allocated pension or annuity.

(2) Left superannuation in the superannuation account.

(3) Invested superannuation in an approved deposit fund, deferred annuity or other superannuation scheme.

(4) Invested superannuation elsewhere (e.g., bank accounts, shares, property).

(5) Paid off debts (e.g., home loan, car loan, business debt).

(7) Assisted family members.

In this report, items 1 to 4 are classified as forms of 'saving', while items 5 and 6 are classified as forms of 'spending'. The distinction reflects whether superannuation was used to preserve or grow wealth versus being withdrawn for immediate financial obligations or family assistance.

Table 5.3 provides a summary of superannuation balances at the time of retirement and the uses of superannuation for retirees by gender from 2015 to 2023. The first panel presents estimates for the entire population of retirees, including those with no superannuation balances, while the second panel focuses exclusively on retirees with positive superannuation balances. The estimated dollar amounts are provided in December 2023 prices to adjust for inflation and allow for comparisons across time. Key trends over time and differences between men and women highlight persistent disparities in retirement savings and how superannuation is used.

Table 5.3: Superannuation balances of retirees and uses at retirement by gender, 2015 to 2023

	Women				Men			
	2015	2019	2023	Change 2015 to 2023 (%)	2015	2019	2023	Change 2015 to 2023 (%)
Superannuation at the time of retirement								
Percentage of retirees with superannuation (%)	85	88.2	89.2	–	80.8	81	87.4	–
Mean balance, all retirees ($, December 2023 prices)	245,122	298,813	383,217	56.3	467,307	456,680	504,420	7.9
Median balance, all retirees ($, December 2023 prices)	90,733	129,678	190,850	110.3	216,296	262,419	310,326	43.5
Uses of superannuation for retirees with superannuation								
Mean amount saved ($, December 2023 prices)	284,386	328,024	427,072	50.2	571,138	548,940	564,658	–1.1
Median amount saved ($, December 2023 prices)	129,209	157,551	221,661	71.6	382,303	402,142	365,741	–4.3
Percentage spending any superannuation (%)	18.6	16.1	11.3	–	13.4	17.5	15.5	–
Mean percentage of balance spent (%)	68.4	63.2	51.9	–	52.9	60.8	46.1	–
Mean amount spent ($, December 2023 prices)	60,339	92,859	64,105	6.2	89,830	126,714	122,970	36.9
Median amount spent ($, December 2023 prices)	25,487*	35,784*	48,681	90.8*	48,425*	95,425	93,219	92.5*

Notes: Estimates apply to persons aged 45 and over who retired within the last four years, including the current survey year. Superannuation balance estimates in the top panel include the entire population, including retirees with no superannuation at retirement. Estimates in the 'Uses of superannuation' panel are limited to retirees with positive superannuation balances, while the mean and median amounts spent apply only to those who spent at least part of their superannuation balance. * Estimate not reliable.

The first panel shows that recent retirees have experienced increases in average superannuation balances over time, though men consistently hold higher average balances than women. Among all retirees, the mean superannuation balance for women rose by 56.3%, from $245,122 in 2015 to $383,217 in 2023, while the mean for men increased by just 7.9%, from $467,307 to $504,420 over the same period. Similarly, median balances, which reflect the midpoint of the distribution, showed significant growth for both genders, with women's median balance increasing by 110.3%, from $90,733 in 2015 to $190,850 in 2023, and men's increasing by 43.5%, from $216,296 to $310,326. As a result, women's median superannuation balance as a proportion of men's increased markedly, rising from 41.9% in 2015 to 61.5% in 2023, reflecting faster growth in women's retirement savings over this period. Despite this progress, however, gender disparities in retirement savings remain pronounced. Men still have more than 1.5 times the median balance of women in 2023. Notably, the percentage of recent retirees with any superannuation has increased for both genders, reaching 89.2% for women and 87.4% for men by 2023.

The second panel examines how retirees with superannuation use their balances at the time of retirement (see Box 5.3, page 120). It is important to note that these estimates apply *only* to retirees with superannuation at retirement and exclude the minority of retirees who reported holding no superannuation balances at the time of retirement. The estimates presented therefore reflect patterns of saving and spending among the subset of retirees with superannuation, rather than the full retiree population. In terms of saving behaviour, the mean and median amounts saved (i.e., converted into income streams, reinvested or left in superannuation accounts) were higher for men than for women across all years. For example, in 2023, men saved an average of $564,658 compared to $427,072 for women. However, while men's average savings declined slightly from a high of $571,138 in 2015,

women's average savings increased substantially over the same period, from $284,386 in 2015 to $427,072 in 2023. This reflects not only gains in superannuation balances among women but also a narrowing of the gender gap in retirement savings behaviour. It is important to note that these estimates apply only to retirees with superannuation, excluding those with no balances at retirement, which explains why the savings estimates in the second panel are not necessarily lower than the superannuation balances reported for the broader retiree population (top panel).

In addition to the amount saved, the second panel also reports on spending from superannuation balances at retirement. These include the percentage of retirees with superannuation who spent any amount, the mean percentage of the balance spent among those who spent, and the mean and median amounts spent. These figures reflect spending at or shortly after retirement, and do not capture cumulative withdrawals or spending at later stages of retirement (see Box 5.3, page 120). In terms of spending behaviour, women who retired with superannuation were less likely to spend compared to men in 2023, with the percentage of women spending any superannuation declining from 18.6% in 2015 to 11.3% in 2023. For men, by contrast, the percentage increased slightly between 2015 (13.4%) and 2023 (15.5%), although this followed a higher rate of 17.5% in 2019. Among those who spent any amount, women consistently spent a higher percentage of their superannuation balances than men. By 2023, the 11.3% of women who spent superannuation spent an average of 51.9% of their balances compared to 46.1% for men. This suggests that women are more reliant on superannuation savings to meet immediate financial needs at retirement. At the same time, the average amount spent by women remained lower than that of men due to their smaller superannuation balances, highlighting persistent gender disparities in superannuation balances.

Across retirement cohorts, the average amount spent by both men and women increased in 2019 compared to 2015, potentially reflecting larger superannuation balances and greater economic confidence in the pre-COVID environment. By 2023, average spending declined for both groups, potentially reflecting differences in retirement cohorts, with some individuals delaying retirement to build up additional savings, as well as increased economic uncertainty during the pandemic and rising cost-of-living pressures. Despite this decline, spending levels in 2023 remained higher than in 2015 for both groups. Notably, men in the 2023 cohort spent over $30,000 more on average than their counterparts in 2015, despite spending a smaller percentage of their superannuation balance (46.1% in 2023 compared to 52.9% in 2015 and 60.8% in 2019). This reflects stronger financial positions and higher superannuation balances in recent cohorts, allowing men to spend more in absolute terms while preserving a greater share of their savings.

These trends suggest that while retirees are increasingly preserving their superannuation balances, women may still rely more heavily on these savings to cover immediate needs at retirement, likely due to their lower superannuation balances at retirement. Nonetheless, the gap between men and women has narrowed considerably in recent years, reflecting faster growth in women's retirement savings. This suggests that if women's superannuation balances continue to grow at a faster rate than men's, gender differences at retirement may continue to narrow in future cohorts. Despite this progress, however, substantial disparities remain. Men continue to hold higher balances at retirement and spend smaller proportions of their savings. While there are positive trends in terms of growing balances for both genders, the persistent gap between men and women underscores the need for continued attention to policies and structural factors that may influence gender equality in retirement savings.

Housing wealth and superannuation

While superannuation is playing an increasingly important role in supporting retirees, housing wealth remains the most significant component of economic wellbeing for this population. As shown in Figure 5.3, the share of retirees who own their homes outright declined from 75% in 2003 to 66% in 2023, while the proportion with a mortgage increased slightly, from 13% to 17%. In 2023, about 83% of retirees owned their home, either outright or with a mortgage, down from 88% in 2003. This overall decline of 5 percentage points reflects a 9-percentage-point drop in the share of outright owners, and a 4-percentage-point increase in the share retiring with a mortgage.

Over the same period, the share of retirees living in private rentals has doubled—from 6% in 2003 to 12% in 2023. By contrast, the proportion in other housing arrangements—such as social housing or living rent-free—has remained small and relatively stable at around 5%. These groups tend to face greater financial vulnerability due to the absence of housing wealth. Looking ahead, these disparities are likely to grow, as declining homeownership among younger Australians makes retirement without housing wealth increasingly common—placing even greater importance on the role of superannuation in ensuring retirement security.

Figure 5.3: Housing tenure types among people who retired within the last four years, 2003 to 2023
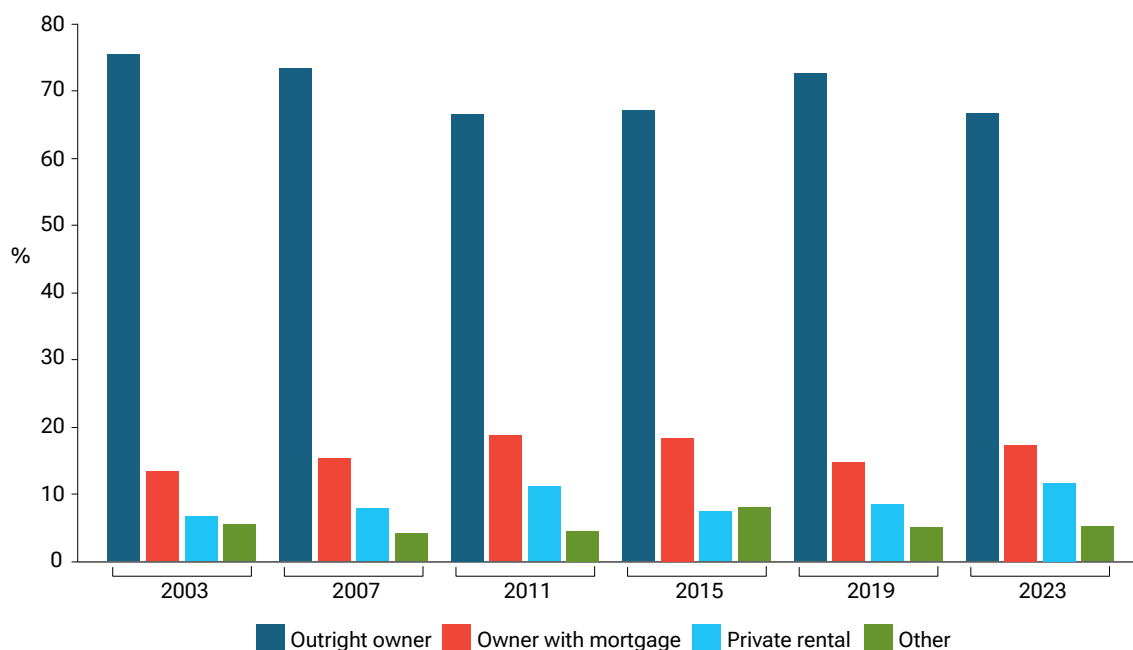
Note: 'Other' housing tenure type includes those living in social housing and those living rent free.

Table 5.4 highlights the trends in housing wealth, home value and debt for retirees between 2003 and 2023, adjusted to December 2023 prices. The results show that outright homeowners consistently have higher levels of housing wealth, with average equity increasing from approximately $638,000 in 2003 to over $1.14 million in 2023. This reflects both rising property values and the absence of mortgage debt. Retirees with mortgages have experienced a different trajectory, with average equity fluctuating more over time, from about $344,000 in 2007 to $873,000 in 2023. While home values for mortgagees have risen substantially and are converging with those of outright owners, high levels of debt persist. By 2023, mortgagees had an average home value of $1.17 million but still carried substantial debt, averaging approximately $295,000. However, the estimate for 2023 mortgage debt should be interpreted with caution, as it is influenced by a small number of retirees with exceptionally high levels of debt, leading to variability in the average.

Table 5.4: Housing wealth for recent retirees by housing tenure, 2003 to 2023 ($, December 2023 prices)

	2003	2007	2011	2015	2019	2023
Outright owner						
Mean housing wealth	638,100	816,497	810,013	885,464	966,310	1,144,788
Owner with mortgage						
Mean housing wealth	590,977	344,028	532,967	658,791	587,838	872,668
Mean home value	716,280	634,909	801,979	886,437	826,427	1,167,693
Mean mortgage debt	125,303	290,881	269,012	227,646	238,589	295,025*

Notes: Estimates apply to the population of homeowners aged 45 and over who had retired within the last four years, inclusive of the current survey year. * Estimate not reliable.

These findings highlight the critical role of housing wealth in shaping Australians' economic wellbeing in retirement, despite the potential challenges faced by those still servicing mortgage debt. For the majority of retirees, housing wealth—the largest contributor to household wealth in Australia—serves as a key financial safety net. However, it is also important to consider the combination of superannuation and housing wealth, which can vary significantly across different housing tenure types. Table 5.5 presents trends in superannuation and total wealth (superannuation plus housing wealth) for retirees from 2015 to 2023 and highlights critical disparities by housing tenure type.

The data show that retirees who own their homes outright consistently have the highest levels of wealth. The percentage of outright owners with superannuation increased steadily over the period, reaching 93.3% in 2023. Their average superannuation balance also grew from $441,045 in 2015 to $500,109 in 2023, contributing to a significant rise in their total wealth at retirement, from $1.32 million to $1.66 million over the same period. The picture is somewhat different for retirees with mortgages. While the percentage with superannuation improved from 80.9% in 2015 to 89.7% in 2019, it decreased slightly to 82.6% in 2023. The average superannuation balance for recent retirees with mortgages has grown significantly over time, from $251,019 in 2015 to $409,592 in 2023, reflecting increased savings for retirement. However, their total wealth, though still substantial, remains lower than that of outright owners, with total average wealth increasing from $913,724 in 2015 to $1.48 million in 2023. This highlights the importance of homeownership, particularly for retirees without mortgage debt, in providing substantial financial security in retirement.

Table 5.5: Superannuation and total wealth of recent retirees by housing tenure type, 2015 to 2023

	2015	2019	2023
Owner outright			
Percentage of retirees with superannuation (%)	86	87	93.3
Mean superannuation balance, all retirees ($, December 2023 prices)	441,045	428,864	500,109
Mean total wealth, all retirees ($, December 2023 prices)	1,315,869	1,390,814	1,658,583
Owner with mortgage			
Percentage of retirees with superannuation (%)	80.9	89.7	82.6
Mean superannuation balance, all retirees ($, December 2023 prices)	251,019	312,342	409,592
Mean total wealth, all retirees ($, December 2023 prices)	913,724	928,969	1,475,562
Private rental			
Percentage of retirees with superannuation (%)	64.7	60.5	73.2
Mean superannuation balance, all retirees ($, December 2023 prices)	83,268*	252,792*	277,132*
Other			
Percentage of retirees with superannuation (%)	79.5	59	63.2
Mean superannuation balance, all retirees ($, December 2023 prices)	101,866*	164,886*	91,402*

Notes: Estimates apply to the population of people aged 45 and over who had retired within the last four years, inclusive of the current survey year. The mean superannuation and total wealth estimates also include retirees without superannuation at retirement. 'Other' housing tenure type includes those living in social housing and those living rent free. * Estimate not reliable.

In contrast, retirees living in private rentals or other housing arrangements are much worse off in terms of superannuation and, by definition, do not have any housing wealth. The proportion of retirees living in private rentals has nearly doubled over the past two decades—from around 6% in 2003 to 12% in 2023—reflecting a growing share of older Australians entering retirement without owning a home. Among private renters, the percentage with superannuation ranged from 64.7% in

2015 to 73.2% in 2023, substantially lower than among homeowners. Their average superannuation balance also remained relatively low, rising from about $83,000 in 2015 to about $277,000 in 2023. Similarly, retirees in other housing situations, including social housing and those living rent free, also had much lower superannuation balances. These trends suggest that retirees who do not own homes are at a substantial disadvantage compared to homeowners.

However, it is important to note that superannuation estimates for these groups are subject to higher variability in all years. This reflects the smaller number of retirees in private rental and other housing arrangements, which results in less precise estimates and greater sampling error compared to outright owners and mortgage holders. As such, caution is warranted when interpreting these figures. While renters and those in other housing arrangements tend to retire at slightly younger ages than outright homeowners, they often face markedly different socio-economic circumstances. These include lower and more unstable incomes, higher housing costs relative to income and limited access to the wealth-building benefits of homeownership. Unlike homeowners, they do not accumulate housing wealth through mortgage repayment, which increases equity, or through capital gains as property values rise. These disparities in wealth at retirement are therefore not simply a reflection of housing choices but are indicative of broader economic inequalities.

Australia is currently experiencing an unprecedented housing crisis, and the proportion of retirees living in private rentals or social housing is likely to increase substantially in the future. A key reason for this shift is that younger generations—especially first-generation immigrants and other groups without access to intergenerational housing wealth—are finding it increasingly difficult to enter the housing market. If current trends continue, these younger cohorts may spend most or all of their working lives renting. Although younger generations may have higher average incomes than today's retirees, these income gains have not kept pace with housing costs. Over the past two decades, house prices have risen more than 400%—more than double the growth in wages—and the average Australian now faces more than a decade of saving to afford a deposit (Dean and Hewitt, 2023; National Housing Supply and Affordability Council, 2024). This widening gap between incomes and housing costs will limit homeownership opportunities for younger Australians and is likely to have significant implications for their economic wellbeing in retirement.

Household expenditure in retiree households

The household expenditure data collected by the HILDA Survey (see Chapter 3 of this report) provides valuable insights into the economic circumstances and consumption patterns of retiree households. This section examines changes in household expenditures for households where at least one resident member is fully retired, focusing on data from retirement module years between 2007 and 2023. Table 5.6 presents mean household expenditures across various items, grouped into non-discretionary and discretionary categories. The average for each item is measured across all retiree households, including those with no expenditure on the item (i.e., outright homeowners will not have any expenditure on mortgage payments). All values are expressed in December 2023 prices, ensuring that comparisons across years account for inflation and reflect real expenditure patterns. To provide additional context, the table also includes percentage changes between 2019 and 2023, offering insight into more recent cost-of-living pressures. Although many of these recent changes were not statistically significant, some categories—such as insurance and fees paid to health practitioners—did show real increases.

The analysis reveals several key trends. Total household expenditure among retiree households has grown modestly, increasing by 7.5% in real terms from 2007 to 2023. Non-discretionary spending, which consistently accounts for nearly 90% of total retiree household expenditures, rose by 6.1%, making it the primary driver of overall expenditure growth. By contrast, discretionary spending, which represents a much smaller share of total expenditures, grew by 17.4% over the same period.

Spending on housing costs, a key non-discretionary item, has risen sharply over the period. Expenditure on home rent increased by 36.7% between 2007 and 2023, while mortgage payments

saw more modest growth, though the latter change is not statistically significant. These trends reflect the broader rise in housing costs across Australia during this time. For retiree households that rent, rental payments represent a substantial financial burden, accounting for approximately 40% of total household expenditure in 2023, up from 33% in 2007. In comparison, housing costs for retiree households with mortgages are less burdensome as a share of total expenditure, remaining relatively stable over the period and reflecting the fixed nature of mortgage repayments for many retirees. These findings highlight the disproportionate financial pressure faced by renters in the retiree population.

Insurance-related expenses also showed notable growth over the period. Spending on private health insurance rose by 47.5% in real terms, while spending on other insurance (e.g., home and vehicle insurance) increased by 55.9%. These increases suggest a growing financial burden of insurance costs in the retiree population. There were also modest increases in health-related costs. Fees paid to health practitioners rose by 17.1%, with most of this increase occurring between 2019 and 2023 (+16%). In contrast, spending on medicines remained stable, with no significant change over the period. Spending on electricity, gas and other heating fuels rose by 11.6%, though it has been declining since 2011.

Table 5.6: Mean household expenditure on various items in retiree households, 2007 to 2023 ($, December 2023 prices)

	2007	2011	2015	2019	2023	Change 2007 to 2023 (%)	Change 2019 to 2023 (%)
Non-discretionary items							
Groceries	11,666	10,913	10,645	10,213	10,493	–10	ns
Public transport, taxis and ride-sharing services	333	430	456	491	346	ns	–29.5
Motor vehicle fuel	2,316	2,295	2,064	1,877	2,126	ns	13.2
Men's clothing and footwear	523	516	462	446	444	ns	ns
Women's clothing and footwear	1,058	852	898	793	752	–28.9	ns
Children's clothing and footwear	165	142	167	119	96	–41.8	ns
Telephone and internet charges	1,953	2,073	2,128	1,884	1,849	ns	ns
Private health insurance	1,307	1,409	1,737	1,974	1,928	47.5	ns
Other insurance	1,488	1,691	1,914	1,990	2,320	55.9	16.6
Fees paid to health practitioners	1,113	1,415	1,212	1,124	1,303	17.1	16.0
Medicines	730	730	684	700	680	ns	ns
Electricity, gas and other heating fuels	1,526	1,856	1,861	1,755	1,703	11.6	ns
Home repairs, renovations and maintenance	2,198	2,554	2,239	2,301	2,944	ns	ns
Motor vehicle repairs and maintenance	983	986	994	944	968	ns	ns
Home rent	9,994	11,631	12,126	13,405	13,662	36.7	ns
Home mortgage payments	3,138	3,474	3,362	3,489	3,759	ns	ns
All non-discretionary items	31,897	33,132	32,656	32,144	33,850	6.1	5.3
Discretionary items							
Alcohol	1,427	1,336	1,375	1,399	1,456	ns	ns
Tobacco products	711	744	879	833	783	ns	ns
Meals eaten out	2,176	2,375	2,662	2,871	2,824	29.8	ns
All discretionary items	4,314	4,455	4,916	5,103	5,063	17.4	ns
All expenditure items	36,211	37,587	37,572	37,247	38,913	7.5	ns

Notes: Estimates apply to households where at least one resident member of the household is completely retired. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Other non-discretionary categories saw declines or minimal growth. Spending on groceries, which consistently comprises over 30% of non-discretionary spending, decreased by 10% in real terms between 2007 and 2023. However, this decline was not uniform; between 2019 and 2023, grocery spending saw a slight increase, potentially reflecting adjustments made by retirees during the recent cost-of-living crisis to accommodate rising food prices.

Expenditures on clothing and footwear showed substantial declines across all groups. Spending on women's clothing and footwear fell by 28.9%, while spending on men's clothing and footwear saw a smaller but consistent decline, with no statistically significant changes in recent years. Spending on children's clothing and footwear fell by 41.8%, representing one of the largest percentage decreases among non-discretionary items. These trends likely reflect changing consumption priorities among retirees, as clothing becomes a less essential component of household expenditure in later life.

Discretionary expenditure among retiree households increased by 17.4% in real terms between 2007 and 2023, driven primarily by higher spending on meals eaten out, which rose by 29.8%. However, spending on meals remained stable between 2019 and 2023. Over the full period, spending on alcohol and tobacco products was relatively flat, with no statistically significant change. This stands in contrast to the general population, where household expenditure on alcohol and tobacco declined and spending on meals eaten out increased modestly between 2019 and 2023 (see Chapter 3 of this report). While discretionary items represent a smaller share of total household expenditure compared with non-discretionary items, these trends suggest that retiree households have maintained or modestly increased discretionary spending, even amid rising living costs.

It is important to note that these estimates apply specifically to retiree households, defined as those in which at least one member is fully retired. As such, they are not directly comparable to the household expenditure data presented in Chapter 3, which reflect the broader population. While some patterns are similar across both groups—for instance, both saw modest real declines in spending on electricity, gas and other heating fuels between 2019 and 2023—differences in expenditure levels and trajectories should be interpreted in light of each population's distinct demographic and economic circumstances.

Characteristics associated with retirement age

This final section examines the predictors of retirement age among recent retirees, focusing on individuals aged 45 and over who retired within the last four years during the 2015, 2019 and 2023 survey waves. These waves were chosen specifically because they include information on superannuation balances at the time of retirement, a key factor in understanding retirement behaviour. The analysis is based on linear regression models estimated separately for men and women, with retirement age (in years) as the outcome variable. The coefficients reported in Table 5.7 reflect the estimated difference in retirement age (in years) associated with each characteristic, relative to the specified reference category. To analyse the relationship between superannuation balances and retirement age, quintiles were constructed based on retirees' superannuation balances at the time of retirement, using inflation-adjusted real dollars (December 2023 prices). This approach ensures that comparisons across individuals and survey waves are meaningful and not distorted by inflationary differences.

The results, presented in Table 5.7, provide several insights into how these characteristics influence retirement age and whether their relationships differ by gender. First, higher superannuation balances at retirement are strongly associated with earlier retirement ages for both men and women, though the strength of this relationship varies by gender. Among women, those in the top quintile of superannuation balances—those with the largest balances among recent retirees—retire approximately 3.8 years earlier than those in the bottom quintile. Men in the top quintile retire 4.6 years earlier than those in the bottom quintile. Across both genders, the relationship between retirement age and superannuation balance appears linear, with stronger associations observed for higher quintiles. These results demonstrate that retirees with higher superannuation balances tend to retire younger than those with lower balances, as larger balances facilitate earlier transitions into retirement.

The results also demonstrate that housing tenure type, another key indicator of economic wellbeing, is an important predictor of retirement age for both men and women. Recent retirees who own their homes outright, the majority of the retiree population (see Figure 5.3, page 123), tend to retire at older ages than those in other housing tenure types. Although this may seem counterintuitive, as outright homeowners face lower housing costs and might appear more able to retire earlier, the pattern primarily reflects cohort effects rather than current financial circumstances. Outright owners generally belong to older birth cohorts who entered the housing market when it was more affordable and remained in the workforce longer to pay off their homes. By contrast, retirees with mortgage debt or in rental accommodation tend to be from younger cohorts who faced higher housing costs, entered the market later and retired earlier despite ongoing housing expenses. For example, among women, retirees with mortgages are about two years younger than outright owners, while those in private rentals or other housing arrangements—such as social housing—are about three years younger. Similar patterns are observed for men, though the differences are somewhat smaller.

These findings reflect generational differences in housing affordability and debt accumulation. Older retirees were able to enter the housing market during a time of greater affordability, enabling them to pay off their mortgages before retirement. By contrast, younger cohorts have faced steadily rising housing costs, delaying outright homeownership and increasing the likelihood of carrying mortgage debt or renting at the time of retirement. Consequently, those who have paid off their mortgages are often older, having had decades to achieve full homeownership.

The results highlight significant gender differences in the relationship between retirement age and relationship status. For women, being partnered at the time of retirement is associated with retiring 2.2 years earlier than their non-partnered counterparts. Conversely, for men, being partnered is associated with retiring about 1 year later than their non-partnered counterparts. These differences may reflect gendered household dynamics, with partnered women potentially retiring earlier to accommodate family needs, such as caregiving responsibilities or shared retirement timing with their partners. At the same time, financial pressures are likely a key factor for non-partnered women. Given that women generally have significantly lower superannuation balances than men (see Table 5.3, page 121 non-partnered women may need to remain in the workforce longer to achieve financial security for retirement.

Table 5.7: Predictors of retirement age for people who retired in the last four years, 2015 to 2023

	Women	Men
Bachelor's degree or higher	*ns*	*ns*
Married/partnered	–2.164	0.90
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)		
First Nations	–6.068	*ns*
Immigrant, main English-speaking countries	*ns*	*ns*
Immigrant, other countries	*ns*	*ns*
Housing tenure type (Reference category: Owner outright)		
Owner with mortgage	–2.153	–1.786
Private rental	–3.14	–2.005
Other	–2.673	*ns*
Superannuation balance (Reference category: Bottom quintile)		
Second quintile	*ns*	–3.821
Third quintile	–2.897	–3.698
Fourth quintile	–2.899	–3.334
Top quintile	–3.765	–4.626
Main reason for retirement (Reference category: Family/lifestyle)		
Financial	*ns*	*ns*
Health	–2.577	–2.879
Job-related	*ns*	–1.338
Other reason	*ns*	3.296
Region (Reference category: New South Wales)		
Victora	*ns*	*ns*
Queensland	*ns*	1.258
South Australia	1.312	*ns*
Western Australia	*ns*	1.919
Rest of Australia	*ns*	*ns*
Year (Reference category: 2015)		
2019	1.325	*ns*
2023	2.295	*ns*
Number of observations	1,041	1,028

Notes: The table reports estimated differences in retirement age (in years) from linear regression models of retirement age on retiree characteristics. See the Technical Appendix for an explanation of these models. Coefficients represent the estimated difference in retirement age (in years) relative to the specified reference category for each characteristic. Models for males and females are fit separately on the pooled dataset of the 2015, 2019 and 2023 retirement module survey waves. 'Other' housing tenure type includes those living in social housing and those living rent free. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Health is a major driver of early retirement, with both men and women who retire due to health reasons leaving the workforce nearly 3 years earlier than those who retire for family or lifestyle reasons. First Nations women retire at significantly younger ages—about 6 years earlier than non-First Nations Australian-born women. This disparity likely reflects persistent health inequities faced by First Nations populations, including lower life expectancy and a higher prevalence of chronic illnesses. Moreover, First Nations women are over-represented among those accessing aged care services in Australia, which is often associated with the earlier onset of health conditions and a greater need for care. This earlier need for care—due to factors such as chronic illness and lower life expectancy—contributes to their earlier retirement from the workforce. These health-related factors are key contributors to the earlier workforce exits observed among First Nations women (AIHW, 2024b).

More broadly, the results indicate that women are, on average, retiring at older ages over time. The estimates for each survey year are positive and statistically significant for women but not for men, showing that women are increasingly delaying retirement. For instance, women retiring in 2019 retired 1.3 years later than those in 2015, and women retiring in 2023 retired 2.3 years later than those in 2015. This trend may reflect growing workforce participation among women, shifts in societal norms and economic conditions that encourage extended working lives, and other factors such as differences in employment patterns and career trajectories across the life course.

6 Housing insurance

6. Housing insurance

Kyle Peyton

Housing insurance is a critical component of financial protection for Australian households, safeguarding against losses from natural disasters, theft and other risks. In 2023, the HILDA Survey introduced a new module on housing insurance, capturing information on coverage rates, expenditure and risk perceptions. This addition offers a unique opportunity to examine housing insurance in greater detail, including the factors associated with coverage, underinsurance and spending patterns. Responses to these questions shed new light on the financial priorities of Australian households and the socio-economic factors influencing decisions about insurance.

Box 6.1: HILDA Survey measures of housing insurance

In 2023, the HILDA Survey introduced a new module on housing insurance to the household questionnaire that included questions about two types of housing insurance.

1. Building Insurance. This refers to insurance that covers the physical structure of the home (e.g., house or unit) in which the household resides. Homeowners were asked: *Is the building in which you live currently insured?*

2. Contents Insurance. This covers the belongings inside the home, such as furniture and appliances. All respondents, including both renters and homeowners, were asked: *Are the contents of this home currently insured?*

In this report, a person is considered to live in a home covered by building insurance if they are a homeowner (with or without a mortgage) and any household member responding to the household questionnaire reported that the building was insured. Similarly, a person is considered to live in a home covered by contents insurance if the responding household member reported that the contents were insured, regardless of homeownership status.

This chapter focuses on two key dimensions of housing insurance in Australia, beginning with coverage rates for building and contents insurance (see Box 6.1, above). Building insurance, held exclusively by homeowners, has near-universal coverage due to legal and financial obligations, such as mortgage requirements. In contrast, contents insurance is optional and available to both homeowners and renters, with coverage rates varying significantly by household type, income and geographic location. The chapter also explores reasons for lacking insurance, providing insights into affordability concerns, perceptions of risk and the perceived value of coverage. Subsequent sections examine underinsurance, addressing the adequacy of coverage among insured households and reasons for insufficient protection. The chapter concludes with an analysis of household spending on housing insurance, both on its own and relative to other household expenses. Together, these analyses provide a detailed overview of housing insurance in Australia, highlighting variations in access, coverage and financial priorities among households.

Housing insurance in Australia

In 2023, 96.3% of Australians living in homes owned by their household (with or without a mortgage) were covered by building insurance. While there are no federal or state laws in Australia mandating building insurance for homeowners, many mortgage agreements require it to protect the lender's investment. Homeowners who own their properties outright are not legally required to purchase building insurance, but most still do for financial security. Among homeowners, 96.5% of those with a mortgage and 96.1% of those without a mortgage had building insurance in 2023, with no statistically significant difference between the two groups.

In contrast to building insurance, contents insurance is entirely optional and is not tied to legal or financial requirements. Unlike building insurance, contents insurance can also be purchased by renters, as it covers personal belongings rather than the structure of the home. In 2023, 70% of Australians lived in homes covered by contents insurance. Figure 6.1 highlights how contents insurance coverage rates vary by housing tenure type.

Coverage rates for contents insurance were highest among homeowners, with 90.4% of outright owners and 84.7% of owners with mortgages reporting that their home contents were insured. In contrast, coverage was significantly lower among renters, with 30.6% of Australians in private rentals and only 14.9% of those in social housing reporting that their home contents were insured.

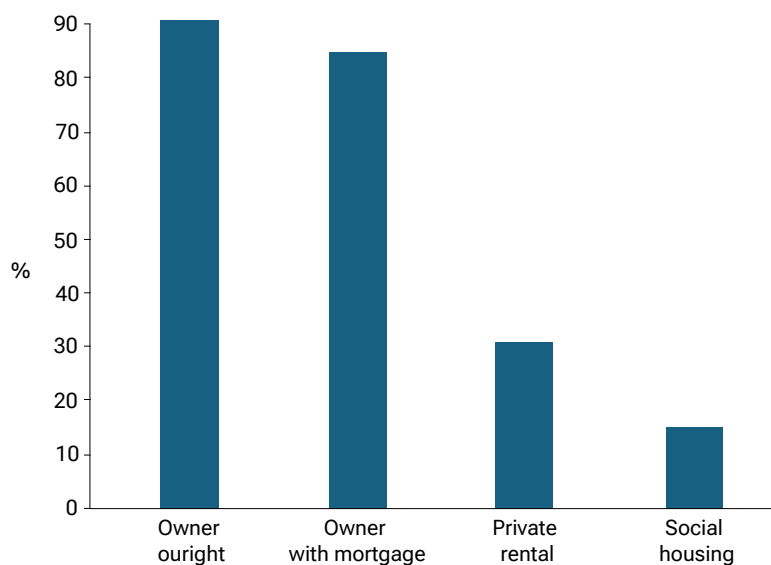**Figure 6.1: Rates of home contents insurance coverage by housing tenure type**

Figure 6.2 illustrates that coverage rates also vary significantly by housing type. While 76.7% of Australians living in freestanding houses have home contents insurance, the rates are much lower for those in other housing types: 48.1% of individuals in semi-detached houses and 37.9% of those in flats or apartments have insured their home contents.

Figure 6.2: Rates of home contents insurance coverage by housing type
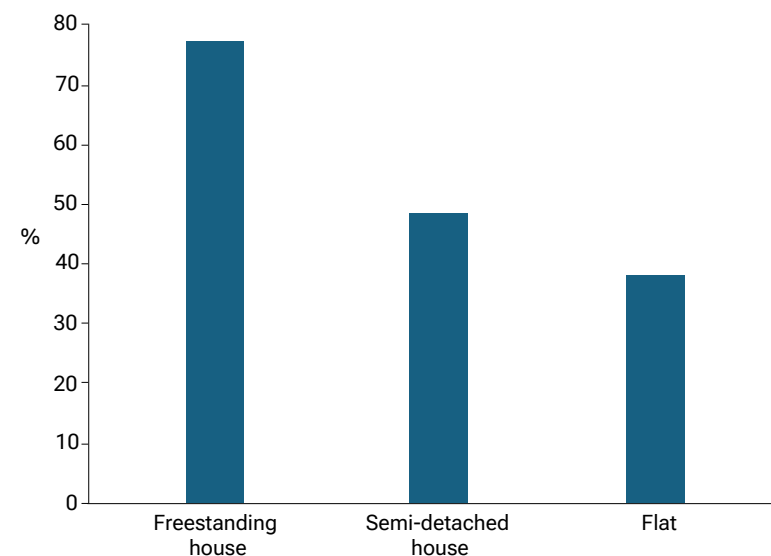
The lower rates of contents insurance observed for semi-detached houses and flats reflect both the higher proportion of renters in these dwelling types and lower coverage rates among homeowners. Private renters and social housing tenants account for 60% of flat residents and 41% of those in semi-detached houses. However, coverage is also lower among homeowners in these dwellings. Among owners (with or without a mortgage), 90% of those in separate houses have contents insurance, compared with 67% in semi-detached houses and 69% in flats.

Among homeowners, 3.7% did not have building insurance and 30% of Australians lived in households without contents insurance. In a follow-up questionnaire, uninsured households were asked to explain why their home was not covered, with respondents able to select multiple reasons from a list of six options. Figure 6.3 shows the percentages citing each reason, separated by type of coverage.

Figure 6.3: Reasons cited for not having housing insurance by type of coverage
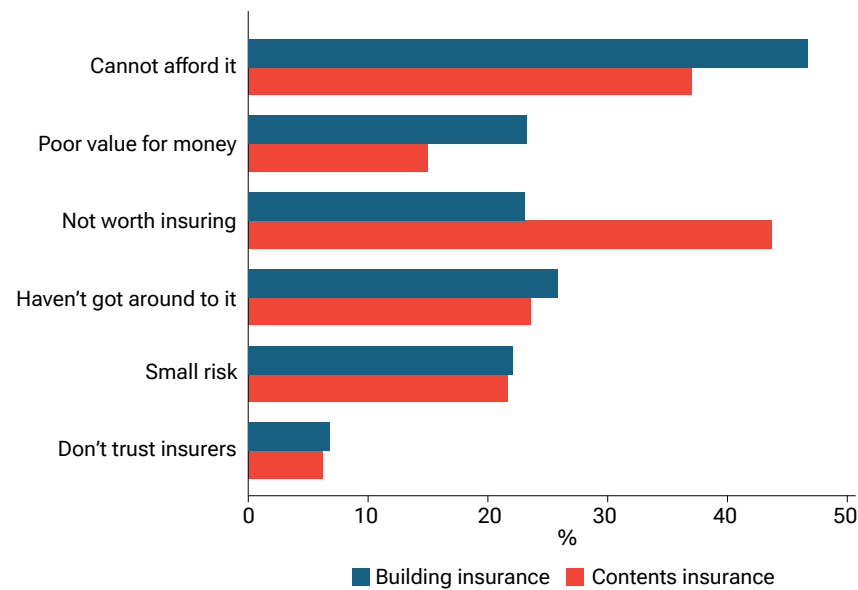
Notes: Respondents could select multiple reasons for underinsurance from six pre-specified options, as shown in the figure. Additionally, 14.6% of the homeowner population without building insurance and 7.3% of the general population without contents insurance selected 'other' as their reason.

The most common reason for not having building insurance, cited by 46.6% of uninsured homeowners, was that they could not afford it. Affordability was also a major factor for not having contents insurance, reported by 36.9% of uninsured households. However, the leading reason for not having contents insurance was a belief that home contents were not worth insuring, cited by 43.7% of uninsured households. In contrast, only 22.9% of uninsured homeowners cited this reason for not having building insurance, making it a less common justification for skipping this coverage. Distrust of insurers was the least cited reason for not having either type of insurance, with just 6.6% of uninsured homeowners and 6% of uninsured households reporting that they did not trust insurers to pay claims.

> **Box 6.2: Measurement of risk perceptions**
>
> In 2023, the HILDA Survey introduced four measures of risk perception in the household questionnaire as part of the new module on housing insurance. Respondents were asked to rate the risk of three events damaging their home: 'a flood', 'a bushfire' and 'a storm, cyclone or surging seawater'. In addition, respondents were asked to rate the risk of theft. Risk perceptions were measured using a four-point scale: 'No risk' (1), 'Low risk' (2), 'Moderate risk' (3) and 'High risk' (4).

The new module on housing insurance also included questions that capture the perceived risks associated with these events, providing insight into how individuals view potential threats to their homes (see Box 6.2, above). Table 6.1 presents the distribution of responses to each of these measures in the 2023 survey.

Table 6.1: Levels of perceived risk of home damage due to natural disasters and theft (%)

	Bushfire damage	Flood damage	Storm damage	Theft
No risk	28.4	36.1	16.4	5.9
Low risk	49.3	56.3	50.3	54.8
Moderate risk	17.6	6.3	28.5	32.9
High risk	4.8	1.3	4.8	6.5

Most Australians live in homes where the perceived risk of bushfires and floods damaging their property is low or non-existent. For bushfire damage, 28.4% of Australians live in a home where the perceived risk of bushfire damage is 'no risk', and 49.3% live in a home where it is perceived as a 'low risk'. Similarly, 36.1% of Australians live in homes where the perceived risk of flood damage is 'no risk', and 56.3% perceive a 'low risk'.

In contrast, risk perceptions are higher for storms and theft. Only 16.4% of Australians live in homes where the perceived risk of storm damage is 'no risk', while 50.3% perceive a 'low risk'. Similarly, just 5.9% live in homes where there is 'no risk' of theft, with a larger proportion perceiving 'low risk' (54.8%) or 'moderate risk' (32.9%).

High-risk perceptions remain relatively uncommon across all categories but vary by event. Only 1.3% of Australians live in homes where the perceived risk of flood damage is rated as 'high', compared to 4.8% for bushfire and storm damage, respectively. The highest perceived risk is for theft, with 6.5% of Australians living in homes where theft is perceived as a 'high risk'. These patterns suggest that Australians view storms and theft as more immediate or probable threats compared to natural disasters like bushfires or floods. While risk perceptions are likely to vary by geography and other contextual factors, they play an important role in decisions about whether to purchase housing insurance.

Characteristics associated with living in an uninsured home

This section examines the characteristics associated with living in an uninsured home, with separate analyses for building insurance and home contents insurance. In addition to housing tenure and housing type, the analyses consider a range of other factors, including household income, local socio-economic conditions and newly introduced measures of perceived risks of home damage and theft (see Box 6.2, page 134). All else being equal, individuals who perceive a higher risk of home damage or theft are expected to be less likely to live in an uninsured home.

The likelihood of living in an uninsured home (coded as 1 = Yes, 0 = No) was analysed using logistic regression models. Results are presented as average marginal effects, which represent the change in the probability of living in an uninsured home associated with each characteristic, relative to the reference category. Table 6.2 summarises the findings from two models: one predicting the probability of living in a home without building insurance and the other predicting the probability of living in a home without contents insurance. The estimates for building insurance are limited to homeowners, while the estimates for contents insurance include renters and residents of social housing, in addition to homeowners.

Among homeowners, household income and the Socio-Economic Index for Areas (SEIFA; see Box 6.3, below) are the strongest predictors of living in a home without building insurance. A clear linear relationship is observed, with higher income households significantly less likely to be uninsured. For instance, homeowners in the top income quintile are 6.4 percentage points less likely to lack building insurance compared to those in the bottom quintile. Similarly, homeowners in more advantaged areas, as indicated by higher SEIFA quintiles, are also significantly less likely to live in uninsured homes.

6.3: 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, which shows how disadvantaged that area is compared with other areas in Australia. In analysis presented in this report, the SEIFA measure used is the decile of 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).

Homeowners with higher risk perceptions are less likely to live in an uninsured building. For example, homeowners who perceive a high risk of flood damage are 3.6 percentage points less likely to lack building insurance compared to those who perceive no flood risk. Geographic location also influences building insurance coverage. Homeowners in Sydney and Brisbane are 2.2 and 2.9 percentage points more likely, respectively, to live in uninsured homes compared to those in non-urban areas of Australia.

The findings for contents insurance, which is not held by 30% of Australians, indicate significant disparities across demographic groups. Gender, age and immigrant status or First Nations identity all influence the likelihood of living in a home with uninsured contents. Females are 2.1 percentage points less likely than males to lack contents insurance. Older individuals are also less likely to live in homes with uninsured contents, with those aged 65 and over 13.6 percentage points less likely to lack coverage compared to those aged 18 to 24. Compared to the Non-First Nations Australian-born population, First Nations Australians and immigrants from non-English speaking countries are 7.2 and 13.3 percentage points more likely, respectively, to live in homes where the contents are uninsured.

Table 6.2: Factors associated with living in an uninsured home by type of housing insurance

	Building insurance	Contents insurance
Female	*ns*	–0.021
Age group (Reference category: 18–24)		
25–34	–0.043	*ns*
35–44	*ns*	–0.046
45–54	–0.029	–0.061
55–64	*ns*	–0.068
65 and over	–0.041	–0.136
Education (Reference category: Less than bachelor's degree)		
Bachelor's degree or higher	–0.012	*ns*
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)		
First Nations	*ns*	0.072
Immigrant, main English-speaking countries	0.02	*ns*
Immigrant, other countries	*ns*	0.133
Children in household (Reference category: No children under 15 years of age)		
At least one child under 15 years of age	*ns*	*ns*
Housing tenure type (Reference category: Owner outright)		
Owner with mortgage	*ns*	0.04
Private rental	–	0.439
Social housing	–	0.499
Housing type (Reference category: Freestanding house)		
Semi-detached house	*ns*	0.108
Flat	*ns*	0.122
Other	0.112	0.203
Household equivalised annual disposable income (Reference category: Bottom quintile)		
Second quintile	–0.025	–0.039
Third quintile	–0.056	–0.119
Fourth quintile	–0.062	–0.136
Top quintile	–0.064	–0.144
Socio-economic index for area (Reference category: Bottom quintile)		
Second quintile	–0.028	–0.055
Middle quintile	–0.045	–0.049
Fourth quintile	–0.051	–0.068
Top quintile	–0.055	–0.116
Location (Reference category: Non-urban Australia)		
Sydney	0.022	0.092
Melbourne	–0.02	*ns*
Brisbane	0.029	*ns*
Perth	*ns*	*ns*
Adelaide	–0.041	–0.045
Other urban Australia	–0.022	*ns*
Perceived flood risk (Reference category: No risk)		
Low risk	*ns*	0.028
Moderate risk	*ns*	0.10
High risk	–0.036	*ns*
Perceived bushfire risk (Reference category: No risk)		
Low risk	–0.016	–0.033
Moderate risk	–0.021	–0.091
High risk	*ns*	0.045
Perceived storm risk (Reference category: No risk)		
Low risk	0.02	*ns*
Moderate risk	*ns*	–0.034
High risk	–0.023	–0.047
Perceived theft risk (Reference category: No risk)		
Low risk	*ns*	*ns*
Moderate risk	–0.041	*ns*
High risk	–0.042	–0.046
Number of observations	10,243	14,312

Notes: The table reports average marginal effects from logistic regression models of the probability of living in a home without insurance. See the Technical Appendix for an explanation of these models. Estimates for building insurance apply to homeowners, and estimates for contents insurance apply to the population aged 18 and over. Main English-speaking countries comprise Canada, Ireland, New Zealand, South Africa, UK and USA. 'Other' housing type includes dwellings attached to offices or shops, non-private dwellings (e.g., nursing home), caravans, cabins, houseboats and tents. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

The strongest predictor of uninsured home contents is housing tenure type. While mortgagees are only 4.4 percentage points more likely to have their home contents uninsured than outright homeowners, renters are substantially more likely to be uninsured. Individuals living in private rentals and social housing are 43.9 and 49.9 percentage points more likely, respectively, to lack home contents insurance compared to outright homeowners.

Home type is also a significant predictor of uninsured home contents. Individuals living in semi-detached homes or flats are 10.8 and 12.2 percentage points more likely to lack home contents insurance, respectively, compared to those in freestanding houses. Residents of 'Other' dwelling types, including caravans, cabins, houseboats, tents and non-private dwellings such as nursing homes, have the highest rates of uninsurance. This group is 20.3 percentage points more likely to lack contents insurance compared to outright homeowners.

Indicators of socio-economic advantage are negatively associated with the likelihood of living in a home with uninsured contents. Compared to those in the bottom income quintile, individuals in the top 25% of the household income distribution are 14.4 percentage points less likely to lack home contents insurance. Similarly, residents of the most socio-economically advantaged areas, as measured by the SEIFA index, are 11.6 percentage points less likely to have uninsured home contents compared to those in the least advantaged areas.

Geographic location also predicts differences in home contents insurance coverage. Residents of Sydney are 9.2 percentage points more likely to live in a home without contents insurance compared to individuals in non-urban areas, where coverage rates are highest. In contrast, those living in Adelaide are 4.5 percentage points less likely to have uninsured home contents. No statistically significant differences are observed for those in Brisbane, Melbourne, Perth or other urban areas.

Finally, risk perceptions are moderately associated with uninsured home contents, but the direction of these associations varies by type of risk. For example, individuals who perceive a high risk of theft are 4.6 percentage points less likely to lack contents insurance. Conversely, individuals who perceive a high risk of bushfire damage are 4.5 percentage points *more likely* to have uninsured home contents. The difference in directionality may reflect variations in how individuals prioritise risks or perceive the relevance of insurance, potentially interacting with socio-economic and geographic factors. For instance, individuals who perceive a high risk of bushfires may disproportionately reside in areas with lower contents insurance uptake due to financial constraints or competing priorities, despite their heightened vulnerability.

Overall, these findings highlight significant disparities in housing insurance coverage, with the large gaps in contents insurance coverage among renters compared to homeowners. Consistent with the descriptive differences shown in Figure 6.1, Australians living in private rentals and social housing are over 40 percentage points more likely to have their home contents uninsured, even after adjusting for a range of other important predictors. While building insurance coverage largely

reflects differences in socio-economic advantage and risk perceptions among homeowners, the results for contents insurance point to broader patterns associated with housing tenure, home type and demographic factors. These differences may partly reflect affordability or accessibility issues but could also stem from variations in how individuals perceive the value of insuring their home contents. As shown in Figure 6.3, 43.7% of those without contents insurance reported that they did not believe their home contents were worth insuring, while 36.9% cited affordability as the reason.
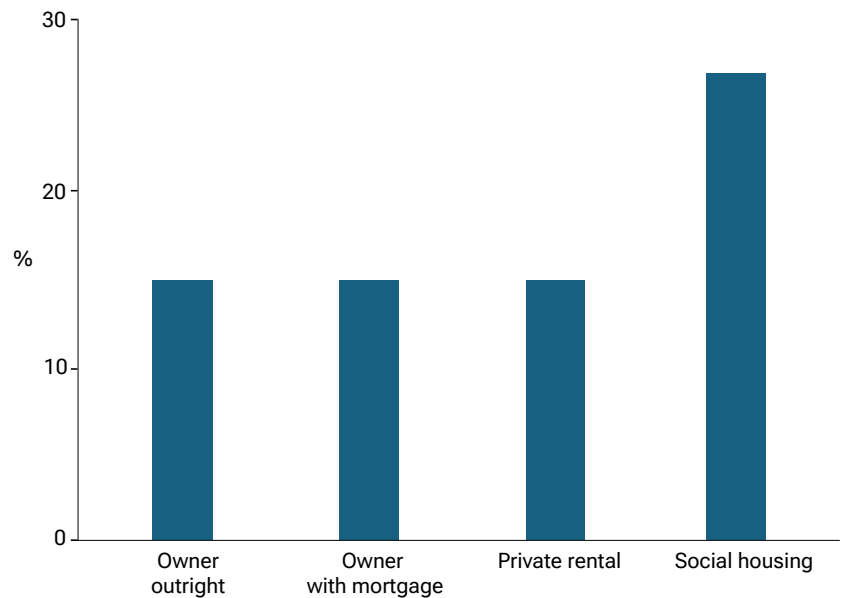
Underinsurance

Box 6.4: Measurement of underinsurance

In 2023, the HILDA Survey introduced questions to measure underinsurance for both building and home contents insurance. These questions were designed to assess whether existing insurance policies would fully cover potential losses in the event of a claim. Homeowners with building insurance were asked: *If your home was severely damaged, would your building insurance cover a complete rebuild of your home?* Similarly, individuals with contents insurance were asked: *If you needed to make a claim, would your insurance cover be enough to replace all your home contents?* Responses to both questions were binary ('Yes' or 'No'), allowing for a straightforward assessment of underinsurance for each type of coverage.

Underinsurance occurs when the level of insurance coverage is insufficient to fully compensate for the potential financial loss in the event of a claim. In the context of housing insurance, underinsured households may face significant out-of-pocket costs following a natural disaster or theft. To assess the adequacy of coverage, the 2023 HILDA Survey included follow-up questions for those with building and contents insurance, asking whether their policies would fully cover the cost of rebuilding a home or replacing its contents in the event of a claim (see Box 6.4, above).

In 2023, 7.8% of Australian homeowners with building insurance coverage were underinsured, with no differences between outright owners and those with a home mortgage. Among those with contents insurance, 15.1% were underinsured. As shown in Figure 6.4, underinsurance rates for contents insurance are similar for homeowners (15%) and private renters (15.1%), in contrast to the large differences in coverage rates by housing tenure type (Figure 6.1). The notable exception is among social housing tenants, where only 14.9% have contents insurance, and of those, 27.1% are underinsured. This highlights that, even among the few social housing tenants with contents insurance, nearly one-third lack adequate coverage to fully compensate for potential losses.

Figure 6.4: Rates of underinsurance for home contents by housing tenure type

In the housing insurance module, underinsured households were asked to explain why their coverage was not adequate to fully compensate them in the event of a loss, selecting from a list of four pre-specified reasons. Figure 6.5 shows that the reasons cited for underinsurance were similar for both building insurance and home contents insurance. About one-third of underinsured homeowners (30.8%) cited affordability as the reason for insufficient building insurance coverage, while 17.5% believed full cover was poor value for money, and 19.5% thought the risk of needing to file a large claim was small. The most common reason, cited by 31.8% of underinsured homeowners, was that they had not got around to updating their coverage.

Similarly, among Australians underinsured for their home contents, 33.7% cited affordability, 17.5% said full cover was poor value for money, and 18.9% believed the risks were too small to justify full replacement costs. About one third (31.4%) said that they had not got around to updating their cover. Overall, these results suggest that affordability and procrastination ('haven't got around to it yet') are both important determinants of underinsurance.

Figure 6.5: Reasons cited for underinsurance by type of coverage
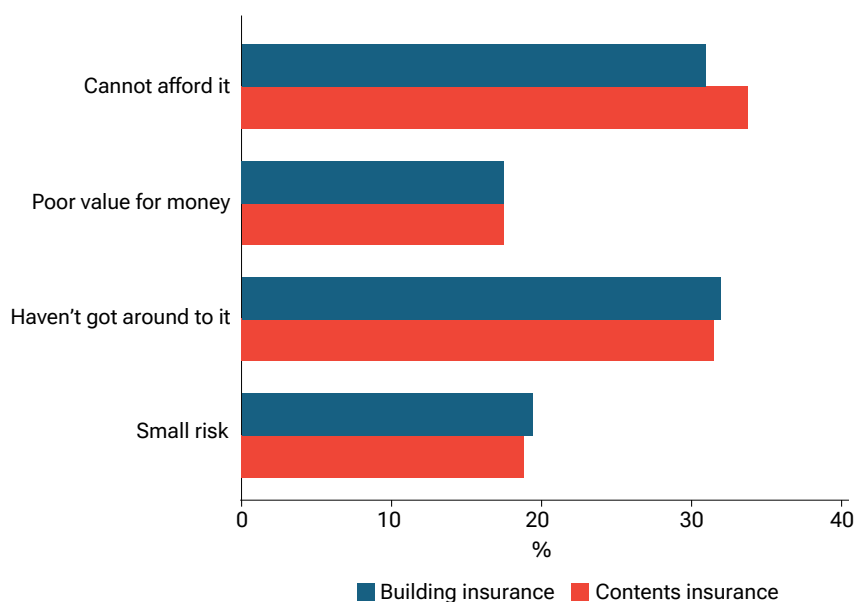
Notes: Respondents could select multiple reasons for underinsurance from four pre-specified options, as shown in the graph. Additionally, 14.6% of homeowners underinsured for building insurance and 9.6% of those underinsured for home contents selected 'other' as their reason.

Table 6.3 compares the underinsured and fully insured populations across several characteristics for each type of insurance. These characteristics were previously identified as strong predictors of whether people have insurance coverage at all (see Table 6.2, page 137). The estimates for building insurance are limited to homeowners, while those for contents insurance include homeowners, renters and residents of social housing. Overall, the underinsured and fully insured populations appear broadly similar across both types of insurance. For instance, 35.6% of homeowners with underinsured buildings are outright owners, compared to 36.8% of fully insured homeowners. Similarly, 55.3% of fully insured households are owners with a mortgage, compared with 54.9% of underinsured households. The proportion living in private rentals is identical across the two groups (10.9%).

Table 6.3: Characteristics of underinsured vs. fully insured populations by coverage type, 2023 (%)

	Building insurance		Contents insurance	
	Underinsured	Fully insured	Underinsured	Fully insured
Housing tenure type				
Owner outright	35.6	36.8	33	33.3
Owner with mortgage	64.4	63.2	54.9	55.3
Private rental	–	–	10.9	10.9
Social housing	–	–	1.2	0.6
Housing type				
Freestanding house	90.1	88.7	90.5	87.8
Semi-detached house	5.6*	6.2	4.4	6
Flat	3.6	4.7	4.6	5.7
Other	0.7*	0.5	0.5*	0.4
Location				
Non-urban Australia	16.3	15.1	14.1	15.1
Sydney	20.2	15.8	15.4	12.6
Melbourne	15.9	19.2	18.1	19.1
Brisbane	10.6	8.6	10.9	9.8
Perth	8.2	9.3	10.9	9.1
Adelaide	4.7	5.5	5.7	5.9
Other urban Australia	24.1	26.4	24.9	28.4
Household equivalised annual disposable income				
Bottom quintile	12.9	14.7	14.2	14.5
Second quintile	18.4	16.6	15.6	17.6
Third quintile	19.4	21.5	22.5	21.9
Fourth quintile	24.7	22.4	23.9	22.1
Top quintile	24.7	24.8	23.9	23.9
Socio-economic index for area				
Bottom quintile	11.8	11.9	12.1	12.4
Second quintile	16.6	19.9	19.5	19.8
Third quintile	18.4	20.7	20.1	20.6
Fourth quintile	23.9	22.1	18.6	22.
Top quintile	29.3	25.5	29.7	25.2
Perceived flood risk				
No risk	29.8	33.8	31.5	36.5
Low risk	59.9	59.6	59.4	57.4
Moderate risk	8.9	5.9	8	5.4
High risk	1.4	0.7	1.1	0.7
Perceived bushfire risk				
No risk	19.6	23.9	23.9	24.5
Low risk	52.5	51.5	48.8	51
Moderate risk	22.6	19.5	21.8	19.8
High risk	5.3	5.1	5.6	4.7
Perceived storm risk				
No risk	8.5	14.1	11.1	13.8
Low risk	50.5	48.4	45.2	49.4
Moderate risk	35.2	32.9	38.3	31.8
High risk	5.8	4.7	5.4	5
Perceived theft risk				
No risk	4.7	5.3	2.8	5.6
Low risk	49.6	55.7	48.4	55.3
Moderate risk	39.7	33.9	38.4	33.9
High risk	6	5.1	10.5	5.2

Notes: Cells may not add up to 100% due to rounding. 'Other' housing type includes dwellings attached to offices or shops, non-private dwellings (e.g., nursing home), caravans, cabins, houseboats and tents. * Estimate not reliable.

Socio-economic status, as measured by household income and the relative socio-economic index for areas (SEIFA), also does not meaningfully differentiate the underinsured and fully insured populations. Homeowners with building insurance, whether underinsured or fully insured, tend to have higher household incomes and live in relatively advantaged areas. For example, 24.7% of underinsured homeowners and 24.8% of fully insured homeowners fall into the top quintile of household income. A similar trend holds for home contents insurance, with 23.9% of the underinsured and 23.9% of the fully insured belonging to the top income quintile.

Risk perceptions also do not reliably distinguish between the two populations. Interestingly, fully insured homeowners are somewhat *more likely* to perceive 'no risk' of home damage due to natural disasters than underinsured homeowners. For example, 8.5% of underinsured homeowners believe there is 'no risk' of storm damage to their home, compared to 14.1% of fully insured homeowners. A similar pattern holds for contents insurance: 5.6% of individuals with full coverage believe there is no risk of theft, compared to 2.8% of those who are underinsured. Conversely, underinsured individuals are *more likely* to perceive a high risk of theft, at 10.5%, compared to 5.2% of the fully insured.

Overall, these results show that the underinsured and fully insured populations are remarkably similar across a range of characteristics, including socio-economic status and housing tenure. This contrasts with the earlier analysis in Table 6.2, where these same characteristics were strong predictors of whether individuals had insurance at all. These findings suggest that while structural factors like income and housing tenure explain insurance uptake, they are less relevant for distinguishing between the underinsured and fully insured within insured populations.

Expenditure on housing insurance

> **Box 6.5: Expenditure on home and contents insurance**
>
> In 2023, the HILDA Survey introduced a new measure of insurance expenditure to the household expenditure items in the self-completion questionnaire. Specifically, the survey asks respondents responsible for household bill payments whether there has been any expenditure on 'home and contents insurance'. Those who confirm expenditure on home and contents insurance are then asked to provide their best estimate of the total amount spent over the last 12 months.
>
> In households where multiple members provide responses to these questions, discrepancies between the reported total amounts can occur. These discrepancies are resolved by calculating the average of all reported amounts. For example, if one household member reports $400 and another reports $200, the household average is calculated as $300. Home and contents expenditure is recorded as zero in cases where all household members indicate that there was no expenditure.

In 2023, the HILDA Survey expanded its measurement of household expenditure to include housing insurance costs. Respondents responsible for paying household bills were asked whether their household incurred any expenditure on home and contents insurance over the past 12 months, and those who confirmed such expenditure were asked to estimate the total amount spent. In households with multiple respondents, discrepancies between reported amounts were resolved by averaging responses, while expenditure was recorded as zero for households where all members reported no spending (see Box 6.5, above, for details).

Table 6.4 summarises household expenditure on housing insurance by coverage type, with households as the unit of analysis. Expenditure is grouped into three categories: 'building and contents', 'building only', and 'contents only', as well as a combined 'all types' category. The first two categories apply exclusively to homeowners, while the third category primarily includes renters, who account for 96% of households with contents-only insurance. Although both renters and homeowners can opt for contents-only policies, most homeowner households with insurance coverage have policies that cover both the building and its contents. The data, presented in December 2023 prices, include only households that reported positive expenditure on housing insurance (see Box 6.1, page 132 and Box 6.5, above).

Table 6.4: Household expenditure on housing insurance by coverage type ($, December 2023 prices)

|	Building and contents	Building only	Contents only	All types
Average annual expenditure	1,739	1,261	720	1,608
Total annual expenditure	9.7b	507.6m	479.5m	10.7b
Number of households	5.6m	402,000	666,000	6.7m

Note: Estimates are for households that reported positive expenditure on some type of housing insurance.

The findings indicate that average annual expenditure on housing insurance is highest for households with both building and contents coverage ($1,739) and lowest for those with contents-only coverage ($720). Unsurprisingly, average costs increase with broader coverage, as policies covering both building and contents cost more than twice as much, on average, as contents-only policies. Across all coverage types, Australian households spent an estimated $10.7 billion on housing insurance in 2023, with approximately 6.7 million households reporting some form of insurance expenditure.

Figure 6.6 shows how insurance coverage varies across housing tenure types, which provides important context for understanding how insurance expenditure differs between renters and homeowners. Among homeowners, the vast majority of households (85.5%) have comprehensive building and contents insurance, with smaller proportions having building only coverage (10.6%) or no insurance at all (3.4%). Contents-only coverage is rare among homeowners, with just 0.6% opting for this type of policy. These results reflect the greater financial incentives and obligations for homeowners to insure their properties, particularly when many mortgage lenders require insurance policies.

Figure 6.6: Distribution of insurance coverage by housing tenure type
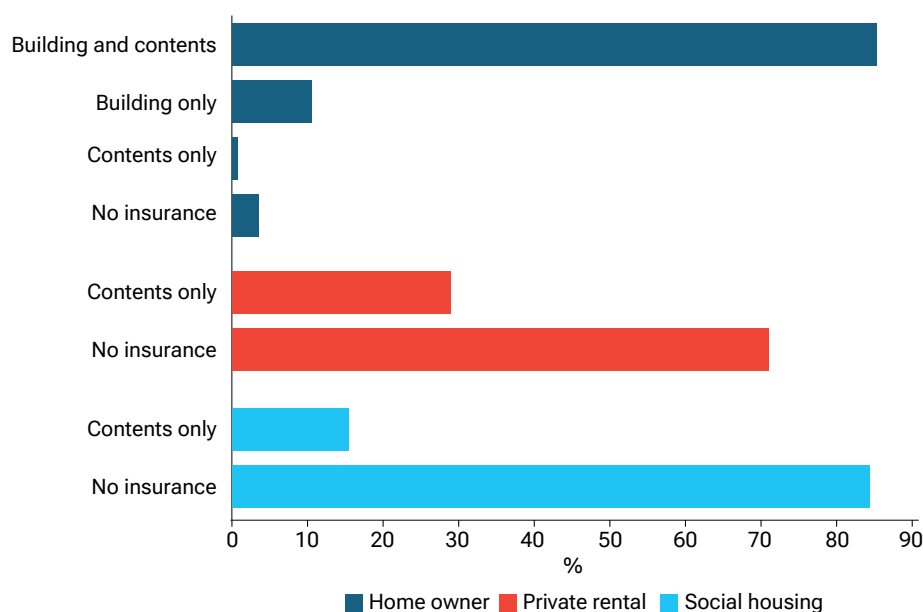
In contrast, rental households, particularly those in social housing, are far less likely to have any form of insurance. Among households living in private rentals, 71.1% lack insurance, while 28.9% have contents-only insurance. Social housing renters are even less likely to be insured, with 84.6% of households reporting no coverage and only 15.4% holding contents-only policies. These patterns highlight the financial constraints and potential lack of incentives for rental households to purchase insurance, as they do not own the properties they live in and may perceive contents insurance as less critical than homeowners.

Table 6.5 shows average household spending on housing insurance alongside other major expenditure categories, grouped by insurance coverage type. Across all coverage types, insured households spend significantly less on housing insurance than on essentials like groceries and utilities. Groceries, a universal and non-discretionary expense, account for a substantial share of

household budgets in all groups, whereas housing insurance constitutes a relatively small share—even for homeowners with more comprehensive coverage. For example, households with contents-only insurance (predominately renters) spend, on average, $11,495 per year on groceries and $2,098 on utilities, compared to just $720 on housing insurance. Similarly, discretionary expenses like meals eaten out far exceed housing insurance costs across all coverage types, underscoring the relatively low financial burden of insurance compared to other household spending priorities.

Table 6.5: Mean expenditure on insurance vs. other items by coverage type ($, December 2023 prices)

	Building and contents	Building only	Contents only	No insurance coverage
Housing insurance	1,739	1,261	720	–
Groceries	13,065	12,151	11,495	10,097
Utilities	2,170	1,779	2,098	1,392
Meals eaten out	4,333	4,190	3,827	4,107
Rent/mortgage payments	18,969	22,007	22,443	19,576

Households with any type of insurance coverage tend to spend more on groceries, utilities and rent/mortgage payments than those without insurance. This pattern reflects higher incomes or greater financial resources among insured households. For instance, building insurance is only incurred by homeowners, who generally have higher wealth and income than renters, and most renter households lack home contents insurance altogether. In contrast, households without insurance coverage typically spend less on all non-insurance items, reflecting more constrained household budgets.

Table 6.6 compares average housing insurance expenditure among insured households by selected household characteristics and coverage types. Among households with comprehensive building and contents insurance, spending is higher for outright owners than for households with mortgages. This difference likely reflects variations in home value or coverage needs, as outright owners may be more likely to insure older homes with higher replacement costs. For households with only contents insurance, those in private rentals spend more than those in social housing. This disparity may reflect differences in household income, asset values or the type and value of possessions insured by these groups.

For all coverage types, insured households living in separate houses spend more than those in other housing types. This reflects higher property values, more extensive coverage needs and larger asset values for home contents in freestanding homes. In contrast, homeowners in flats report lower household expenditures on building-related insurance, likely due to shared ownership structures (e.g., body corporate coverage for buildings).

Households in non-urban areas spend significantly more on all types of insurance, likely due to higher risk exposure to natural disasters such as bushfires and a lack of competition among insurance providers, resulting in higher premiums. Among major capital cities, households with comprehensive coverage in Brisbane spend the most, which may be attributed to higher risk exposure from floods and cyclones (ACCC, 2023; Healy, 2025). For households with contents-only coverage (predominantly renters), those in Melbourne report the highest spending.

As expected, spending on housing insurance increases with income. For example, homeowner households with comprehensive coverage in the top income quintile spend, on average, $1,916 per year, compared to $1,495 in the bottom quintile. However, these differences are not dramatic, suggesting that lower income insured homeowners may allocate a larger share of their disposable income to home protection than higher income households. Similarly, spending on housing insurance is higher in more advantaged areas, where property values and the value of home contents tend to be greater.

Table 6.6: Mean expenditure by household characteristics and coverage type ($, December 2023 prices)

	Building and contents	Building only	Contents only
Housing tenure type			
Outright owner	1,821	1,205	472
Owner with mortgage	1,667	1,298	756
Private rental	–	–	744
Social housing	–	–	533
Housing type			
Separate house	1,846	1,297	747
Semi-detached house	1,175	1,157	636
Flat	891	946	685
Other	1,293	1,933*	1,138
Location			
Non-urban Australia	2,093	1,696	656
Sydney	1,765	1,306	745
Melbourne	1,487	1,052	874
Brisbane	1,994	844*	575
Perth	1,466	856	563
Adelaide	1,506	1,030	747
Other urban Australia	1,766	1,578	739
Household equivalised annual disposable income			
Bottom quintile	1,495	1,192	593
Second quintile	1,847	1,158	572
Third quintile	1,578	1,342	746
Fourth quintile	1,815	1,405	793
Top quintile	1,916	1,293	946
Socio-economic index for area			
Bottom quintile	1,416	1,176	775
Second quintile	1,674	998	660
Third quintile	1,687	1,222	676
Fourth quintile	1,773	1,292	642
Top quintile	1,985	1,552	846

Notes: Estimates are for households that reported positive expenditure on some type of housing insurance. 'Other' housing type includes dwellings attached to offices or shops, non-private dwellings (e.g., nursing home), caravans, cabins, houseboats and tents. * Estimate not reliable.

7

Bodily pain

7. Bodily pain

Ferdi Botha

More than two-thirds of Australians are estimated to experience varying degrees of physical or bodily pain (ABS, 2022). In addition to often restricting their daily lives, many Australians' experience of physical bodily pain can be detrimental to general health and wellbeing (Macchia, 2022).

The HILDA Survey has collected information on perceived bodily pain every year since 2001, and given its potentially debilitating effects, for the first time, in this chapter, we provide an overview of bodily pain in the Australian population. Respondents are asked how often they experience bodily pain, and to what degree it impacts their day-to-day activities.

This chapter reports the trends in perceived bodily pain and how average pain varies for different subgroups. The chapter also examines the factors associated with reporting extreme bodily pain, as well as how the experience of bodily pain is associated with mental health and life satisfaction as wellbeing outcomes.

Intensity and interference of bodily pain

For the latest wave of data, Table 7.1 reports the proportion of individuals who report various degrees of bodily pain, as well as how much bodily pain affects or interferes with their work or daily activities.

Overall, 78.5% of females and 73.8% of males report having experienced at least some bodily pain in the four weeks prior to the survey.

Females tend to report experiencing more pain than do males. For example, 21.5% of females and 26.2% of males report no bodily pain, and 19% of females and 15.2% of males report moderate levels of pain. Moreover, about 8% of females have severe or very severe physical pain, compared to 5.1% of males.

Similarly, pain interference with work or daily activities tend to be greatest for females, as 49.7% of females state that physical pain does 'not at all' impact them, compared to 56.3% of males. About 2.4% of females and 1.3% of males report that pain interferes 'extremely' with their usual duties.

As we would expect, younger age groups report both less pain intensity and pain interference than do older age groups. For instance, whereas 34.8% of those aged 15 to 24 and 32.8% of those aged 25 to 34 have no bodily pain, 13.7% of those aged 55 to 64 report no pain. Among persons aged 35 to 44, 2.8% experience severe bodily pain, compared to 10.8% of respondents aged 65 and older.

In terms of pain interference, 67.4% of those aged 15 to 24 have no interference at all, compared to 42.3% of those aged 55 to 64 and 33.5% of those 65 and older. Finally, whereas 3.4% of individuals aged 25 to 34 report that pain interferes 'quite a bit', 14.6% of individuals aged 65 and older report this level of pain interference with daily duties.

> **Box 7.1: 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 https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form.html for further details.
>
> The SF-36 measures of general health, mental health and bodily pain are used in this report. The scores for all measures are constructed as per Ware et al. (2000) and 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 the HILDA Survey shows that approximately 10–15% of the population is at or below this threshold across the HILDA Survey period. Similarly, poor mental health is defined as a score less than or equal to 52, on the basis that approximately 10–15% of the population is at or below this threshold across the HILDA Survey period. The 52-point threshold has also been used in previous studies to designate poor mental health (e.g., Roy and Schurer, 2013; Botha et al., 2023).

Table 7.1: Intensity of bodily pain and interference of pain with normal work, 2023 (%)

	Females	Males	15–24	25–34	35–44	45–54	55–64	65 and older
How much bodily pain								
No bodily pain	21.5	26.2	34.8	32.8	27.9	21.0	13.7	13.2
Very mild	31.2	32.8	35.1	31.9	34.8	34.3	32.5	25.1
Mild	20.3	20.6	17.5	19.2	20.0	20.5	23.6	22.0
Moderate	19.0	15.2	10.0	12.7	13.6	16.9	21.2	26.9
Severe	6.5	4.2	1.9	2.7	2.8	6.0	7.4	10.8
Very severe	1.5	0.9	0.5*	0.7*	0.9	1.3	1.8	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
How much pain interferes with work								
Not at all	49.7	56.3	67.4	63.1	60.9	53.1	42.3	33.5
Slightly	27.1	25.9	23.7	24.4	25.2	27.0	31.8	27.6
Moderately	12.5	11.1	5.6	8.3	9.4	10.8	14.2	20.8
Quite a bit	8.4	5.4	2.5	3.4	3.5	6.9	9.1	14.6
Extremely	2.4	1.3	0.6*	0.8	1.0	2.3	2.7	3.5
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. * Estimate not reliable.

Table 7.1 reports pain interference regardless of whether an individual has any bodily pain. Table 7.2 presents the prevalence of pain interference among individuals who report having at least some pain, that is, 'very mild' pain or worse.

People who rate their pain intensity as more severe also tend to state that this pain interferes to a greater degree with their work and daily activities. Large proportions of individuals who rate their pain as 'very mild' or 'mild' also report that their pain interferes 'not at all' or 'slightly' with their activities. In contrast, large percentages of those rating their pain intensity as 'severe' or 'very severe' say this pain impacts their daily activities 'quite a bit' or 'extremely'.

Among females with mild bodily pain, for instance, 55.3% and 14% report that this pain 'slightly' or 'moderately' affects their work and daily activities, respectively. Considering males with 'severe' pain, 60.9% said their pain affects their work activities 'quite a bit', and work activities are affected 'extremely' for 58.3% of males with 'very severe' pain.

Table 7.2: Extent of bodily pain interference among individuals with at least some pain, 2023 (%)

	How much bodily pain				
	Very mild	**Mild**	**Moderate**	**Severe**	**Very severe**
Females					
How much pain interferes with work					
Not at all	68.5	29.1	8.7	0.9*	0.0*
Slightly	29.8	55.3	29.7	4.8	0.9*
Moderately	1.6	14.0	42.5	14.6	0.0*
Quite a bit	0.1*	1.4	18.5	65.0	20.5
Extremely	0.0*	0.1*	0.7*	14.6	78.6
Total	100.0	100.0	100.0	100.0	100.0
Males					
How much pain interferes with work					
Not at all	70.4	29.7	10.2	2.2*	1.3*
Slightly	28.3	52.2	33.1	6.0*	0.0*
Moderately	1.0	16.1	43.0	15.9	8.9*
Quite a bit	0.2*	1.8	13.1	60.9	31.6
Extremely	0.0*	0.1*	0.6*	15.1	58.3
Total	100.0	100.0	100.0	100.0	100.0

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

Trends in bodily pain over time

Figure 7.1 depicts mean bodily pain scores over time for females and males. In all years, mean bodily pain was clearly higher for females than for males. Over the entire sample period, average pain increased for all individuals, but especially for females. Between 2001 and 2023, average pain for males increased from 25.3 to 26.6, which is a rise of approximately 5.1%. Over the same period, females' average pain rose from 27.6 to 30.8, an increase of 11.6%. Following an increase in reported pain from 2021 to 2022, both males' and females' mean pain decreased slightly in 2023.

Figure 7.1: Mean bodily pain score, by gender (0–100 scale)
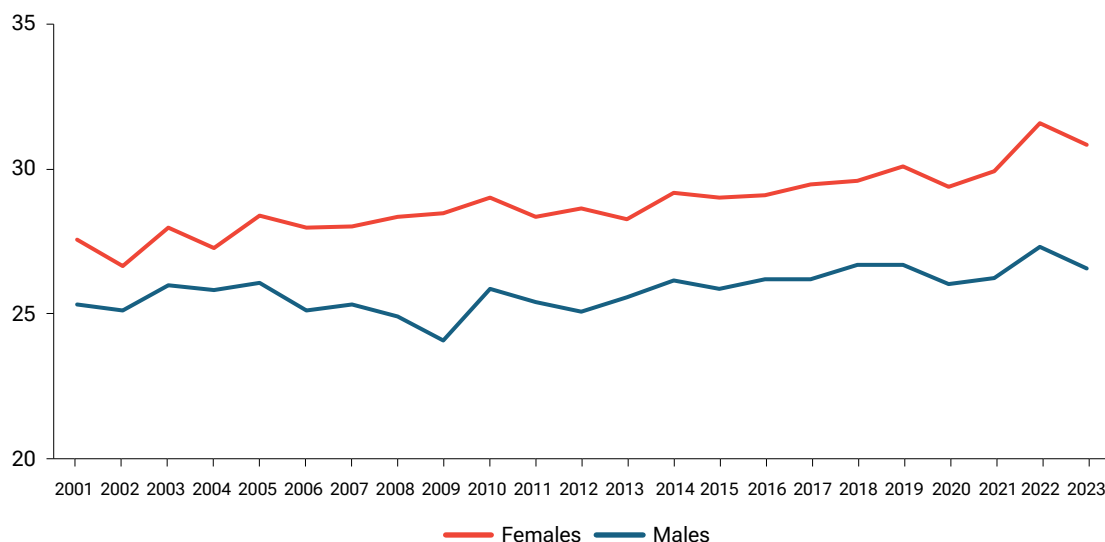
Consistent with the analyses in Table 7.1, Figure 7.2 shows that, over time, average bodily pain scores are higher for older age groups. Mean pain is consistently lowest for those aged 15 to 24 (ranging between 16.7 and 20.4 points) and highest for individuals aged 65 and older (ranging between 38 and 39.8 points).

For most age groups, average bodily pain has remained relatively stable over time, although across all ages pain was slightly greater in 2023 than in 2001. The largest relative rise in pain from 2001 to 2023 was for those aged 25 to 34, from 20 to 22.8 points (an increase of 11%).

Figure 7.2: Mean bodily pain score, by age group (0–100 scale)
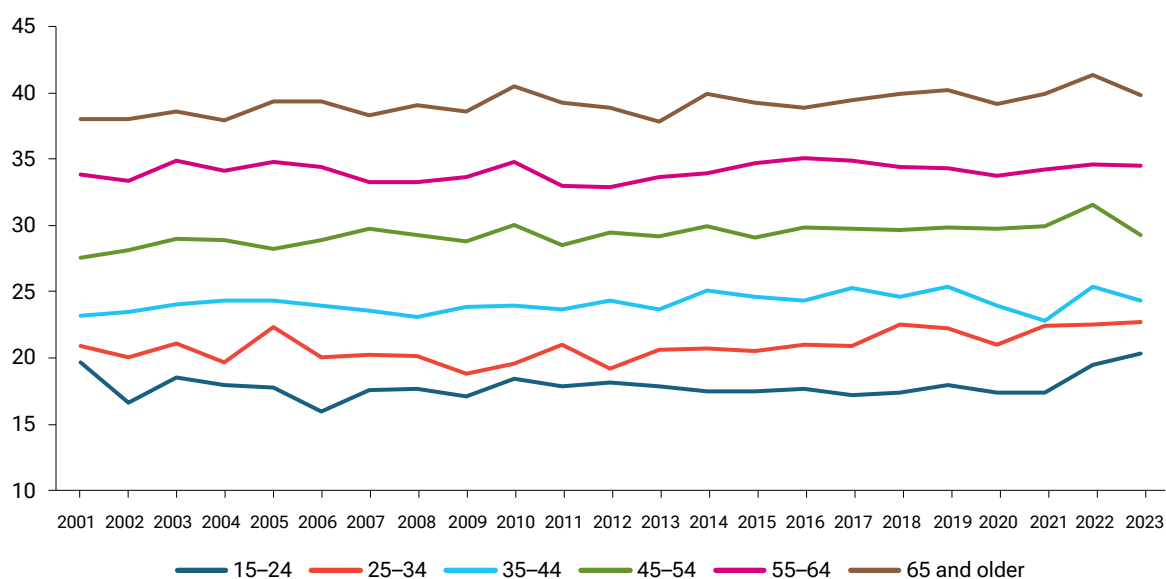
To provide a more detailed examination of how average bodily pain scores vary over the life course, Figure 7.3 shows bodily pain at every age based on 2023 data.

Females report greater physical pain than males at most ages, especially between the ages of 15 to 35, 48 to 53, and 65 to 71. We also observed a steady increase in mean bodily pain as age increases, although the rate of increase appears to rise from about the age of 40.

Figure 7.3: Age differences in mean bodily pain score, by gender, 2023 (0–100 scale)
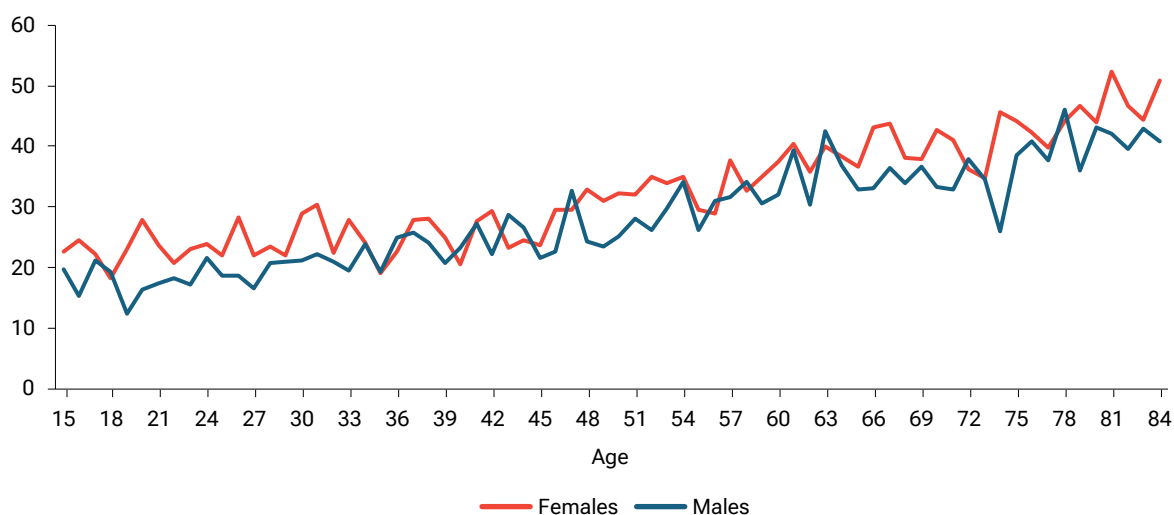
Because age and bodily pain are so strongly related, the observed trends shown in Figure 7.1 may partly reflect the fact that the Australian population is simply getting older over time. As such, Figure 7.4 depicts age-adjusted mean bodily pain scores over time.

When adjusting for age, gender differences in average pain scores are much smaller. Notably, for both females and males, mean pain has increased over time, and these increases cannot be ascribed to the fact that the Australian population became older. Between 2001 and 2023, average pain increased from 27 to 28.5 for females (a 5.6% increase) and from 27 to 28.3 for males (a 4.8% increase). The underlying drivers of this rising trend in pain require further investigation, although one potential explanation relates to an increase in sedentary lifestyles (Dzakpasu et al., 2021).

Figure 7.4: Mean bodily pain score adjusted for age, by gender (0–100 scale)

Average bodily pain by individual characteristics

Table 7.3 reports the average bodily pain scores in 2023 for females and males by several individual characteristics.

As also alluded to in Table 7.1 and Figure 7.2, mean pain tends to increase with age. Among females, those aged 35 to 44 have a pain score of 24.6 whereas those aged 65 or older have a pain score of 42.5. Males aged 15 to 24 report a mean pain score of 17.9, compared to a pain score of 33.4 for males aged 55 to 64.

Average pain is lower among persons with at least a bachelor's degree. For instance, the mean pain score for males with at least a bachelor's degree is 21.4 and the mean pain score for males without a degree is 28.8.

Among both females and males, mean pain is highest for individuals who are not in the labour force, which in part reflects the fact that those not in the labour force also tend to be older. Average pain is lowest for employed individuals, followed by unemployed individuals.

In terms of occupation, female labourers (28.9) and technicians and trades workers (27.3) have the highest pain, and average pain is lowest among managers (23) and professionals (23.8). Among males, machinery operators and drivers (27) and labourers (25) report the greatest pain on average, whereas professionals (18.8) and sales workers (17.7) report the lowest average pain scores.

There is a clear positive relationship between average pain scores and household equivalised annual disposable income, with individuals in the lower income quintiles reporting higher pain and individuals in higher income quintiles reporting lower pain.

As expected, there are large differences in average bodily pain in relation to health measures. Persons in poor general health report more than double the pain score of persons not in poor general health. For instance, males in poor general health have a pain score of 52.3 compared to the 23.5 for males who are not in poor general health.

Mean pain scores are also more than double for individuals with a long-term health condition. Females with a long-term health condition, for example, report a pain score of 48.9 whereas the pain score is 22.8 for females without a long-term health ailment.

Both females and males in poor mental health report notably higher average bodily pain than individuals who are not in poor mental health.

Non-partnered females (33) report higher pain scores than partnered females (29.3), but non-partnered males (25.4) report lower pain scores than partnered males (27.3).

In terms of region of residence, people residing in non-urban areas have the highest average pain whereas those in major urban areas tend to have the lowest pain scores.

Among females, First Nations individuals report the highest average pain levels (36.1), followed by Australian-born individuals (31.4). Among males, Australian-born individuals (27.1) have the highest pain scores and immigrants from other countries (24.5) have the lowest pain scores.

Table 7.3: Mean bodily pain score, by gender, 2023 (0–100 scale)

	Females	Males
Age		
15–24	23.0	17.9
25–34	25.1	20.3
35–44	24.6	23.9
45–54	31.7	26.8
55–64	35.5	33.4
65 and over	42.5	36.9
Educational attainment		
Less than bachelor's degree	33.3	28.8
Bachelor's degree or higher	26.3	21.4
Labour force status		
Employed	25.1	22.7
Unemployed	29.4	25.5
Not in the labour force	40.4	36.0
Occupation		
Managers	23.0	23.8
Professionals	23.8	18.8
Technicians and trades workers	27.3	23.9
Community and personal service workers	25.8	23.6
Clerical and administrative workers	25.5	24.3
Sales workers	26.8	17.7
Machinery operators and drivers	24.5	27.0
Labourers	28.9	25.0
Household equivalised annual disposable income (December 2023 prices)		
Bottom quintile	39.8	35.0
Second quintile	34.1	31.1
Third quintile	28.4	24.8
Fourth quintile	26.6	22.8
Top quintile	24.6	20.3
SF-36 general health measure		
Not in poor general health	26.4	23.5
In poor general health	59.5	52.3
Long-term health condition		
No	22.8	20.7
Yes	48.9	42.5
SF-36 mental health measure		
Not in poor mental health	27.4	24.1
In poor mental health	43.6	38.8
Partnered		
No	33.0	25.4
Yes	29.3	27.3
Region of residence		
Major urban	29.9	25.0
Other urban	33.3	29.8
Non-urban	33.8	32.6
Immigrant status and First Nations identity		
Non-First Nations Australian-born	31.4	27.1
First Nations	36.1	26.5
Immigrant, main English-speaking countries	29.0	26.8
Immigrant, other countries	29.7	24.5

Bodily pain and serious illness conditions

Because physical pain is likely strongly linked to having a certain medical condition, Table 7.4 shows the average bodily pain scores for various formally diagnosed serious illnesses as reported by respondents.

Except for those with asthma, individuals with any of the listed medical conditions report significantly higher bodily pain scores than those who do not have the condition. Average pain differences are largest in the case of arthritis or osteoporosis as well as chronic bronchitis or emphysema, as the pain scores for persons with these illnesses are about 20 points higher compared to persons without such conditions.

Overall, these numbers suggest that the presence of most serious medical ailments is associated with elevated levels of experienced bodily pain.

Table 7.4: Mean bodily pain score for different diagnosed serious illnesses, by gender (0–100 scale)

	Females	Males
Arthritis or osteoporosis		
No	30.5	28.9
Yes	49.6	48.6
Asthma		
No	38.3	35.7
Yes	38.1	31.2
Any type of cancer		
No	37.8	34.1
Yes	45.7	41.6
Chronic bronchitis or emphysema		
No	37.4	33.9
Yes	57.3	51.8
Type 1 diabetes (juvenile-onset)		
No	38.2	34.7
Yes	42.7	37.8
Type 2 diabetes		
No	37.5	33.8
Yes	45.6	40.2
Heart disease		
No	37.1	33.2
Yes	51.9	45.0
High blood pressure or hypertension		
No	35.6	33.0
Yes	42.7	37.5
Any serious circulatory condition		
No	37.2	33.6
Yes	55.8	48.8
Depression		
No	36.6	33.5
Yes	43.1	41.8
Anxiety		
No	37.8	34.7
Yes	39.5	37.9

Note: Questions on diagnosed serious illness were asked in the 2009, 2013, 2017 and 2021 waves. The estimates in this table pool responses from all four waves.

Factors associated with extreme bodily pain

Table 7.5 reports regression results of the individual characteristics associated with suffering from extreme bodily pain, for females and males separately. For indicator variables, such as partnership status, the coefficient is interpreted as the included group's (partnered individuals) likelihood of being in extreme bodily pain compared to those in the reference group (non-partnered individuals). For continuous variables, such as household income, the coefficient is interpreted as the probability of suffering from extreme bodily pain for each unit increase in the variable of interest.

Consistent with the descriptive evidence presented in Figure 7.2 and Table 7.3, the probability of extreme bodily pain is lowest among the youngest (15 to 24) age group. Compared to females aged 15 to 24, females aged 55 to 64 and those aged 65 and older are 4.1 and 4.3 percentage points, respectively, more likely to suffer from extreme physical pain. Males aged 45 to 54 and 55 to 64 are 2.8 and 3 percentage points, respectively, more likely to suffer from extreme bodily pain compared to males aged 15 to 24.

Extreme pain is less likely among individuals with at least a bachelor's degree when compared to those without a degree. Among males, for instance, those with at least a bachelor's degree are 2.2 percentage points less likely to be in extreme pain relative to those without a degree.

Partnered females are less likely to report extreme pain relative to unpartnered females. For men, there is no significant relationship between partnership status and the probability of extreme bodily pain.

There is no difference between employed and unemployed persons in the probability of experiencing extreme pain. Persons not in the labour force, however, are more likely to be in extreme pain compared to employed persons. This latter result in part reflects the fact that a large majority of individuals out of the labour force tend to be older, with older age correlating with a greater tendency to experience extreme physical pain.

The likelihood of extreme pain is inversely related to household equivalised annual disposable income, as for females, for example, each additional $10,000 is associated with a 0.2-percentage-point-lower probability of reporting extreme pain.

Having experienced a serious personal injury or illness in the past 12 months is strongly related to extreme bodily pain. Compared to individuals who did not experience such a life event, among those who did experience such an event the likelihood of being in extreme pain is 8.5 and 6.9 percentage points higher among females and males, respectively. Similarly, being a victim of physical violence in the past 12 months is related to a greater probability of experiencing extreme bodily pain.

Extreme pain is more likely among smokers than among non-smokers. People in poor general health are 10.8 percentage points (females) and 7.7 percentage points (males) more likely to be in extreme pain compared to people who are not in poor general health.

As expected, having a long-term health condition increases the likelihood that an individual will experience extreme physical pain. For example, extreme pain is 8.4 percentage points more probable among females with a long-term health condition relative to females without any long-term health ailment.

For both females and males, immigrants from other (non-main English-speaking) countries are significantly more likely than Australian-born persons to report extreme bodily pain. Among males, immigrants from the main English-speaking countries are roughly 0.7 percentage points less likely than Australian-born males to be in extreme pain.

There are no significant differences between First Nations and non-First Nations individuals in the likelihood of experiencing extreme physical pain.

For females, there is no relationship between the probability of experiencing extreme pain and region of residence. For males, those living in non-major urban areas and in non-urban areas are significantly more likely to report extreme pain compared to males living in major urban regions.

Table 7.5: Factors associated with extreme bodily pain, by gender

	Females	Males
Age (Reference category: 15–24)		
25–34	0.018	0.017
35–44	0.022	0.023
45–54	0.039	0.028
55–64	0.041	0.030
65 and over	0.043	0.017
Educational attainment (Reference category: Less than bachelor's degree)		
Bachelor's degree or higher	–0.016	–0.022
Partnered (Reference category: Not partnered)	–0.009	*ns*
Labour force status (Reference category: Employed)		
Unemployed	*ns*	*ns*
Not in the labour force	0.030	0.035
Household equivalised annual disposable income ($'0,000, December 2023 prices)	–0.002	–0.001
Major life event: Serious personal injury or illness	0.085	0.069
Major life event: Victim of physical violence	0.019	0.018
Smoker	0.010	0.012
Poor general health (SF-36 general health measure)	0.108	0.077
Long-term health condition	0.084	0.061
Immigrant status (Reference category: Australian-born)		
Immigrant, main English-speaking countries	*ns*	–0.007
Immigrant, other countries	0.016	0.013
First Nations	*ns*	*ns*
Region of Residence (Reference category: Major urban)		
Other urban	*ns*	0.005
Non-urban	*ns*	0.008
Number of observations	158,654	139,079

Notes: The table presents mean marginal effects from probit regressions of the predictors of extreme bodily pain. See the Technical Appendix for an explanation of these models. All models also control for survey year. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

Association of extreme bodily pain with mental health and life satisfaction

Why does an emphasis on the alleviation of bodily pain matter? Table 7.6 reports the regression results that indicate how extreme bodily pain is associated with measures of individual wellbeing, in this case mental health (see Box 7.1, page 148) and life satisfaction (see Box 7.3, below), separately for females and males.

Box 7.3: HILDA Survey measure of life satisfaction

The HILDA Survey asks respondents to report on their overall life satisfaction using the question: *All things considered, how satisfied are you with your life overall?*, with response options ranging from 0 (completely dissatisfied) to 10 (completely satisfied).

For both females and males, bodily pain is strongly associated with mental health and life satisfaction. Females and males suffering from extreme bodily pain report on average 6.144 and 7.259 points (on a 0–100 scale) worse mental health, respectively, compared to females and males who are not experiencing extreme physical pain.

Females in extreme pain report 0.314 points (on a 0–10 scale) lower life satisfaction than females who do not live with extreme pain. Similarly, the life satisfaction score for males with extreme bodily pain is on average 0.338 points lower relative to males without extreme pain.

Table 7.6: Association of extreme bodily pain with mental health and life satisfaction

	Mental health (0–100)	Life satisfaction (0–10)
Females		
Extreme bodily pain	–6.144	–0.314
Number of observations	168,273	168,938
Males		
Extreme bodily pain	–7.259	–0.338
Number of observations	147,337	147,942

Notes: The table presents estimates from fixed-effects regression models that show how the experience of extreme bodily pain (scoring 60 or higher on the 0–100 scale) is associated with SF-36 mental health (0–100 scale) and life satisfaction (0–10 scale), as compared to not having extreme bodily pain. See the Technical Appendix for an explanation of these models. All models control for age, education, labour force status, real household equivalised disposable income, partnership status, area of residence and survey year.

8

Psychological distress

8. Psychological distress

Ferdi Botha

Since 2007, the HILDA Survey has included questions on psychological distress every two years. This information was again collected in 2023 and now provides the first post-pandemic estimates of psychological distress in the Australian population.

Within the context of serious efforts to improve mental wellbeing and effectively treat mental ill-health in Australia, this chapter examines the trends in psychological distress over time for several demographic groups of interest. The chapter also examines the factors that jointly determine an individual's probability of being at risk of developing serious mental illness.

Box 8.1: Measure of psychological distress

The psychological distress measure is based on the Kessler-10 (K10) scale, developed by Kessler et al. (2002). Included in the self-completion questionnaire (SCQ), respondents are asked: *In the last four weeks, about how often did you feel …:*

a. tired out for no good reasons?

b. nervous?

c. so nervous that nothing could calm you down?

d. hopeless?

e. restless or fidgety?

f. so restless that you could not sit still?

g. depressed?

h. that everything was an effort?

i. so sad that nothing could cheer you up?

j. worthless?

For each question, possible responses include '*5* all the time', '*4* most of the time', '*3)*some of the time', '*2* a little of the time' and '*1* none of the time'. In the interviewer-administered version of the K10, items *c* and *f* are not asked when responses to items *b* and *e* are 'none of the time'. In the HILDA SCQ, this is not possible. Therefore, responses to items *c* and *f* are set to a value of 1 if responses to items *b* and *e* were 'none of the time' (also see Wooden, 2009). The overall K10 score is then obtained by summing the responses to all items to get a score ranging from 10 (low psychological distress) to 50 (high psychological distress). The K10 can also divide the population into four distinct groups based on the level of psychological distress that describe the risk of serious mental illness, namely 'low' (K10 score: 10–15), 'moderate' (K10 score: 16–21), 'high' (K10 score: 22–29) and 'very high' (K10 score: 30–50). In this chapter, a person is deemed to be in psychological distress if their K10 score is 'high' or 'very high' (thus having a score of 22 or higher).
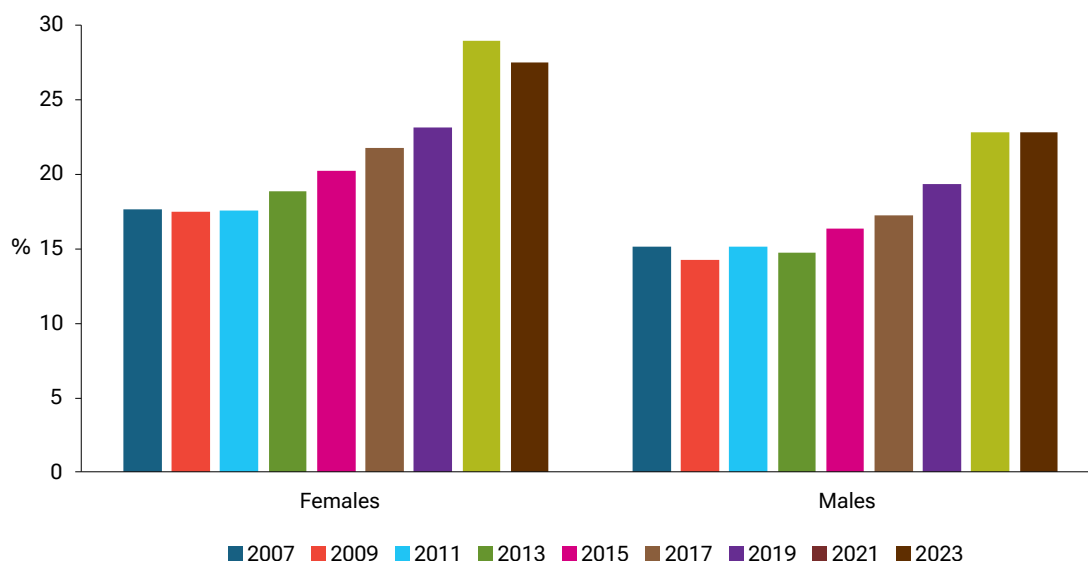

Psychological distress over time

Figure 8.1 depicts the proportion of individuals classified as being in psychological distress between 2007 and 2023. In all years the percentage of females that are psychologically distressed is higher than the percentage of males that are psychologically distressed.

The proportion of people in psychological distress has trended upwards since 2013. In 2013, 18.8% of females and 14.7% of males were distressed. By 2023, 27.5% of females and 22.8% of males were in distress. In the 10 years from 2013 to 2023, the prevalence of psychological distress therefore increased by roughly 55.1% among males and 46.3% among females.

Following the large increase in the prevalence of psychological distress during the pandemic period in 2021, the proportion of females in distress decreased from 28.9% in 2021 to 27.5% in 2023. Among males, distress prevalence remained roughly constant between these years.

Figure 8.1: Prevalence of psychological distress, by gender, 2007 to 2023


Like Figure 8.1, the proportion of individuals in psychological distress over time by age group (Figure 8.2) reveals a similar rising trend. Across all age groups, but especially for those aged 15 to 44, there has been a general increase in the percentage of individuals in psychological distress.

Since 2011, the prevalence of distress among those aged 15 to 24 has risen substantially, from 18.4% to 37.6% by 2023. This equates to an increase in the prevalence of psychological distress of just over 104% in 12 years. Following the large increase in distress for those aged 15 to 24 from 2019 (30.5%) to 2021 (42%), which includes the COVID-19 pandemic period, distress declined by about 4.4 percentage points in 2023. The overall level of distress, however, is still much greater than in 2011.

Note also that there have been large increases in psychological distress for those aged 25 to 34 and 35 to 44. Among those aged 25 to 34, 19.4% were in distress in 2013 compared to 32.2% in 2023. For those aged 35 to 44, 14.8% were in distress in 2013 compared to 26.9% in 2023. In contrast to the trends for respondents aged 15 to 24, for whom distress fell between 2021 and 2023, among those aged 35 to 44 the prevalence of psychological distress increased slightly post-pandemic.

Figure 8.2: Prevalence of psychological distress, by age group, 2007 to 2023
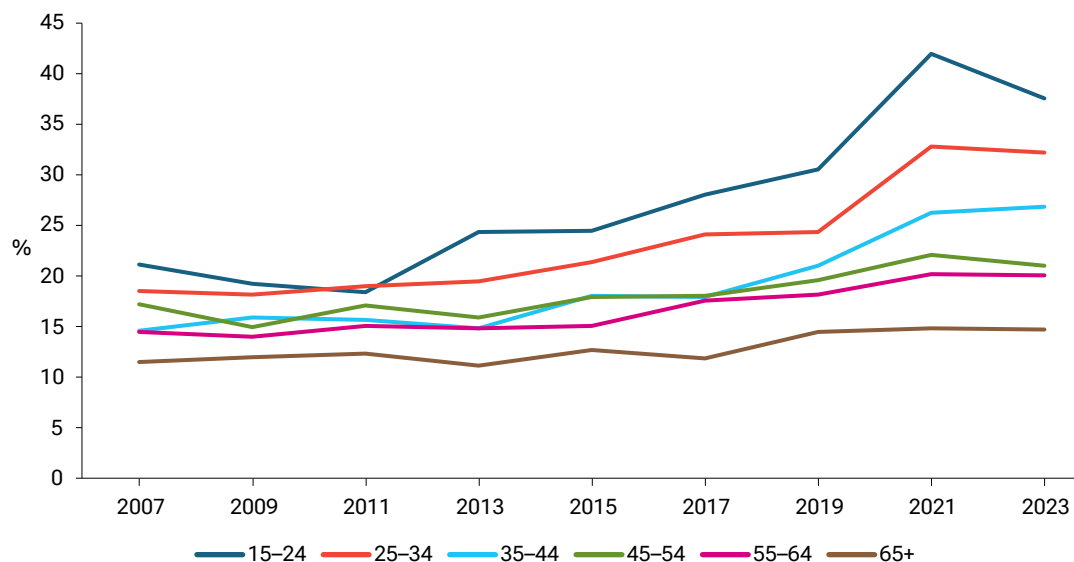
Figures 8.3 and 8.4 break down the age group trends in psychological distress for females and males, respectively. The rising prevalence of psychological distress among those aged 15 to 24 since around 2011 is evident for both females and males, with the relative increase in distress between 2011 and 2023 being larger for females (by 132.5% for females and by 85.3% for males). For those aged 15 to 24 the prevalence of psychological distress decreases from 2021 to 2023, although by 2023 the levels of distress remain substantially higher than in earlier years.

For females, distress has also increased steadily among those aged 25 to 34 since 2011 and those aged 35 to 44 since 2019. For males, distress has increased consistently for those aged 35 to 44, and especially for those in the 25 to 34 age group since 2013. For the latter age group, the prevalence of psychological distress increased from 17.6% in 2011 to 31.6% in 2023, which equates to an almost 80% change. By 2023, male distress prevalence was higher for those aged 25 to 34 than those aged 15 to 24.

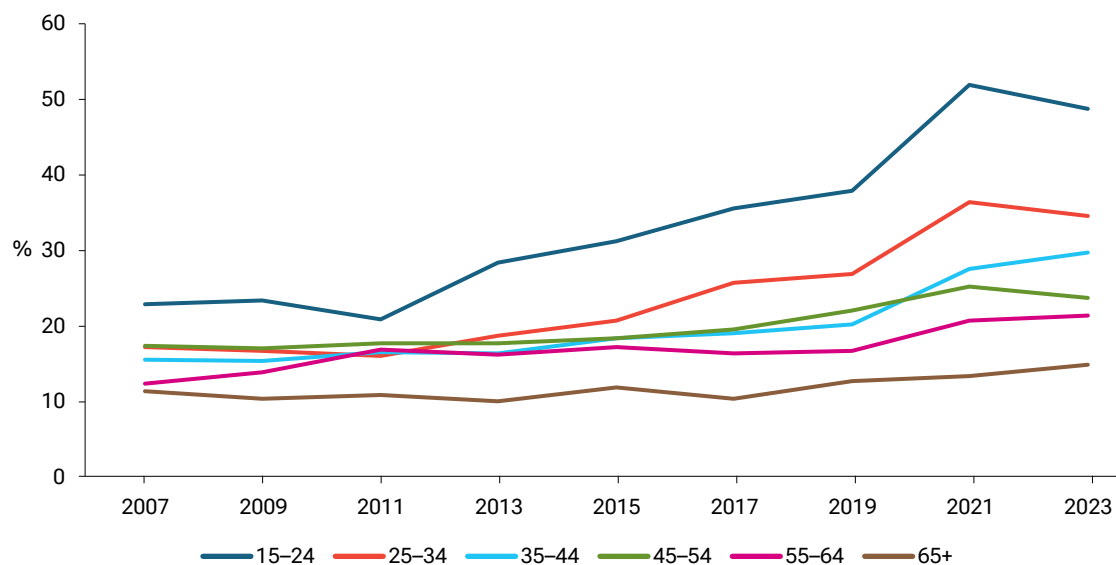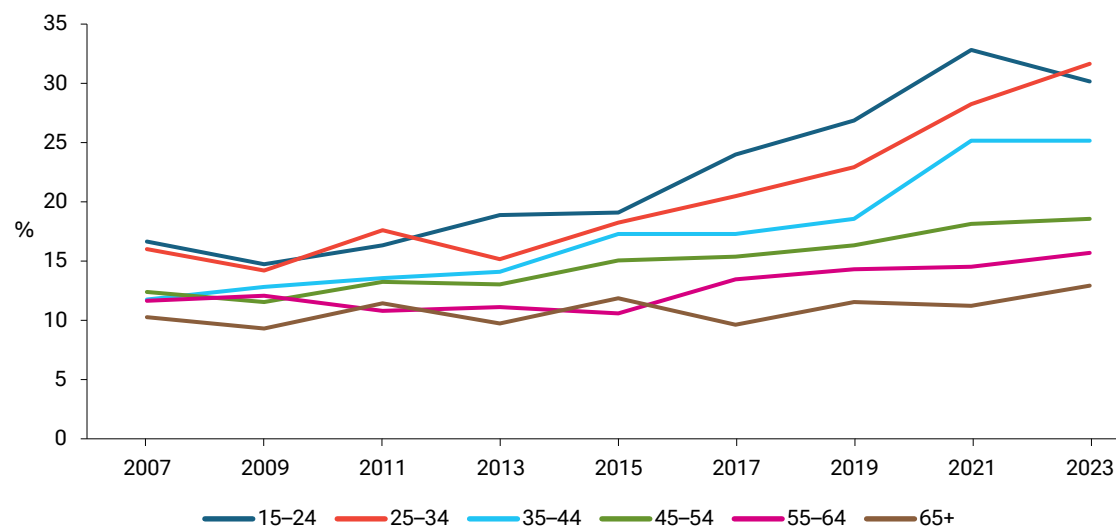**Figure 8.3: Prevalence of psychological distress among females, by age group**

Figure 8.4: Prevalence of psychological distress among males, by age group

Figures 8.5 and 8.6 show how the profile of psychological distress changed over time by plotting the proportion of individuals within each K10 risk category. The general increase in psychological distress over time, as shown in the previous figures, has not only been characterised by a general upward shift in the distribution of psychological distress but has also generally coincided with a movement of a greater proportion of individuals into the 'high' and 'very high' risk categories.

The proportion of people in the 'low' risk category has tended to decline over time. Among females (Figure 8.5), the prevalence of individuals in the 'high' risk category has risen over time, to 16.4% in 2023. The percentage of females in the 'very high' risk group has also increased with time, although there was a slight decline between 2021 (12.5%) and 2023 (11.1%).

Among males (Figure 8.6), the proportion of individuals in the 'low' risk group has declined from 64.9% in 2007 to 52.5% in 2023. The proportion in the 'moderate' category has risen to 24.7% in 2023. The prevalence of males in the 'very high' risk group has also grown over time, and in 2023 8.6% were classified as being at 'very high' risk.

These trends suggest that the observed increasing trend in psychological distress scores has been significant, to the extent that a greater proportion of individuals are at high risk of developing serious mental illness.

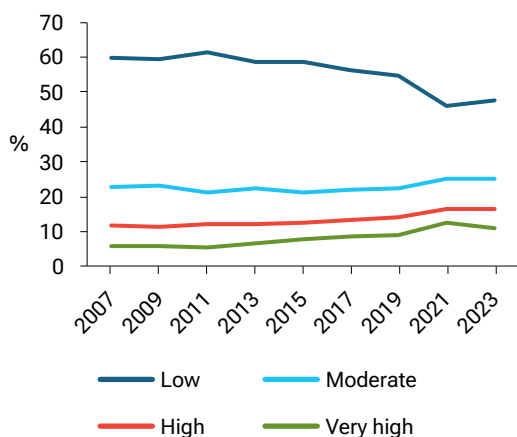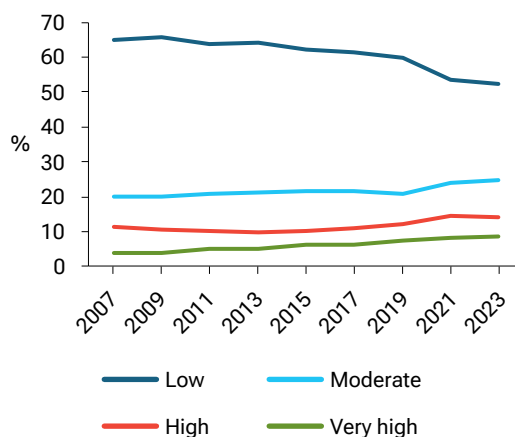**Figure 8.5: Proportion of females in each K10 risk category**

Figure 8.6: Proportion of males in each K10 risk category

Determinants of psychological distress

This section examines the individual characteristics that jointly determine the likelihood of reporting being in psychological distress, that is, being classified as at 'high' or 'very high' risk of psychological distress on the K10 scale.

Table 8.1 reports the results from probit regressions in the form of mean marginal effects, for females and for males. For indicator variables (such as educational attainment or labour force status), the estimates are interpreted as the change in the probability of psychological distress if the characteristic is present compared to the reference category. In the case of continuous variables (such as household equivalised disposable income or general health), the estimates reflect the effect of a one-unit increase in this variable on the probability of being in psychological distress.

As expected, based on the findings shown in Figures 8.2 to 8.4, the probability of being in distress declines with age. For example, females aged 55 to 64 are 22.1 percentage points less likely to be in distress compared to females aged 15 to 24, and distress is 13.2 percentage points less likely for males aged 45 to 54 compared to males aged 15 to 24. Females aged 65 and over are 27.5 percentage points less likely than those aged 15 to 24 to be in psychological distress.

A higher educational attainment is related to a lower probability of being psychologically distressed. For example, psychological distress is 4.6 percentage points less likely among females with at least a bachelor's degree than among females with less than a degree.

Unemployed persons are more likely to be in distress relative to persons who are employed or not in the labour force. Employed males, for instance, are on average 4.1 percentage points less likely than unemployed males to experience psychological distress.

For each additional $10,000 increase in household equivalised annual disposable income, the likelihood of psychological distress declines on average by 0.2 percentage points for males. There is no significant relationship between household disposable income and psychological distress among females.

Being on income support is associated with a greater likelihood of reporting psychological distress. The probability of distress among female income support recipients, for example, is 3 percentage points greater than among females who are not on income support.

An improvement in the SF-36 general health score is associated with a lower probability of psychological distress.

Females and males with a disability that moderately or severely restricts work are 3.2 and 2.2 percentage points, respectively, more likely to be in psychological distress than persons without such disability.

Psychological distress is less likely among partnered individuals than among non-partnered individuals, and distress is less likely for persons with children younger than 15 than for those who do not have children in this age range.

The relationship between psychological distress and loneliness is very strong. Females and males who are categorised as lonely (see Box 8.2, below) are 18.6 and 15.6 percentage points, respectively, more likely to be in psychological distress compared to those who are not lonely.

> **Box 8.2: HILDA Survey measure of loneliness**
>
> In every wave of the HILDA Survey, a question has been included in the SCQ asking respondents about the extent of their agreement with the following statement: *I often feel very lonely*. Response options range from 1 (strongly disagree) to 7 (strongly agree), with a higher score implying higher levels of loneliness. In this chapter, a person is categorised as 'lonely' if they provide a response of 5 or higher (also see Kung et al., 2021).

Related to feelings of loneliness, the findings support the idea that social relationships are important for mental wellbeing. Seeing friends and family more often is associated with a lower probability of being in psychological distress. Among females, for example, distress is 4 percentage points less likely for persons who see family and friends at least weekly when compared to persons who make such connections only once every three months or less. Relatedly, a stronger perception of having a greater quantity of friends (see Box 10.1, page 176) is significantly associated with lower psychological distress for both females and males.

For both females and males, psychological distress is more likely among persons in social housing and private rentals relative to outright homeowners. In addition, males who own their homes with a mortgage are 0.9 percentage points more likely to be in distress relative to males who own their homes outright. Compared to males who are outright homeowners, males in social housing and in private rentals are 6.6 and 2.8 percentage points, respectively, more likely to report being in psychological distress.

After adjusting for other factors, First Nations Australians and non-First Nations Australians do not differ significantly in terms of their probability of being in psychological distress.

The probability of psychological distress is 1.8 percentage points lower for male immigrants from the main English-speaking countries than for Australian-born males. Relative to Australian-born individuals, both female and male immigrants from other countries are significantly more likely to experience psychological distress.

Individuals living in major urban areas are more likely to report psychological distress compared to individuals living in non-urban areas. In addition, males in other urban areas are 1.5 percentage points more likely to be distressed than males living in non-urban areas.

For males, there are mostly no major differences in psychological distress according to state of residence. Males living in South Australia are 1.1 percentage points more likely to be in distress compared to males residing in New South Wales. Among females, those living in Victoria are also more likely to experience psychological distress than are females in New South Wales. But the probability of being in psychological distress is significantly lower for people in Queensland, South Australia, Tasmania and the Northern Territory relative to those in New South Wales.

Finally, the survey year estimates imply a higher likelihood of psychological distress during the past eight years or so than in 2007, when the HILDA Survey first measured psychological distress. In 2019, females and males were 3.5 and 3 percentage points, respectively, more likely to be distressed than in 2007. Compared to 2007, in 2023 the probability of psychological distress was 7.9 percentage points greater for females and 6.3 percentage points greater for males.

Table 8.1: Determinants of psychological distress, by gender, 2007 to 2023

	Females	Males
Age (Reference category: 15–24)		
25–34	–0.070	–0.019
35–44	–0.128	–0.079
45–54	–0.160	–0.132
55–64	–0.221	–0.165
65 and over	–0.275	–0.200
Educational attainment (Reference category: Less than bachelor's degree)		
Bachelor's degree or higher	–0.046	–0.016
Labour force status (Reference category: Unemployed)		
Employed	–0.059	–0.041
Not in the labour force	–0.047	–0.020
Household equivalised annual disposable income ($'0,000, December 2023 prices)	ns	–0.002
Income support recipient	0.030	0.019
SF-36 general health measure (0–100 scale)	–0.006	–0.005
Disability with moderate or severe work restriction	0.032	0.022
Partnered (Reference category: Not partnered)	–0.032	–0.015
Has children younger than 15	–0.020	–0.011
Lonely	0.186	0.156
Frequency of social connection (Reference category: Once every 3 months or longer)		
At least once a month	–0.024	–0.014
At least once a week	–0.040	–0.027
Has many friends (1–7 scale)	–0.017	–0.015
Home tenure group (Reference category: Owner without mortgage)		
Social housing	0.026	0.066
Private rental	0.020	0.028
Owner with mortgage	ns	0.009
First Nations	ns	ns
Country of birth (Reference category: Australian-born)		
Immigrant from main English-speaking country	ns	–0.018
Immigrant from country other than main English-speaking countries	0.049	0.059
Region of residence (Reference category: Non-urban)		
Major urban	0.016	0.019
Other urban	ns	0.015
State of residence (Reference category: New South Wales)		
Victoria	0.011	ns
Queensland	–0.025	ns
South Australia	–0.015	–0.011
Western Australia	ns	ns
Tasmania	–0.019	ns
Northern Territory	–0.037	ns
Australian Capital Territory	ns	ns
Survey year (Reference category: 2007)		
2009	ns	ns
2011	ns	ns
2013	ns	ns
2015	0.019	ns
2017	0.032	ns
2019	0.035	0.030
2021	0.102	0.072
2023	0.079	0.063
Number of observations	66,939	58,628

Notes: The table presents mean marginal effects from probit regression models of the determinants of being in psychological distress. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

9 Blood donation

9. Blood donation

Ferdi Botha

For the first time, Wave 23 of the HILDA Survey asked Australians whether they had ever donated blood, which makes it possible to examine the topic of blood donation at a national level. A stable and secure blood supply is crucial for Australia's health system, supporting the production of numerous blood products used in the treatment of illnesses, in emergency situations and for medical research. About a third of Australians will require additional blood at some point in their lifetime (National Blood Authority Australia (NBAA), 2024), in turn requiring 1.6 million blood donations annually for a sufficient stock of blood (Australian Red Cross Lifeblood (ARCL), 2024).

This chapter reports the prevalence of blood donation (see Box 9.1, below) among Australians at least 18 years of age, and provides an overview of the individual characteristics associated with being a blood donor.

> **Box 9.1: Blood donation**
>
> In Wave 23 of the person questionnaire, respondents were asked: *Have you ever donated blood?* In this case, 'blood' refers to all blood products (i.e., whole blood, plasma and platelets). Respondents who responded 'yes' to this question were subsequently asked whether they had donated blood in the last 12 months. The age eligibility for blood donation requires that an individual must be at least 18 years of age, and those older than 75 must have donated at least once prior to turning 75.

Prevalence of blood donation

Figure 9.1 shows (on the left) the proportion of women and men who report having donated blood at least once. Roughly 35.8% of women and 37.8% of men report having ever donated blood. Among these respondents who have donated blood, 14.9% and 14.4% of women and men, respectively, had donated blood in the 12 months prior to interview.

Figure 9.1: Proportion of persons donating blood, by gender

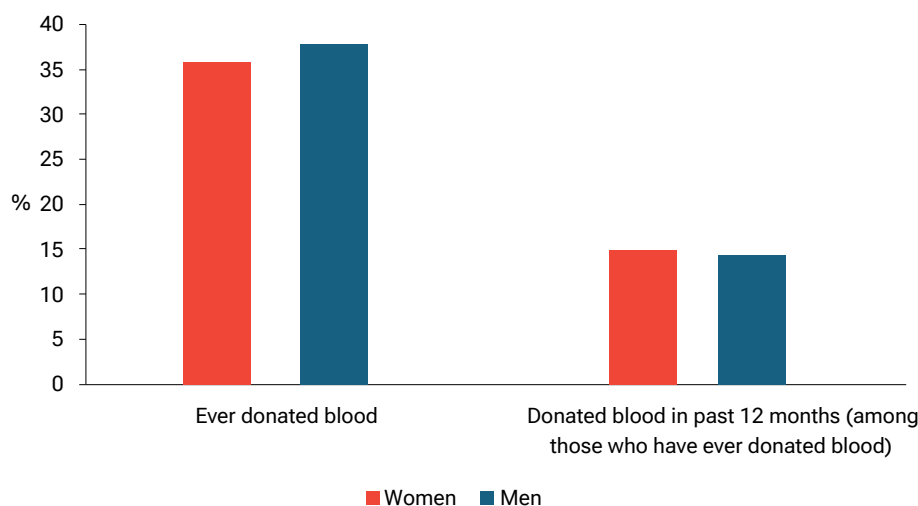Table 9.1 reports the prevalence of blood donation for different age groups. The proportion of individuals who have ever donated blood generally rises with age, as older individuals have had more opportunities to do so. Whereas 12.7% and 28.9% of those aged 18 to 24 and 25 to 34, respectively, have donated blood at least once in their lifetimes, among those aged 55 to 64 and 65 to 74 this proportion is 44.7% and 44.9%, respectively.

Among the subgroup of persons who indicated that they had donated blood at least once, blood donation in the past 12 months is more prevalent among younger age groups. For example, 43.6% of blood donors aged 18 to 24 reported donating blood in the past year, whereas 13.6% of blood donors aged 35 to 44 and 12.8% of blood donors aged 55 to 64 have done so. Only 7.1% of blood donors aged 65 to 74 donated blood in the 12 months prior to interview.

Table 9.1: Proportion of persons donating blood, by age group (%)

	Ever donated blood	Of those who have ever donated blood, donated blood in past 12 months
18–24	12.7	43.6
25–34	28.9	25.5
35–44	38.6	13.6
45–54	41.6	17.7
55–64	44.7	12.8
65–74	44.9	7.1
75 and over	45.9	1.5*

Note: * Estimate not reliable.

Blood donation prevalence for selected subgroups

For selected subgroups, the proportions of women and men who have donated blood at least once are reported in Table 9.2.

As also observed in Table 9.1 for women and men grouped together, Table 9.2 shows that older age groups tend to have higher proportions of individuals who have ever donated blood. For example, 30.4% of women aged 25 to 34 have donated blood and 44.5% of women aged 55 to 64 have donated blood. About 38.3% of men in the 35 to 44 age group report having donated blood, whereas 49% of men aged 65 to 74 have donated blood.

The prevalence of blood donation is higher among higher-educated individuals. For example, 46.7% of men with at least a bachelor's degree have donated blood, compared to 33.7% of men with less than a bachelor's degree.

Among women, blood donation rates are highest among employed persons (36.6%) and lowest among unemployed persons (29.1%). Men not in the labour force have the highest prevalence of blood donation (42.5%) and the prevalence of blood donation among unemployed men is 23.2%.

Across the bottom four household equivalised annual disposable income quintiles, rates of blood donation are relatively similar. The highest prevalence is among women and men in the highest income quintile, at around 44% to 46%.

Blood donation prevalence is slightly higher among persons who are not in poor general health than among those who do suffer from poor general health.

Among women, 36.3% of those without a long-term health condition have donated blood and 34.9% of those with a long-term health condition have donated. In contrast, 36.9% of men without a long-term health condition have donated blood, whereas 40.1% of men with a long-term health condition have done so.

Blood donation is less prevalent among individuals in poor mental health than among individuals who are not in poor mental health. Among men, for example, 32.8% of those in poor mental health have donated blood, compared to 38.8% among those who are not in poor mental health.

Blood donations are more prevalent among partnered individuals than among non-partnered persons. A slightly higher proportion of people without children below 15 years have donated blood than people with at least one child younger than 15.

Individuals have relatively similar blood donation rates across the various regions of residence, with rates being highest among women in non-urban areas (37.7%) and men in other non-major urban areas (38.3%).

In relation to immigrant status and First Nations identity, blood donation is most prevalent among immigrants from the main English-speaking countries. Blood donation is lowest among First Nations Australians. Among immigrants from other countries, 24.4% of women have donated blood compared to 36.2% of men.

Table 9.2: Proportion of persons who have ever donated blood, by gender (%)

	Women	Men
Age		
18–24	13.1	12.3
25–34	30.4	27.3
35–44	38.8	38.3
45–54	40.9	42.2
55–64	44.5	44.8
65–74	41.1	49.0
75 and over	37.9	55.1
Educational attainment		
Less than bachelor's degree	31.3	33.7
Bachelor's degree or higher	43.6	46.7
Labour force status		
Employed	36.6	41.0
Unemployed	29.1	23.2
Not in the labour force	34.8	42.5
Household equivalised annual disposable income (December 2023 prices)		
Bottom quintile	28.8	36.2
Second quintile	35.0	36.5
Third quintile	34.7	32.6
Fourth quintile	37.4	36.9
Top quintile	43.7	45.8
SF-36 general health measure		
Not in poor general health	36.4	37.9
In poor general health	32.3	37.3
Long-term health condition		
No	36.3	36.9
Yes	34.9	40.1
SF-36 mental health measure		
Not in poor mental health	37.2	38.8
In poor mental health	30.5	32.8
Partnered		
No	30.7	28.9
Yes	39.0	42.7
Children		
No children < 15	36.2	37.8
Children < 15	34.9	37.9
Region of residence		
Major urban	35.8	38.0
Other urban	34.9	38.3
Non-urban	37.7	35.0
Immigrant status and First Nations identity		
Non-First Nations Australian-born	38.2	37.0
First Nations	21.7	26.7
Immigrant, main English-speaking countries	40.9	46.3
Immigrant, other countries	24.4	36.2

Factors associated with having ever been a blood donor

Table 9.3 reports regression results of the individual characteristics associated with having ever donated blood.

Consistent with the descriptive evidence in Tables 9.1 and 9.2, the likelihood of having donated blood at least once increases with age. For example, women aged 45 to 54 and 65 to 74 are 24.9 and 32 percentage points, respectively, more likely to have donated blood compared to women aged 18 to 24. Relative to men aged 18 to 24, men aged 65 to 74 and 75 and older are 39.1 and 46.1 percentage points, respectively, more likely to have donated blood at least once.

Individuals with at least a bachelor's degree are more likely to be blood donors than those with less than a bachelor's degree.

There is no significant relationship between the probability of donating blood and partnership status or an individual's labour force status.

Blood donation is more likely among women in all higher income quintiles when compared to women in the bottom quintile. For instance, women in the top income quintile are 10% more likely than women in the bottom quintile to be blood donors. The relationship is weaker among men, with only men in the top income quintile being 8.1 percentage points more likely to donate blood than men in the lowest quintile.

There is no relationship between general health status and the probability of being a blood donor. The likelihood of blood donation is also not significantly related to poor mental health status.

Women with a long-term health condition are 3.1 percentage points less likely to be blood donors than women with no long-term health condition. Among men, there is no relationship between blood donor status and having a long-term health condition.

Because the act of blood donation is a form of pro-social behaviour that benefits others, we here consider how volunteering or charity work relates to blood donation. Volunteering (see Box 9.2, below) is associated with a greater likelihood of blood donation. Women and men who use at least some of their time to engage in volunteering activities are 9.1 and 4 percentage points, respectively, more likely to be blood donors relative to women and men who never volunteer.

> **Box 9.2: Volunteering**
>
> In the self-completion questionnaire (SCQ), respondents are asked to report how much time they spend in a typical week on 'volunteer or charity work (e.g., canteen work at the local school, unpaid work for a community club or organisation)'. Respondents are classified as engaging in volunteering if they report having spent any time on such activities.

For both men and women, the likelihood of blood donation does not differ between Australian-born persons and immigrants from main English-speaking countries. But immigrants from other countries are significantly less likely than Australian-born individuals to be blood donors. For example, the probability of being a blood donor is 19.1 percentage points lower for female immigrants from other countries compared to Australian-born women.

First Nations women are 12.9 percentage points less likely than non-First Nations women to be blood donors, whereas for men there is no significant difference by First Nations status in the probability of being a blood donor.

There is no relationship between region of residence and the likelihood of blood donation among men. Among women, those residing in other (non-major) urban areas are 3.7 percentage points less likely to be blood donors compared to those living in major urban areas.

Table 9.3: Factors associated with having ever been a blood donor, by gender

	Women	Men
Age (Reference category: 18–24)		
25–34	0.151	0.118
35–44	0.244	0.235
45–54	0.249	0.265
55–64	0.312	0.302
65–74	0.320	0.391
75 and over	0.319	0.461
Educational attainment (Reference category: Less than bachelor's degree)		
Bachelor's degree or higher	0.110	0.104
Partnered (Reference category: Not partnered)	*ns*	*ns*
Labour force status (Reference category: Employed)		
Unemployed	*ns*	*ns*
Not in the labour force	*ns*	*ns*
Household equivalised annual disposable income (Reference category: Bottom quintile)		
Second quintile	0.064	*ns*
Third quintile	0.058	*ns*
Fourth quintile	0.072	*ns*
Top quintile	0.100	0.081
In poor general health (SF-36 general health measure)	*ns*	*ns*
In poor mental health (SF-36 mental health measure)	*ns*	*ns*
Long-term health condition	–0.031	*ns*
Volunteer	0.091	0.040
Country of birth and immigrant status (Reference category: Australian-born)		
Immigrant, main English-speaking countries	*ns*	*ns*
Immigrant, other countries	–0.191	–0.097
First Nations	–0.129	*ns*
Region of residence (Reference category: Major urban)		
Other urban	–0.037	*ns*
Non-urban	*ns*	*ns*
Number of observations	7,225	6,081

Notes: The table presents mean marginal effects from probit regression models of the predictors of having ever been a blood donor. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

10

Friendships

10. Friendships

Inga Laß

Friendships are an important part of many people's lives. However, our friendship networks and the way we connect with friends can change with our living circumstances and over time as societies change. Each year, the HILDA Survey asks respondents whether they believe they have many friends and how often they socialise with friends and relatives outside their own household. This chapter looks at how the perceived quantity of friends differs across time and between groups of people and how often people meet their friends and relatives. It also investigates the relationship between friendships and various measures of support and wellbeing.

Trends in perceived quantity of friends, 2001 to 2023

Each year, the HILDA Survey asks respondents in the self-completion questionnaire (SCQ) to provide their agreement with the statement 'I seem to have a lot of friends' on a scale from 1 (strongly disagree) to 7 (strongly agree). For ease of interpretation, the seven-point scale can be split into three parts, with the mid-point of the scale (4 points) indicating a relatively neutral position, whereas 1 to 3 points indicate disagreement and 5 to 7 points indicate agreement with the statement.

Table 10.1 presents people's level of agreement with the statement 'I seem to have a lot of friends' in 2023, for all persons and separately for males and females. Focusing on the top part of the scale shows that only one in 10 (9.9%) Australians score 7 points and thus strongly agree that they have many friends. Another 14.8% and 17% score 6 and 5 points, respectively. Summing up the shares of people selecting between 5 and 7 points, we find that only a minority of Australians—about 42%— tends to agree that they have many friends. Close to one in four people (23.3%) have a neutral position. By contrast, more than a third (35%) score between 1 and 3 points, indicating that they do not believe they have many friends. Among these, close to one in 10 (9.6%) chose the lowest possible score of 1 point.

Table 10.1: Agreement with the statement 'I seem to have a lot of friends', 2023 (%)

	← Disagreement			Neutral	Agreement →			
	1 Strongly disagree	2	3	4	5	6	7 Strongly agree	
Male	9.3	11.8	14.3	23.9	17.2	13.9	9.7	100.0
Female	9.8	11.2	13.7	22.8	16.8	15.7	10.1	100.0
Total	9.6	11.5	14.0	23.3	17.0	14.8	9.9	100.0

Separating by gender, Table 10.1 shows that females are slightly more likely to believe they have many friends than males. Whereas 10.1% of females score 7 points, only 9.7% of males do so. Overall, close to 43% of females tend to agree with the statement (summing up the shares of people scoring 5 to 7 points), compared to close to 41% of males. On the other hand, there are also slightly more females choosing the lowest possible score of 1 point (9.8%) than males (9.3%). Summing up the shares of those scoring between 1 and 3 points, however, shows that overall males are slightly more likely to disagree that they have many friends than females, with 35.4% compared to 34.7%.

The following part examines the average agreement with the statement 'I seem to have a lot of friends' in greater detail. For reasons of brevity, we will refer to the level of agreement with this statement as the 'perceived quantity of friends' (see also Box 10.1, page 176). Figure 10.1 presents the time trend in the average perceived quantity of friends over the 2001–2023 period for all persons and separately by gender. Between 2001 and 2010, the average perceived quantity of friends remained relatively stable at around 4.6 points. However, after 2010, the quantity of friends saw a significant and steady decline. This decline was accelerated during the COVID-19 period, when many Australians were subject to lockdowns and social distancing regulations, and it was thus more difficult to maintain personal contact with friends. The perceived quantity of friends declined from an average of 4.6

points in 2010 to 4.3 points in 2019 and 4.1 points in 2021. After the end of the pandemic, the quantity of friends did not recover but remained on the same low level of 4.1 points until 2023. Overall, this signifies a substantial drop of half a point (0.5) on the 1 to 7 scale over the 2001–2023 period.

Box 10.1: HILDA Survey measure of the perceived quantity of friends

In every wave of the HILDA Survey, a question has been included in the SCQ asking respondents the extent of agreement with the following statement: *I seem to have a lot of friends.* Response options range from 1 (strongly disagree) to 7 (strongly agree), with a higher score implying a larger perceived quantity of friends.

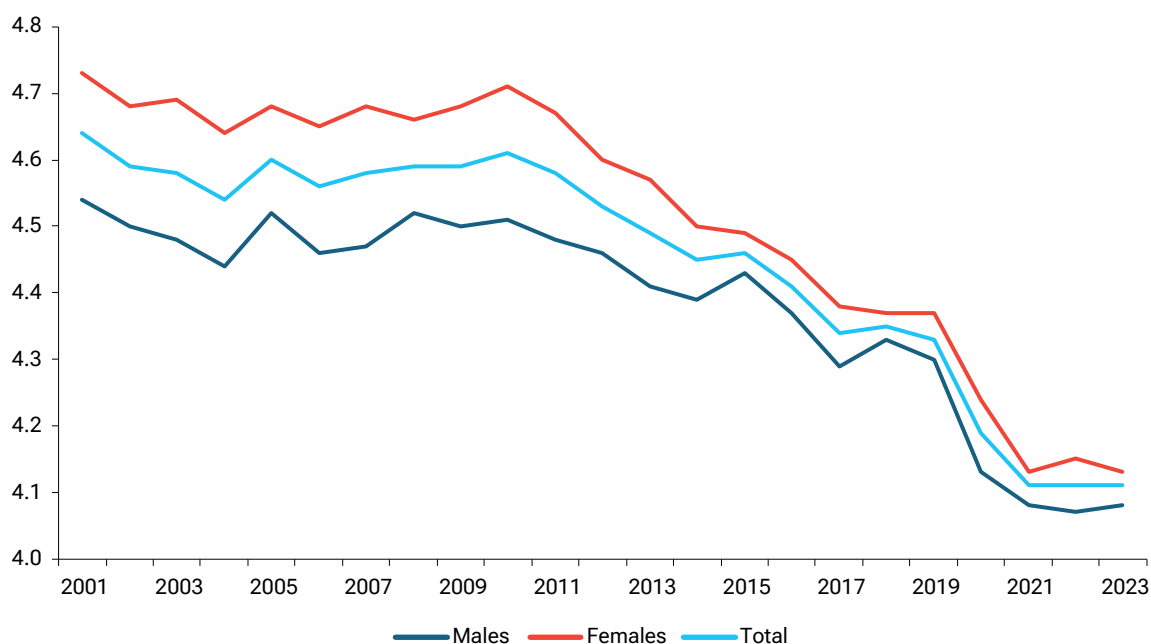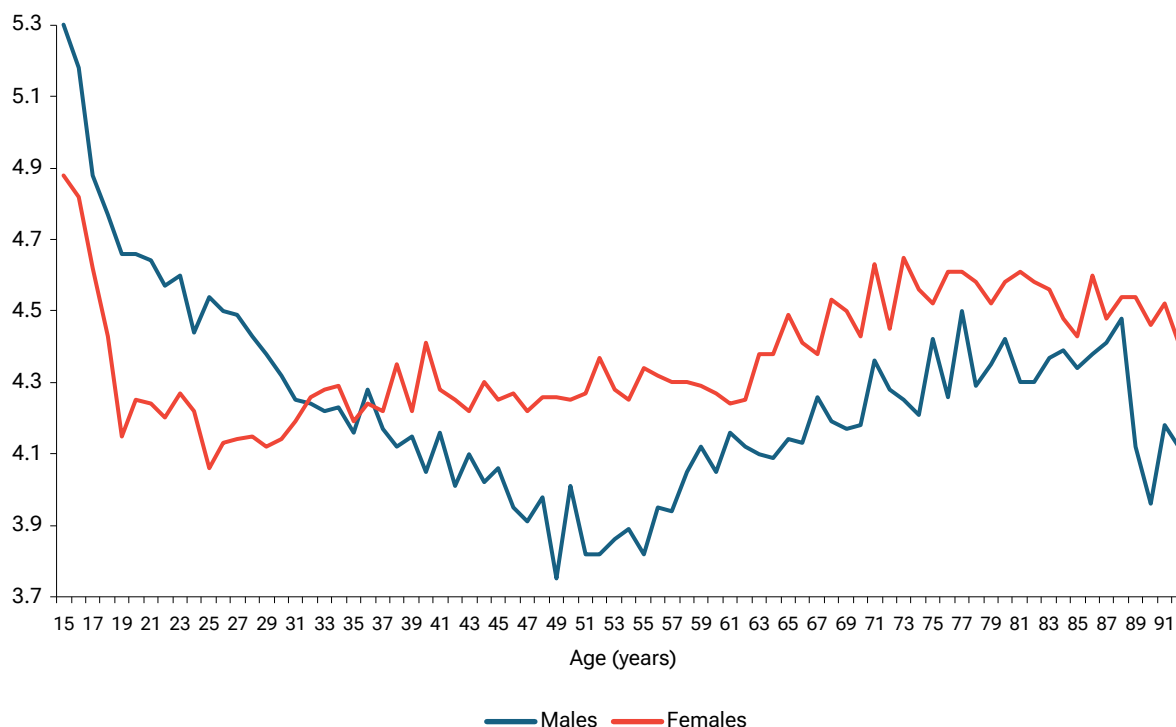**Figure 10.1: Mean perceived quantity of friends (1–7 scale)**

Figure 10.1 also shows marked gender differences in friendship trends. Across the period, females showed a larger perceived quantity of friends than males. However, this gap was larger over the first 10 years than at the end of the period. Whereas in 2001 females averaged 4.7 points compared to 4.5 points for males, they both averaged around 4.1 points in 2023. Females' perceived quantity of friends thus declined by 0.6 points and males' by 0.5 points.

Another factor that matters significantly for the size of the friendship network is a person's phase of life. Figure 10.2 shows the average perceived quantity of friends separately for males and females and for each year of life between 15 and 92 years. To obtain a larger sample, these values are based on pooled data from the last 10 years. The cut-off at age 92 was chosen given there are fewer than 50 male respondents in the years above. The figure shows non-linear relationships between age and the perceived quantity of friends that vary significantly between the genders. Among both males and females, the youngest age group of 15-year-olds has the largest perceived quantity of friends, averaging 5.3 points for males and 4.9 points for females. Until age 19, the perceived quantity of friends decreases sharply among both genders, but the trajectories after this age vary visibly by gender. For males, the quantity of friends continues to decline over the next three decades of life until reaching its lowest point among men aged in their late 40s and early 50s with around 3.8 to 4.0 points. Beginning from the mid-50s, men's friendship networks grow again and reach between 4.3 and 4.5 points in the late 70s and 80s.

The age pattern in the perceived quantity of friends is very different for females. The quantity of friends reaches its lowest points between 25 and 30 years, with around 4.1 points. After age 30, the

quantity of friends grows until the 70s, where it reaches around 4.6 to 4.7 points. From about age 35 onwards, women's perceived quantity of friends is greater than men's at all ages. The gap is particularly large in the early 50s with more than a 1.1-point difference between women and men.

Figure 10.2: Mean perceived quantity of friends by age, 2014 to 2023 (pooled) (1–7 scale)

Looking at the trends over time in the perceived quantity of friends according to age group, as shown in Figure 10.3 for males and Figure 10.4 for females, reveals that the trend has been uneven across age groups. At the beginning of the period, in 2001, those aged 15 to 24 had by far the greatest perceived quantity of friends, averaging 5.1 points for males and 5.0 points for females. By contrast, males and females in the middle age groups of 35 to 44 years and 45 to 54 years had the smallest quantity of friends, with 4.3 to 4.4 points for males and 4.6 points for females. One visible gender difference is that in 2001, males aged 25 to 34 years had the second largest perceived quantity of friends among all males, whereas females in this age group only had a medium quantity of friends compared to other females.

Between 2001 and the COVID-19 year of 2021, all age groups among both genders saw a decline in the perceived quantity of friends. This drop was most marked for the youngest age group, with 0.9 points for females and 0.7 points for males. Females aged 25 to 34 also experienced a 0.7-point decline until 2021. Moreover, since the end of the pandemic, the perceived quantity of friends has started to recover only for very few groups, and only very modestly (by a maximum of 0.1 points until 2023). By contrast, among males and females aged 24 to 34 and 35 to 44 years friendships have continued to decline until 2023.

Despite the significant decline in the perceived quantity of friends, the youngest and second youngest age groups have remained the groups with the most friends across the period among males. By contrast, among females, the drops in the quantity of friends among the two youngest age groups were so significant that those aged below 25 years moved from having the most friends to a middle position, whereas those aged 25 to 34 years moved from a middle position to becoming the group with the least perceived friends. By contrast in 2023, women aged 65 and over have the largest perceived quantity of friends of all females.

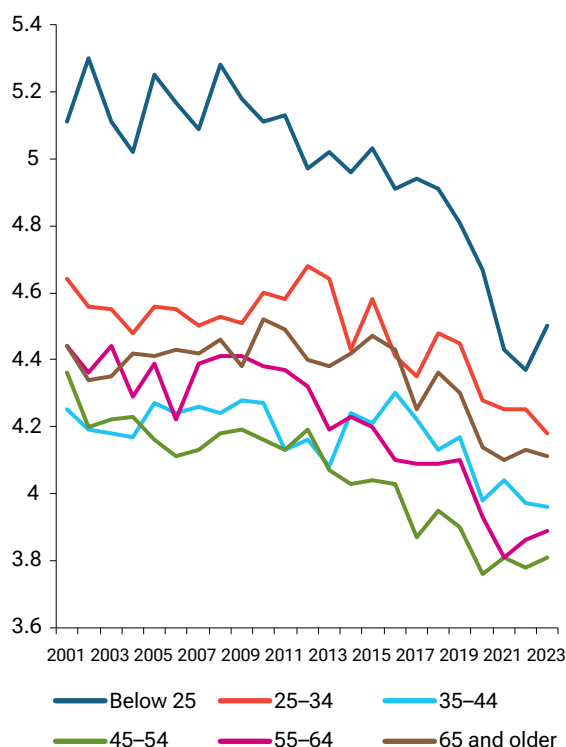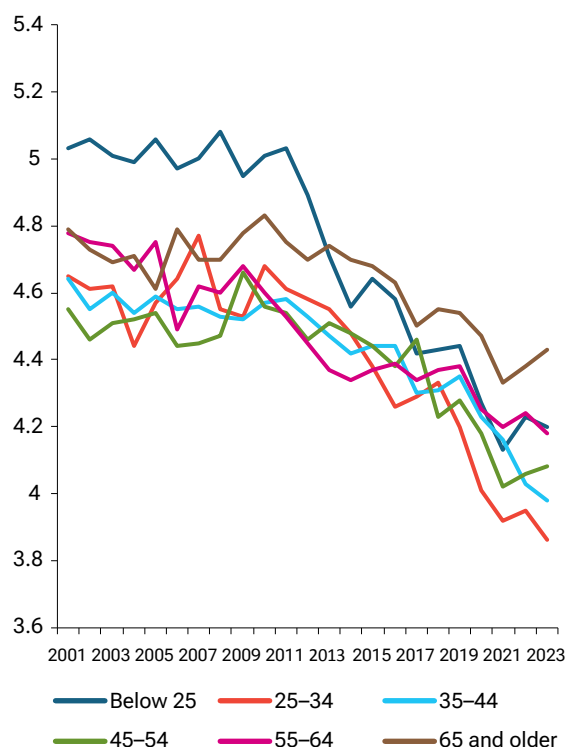**Figure 10.3: Mean perceived quantity of friends, males, by age group (1–7 scale)**

Figure 10.4: Mean perceived quantity of friends, females, by age group (1–7 scale)
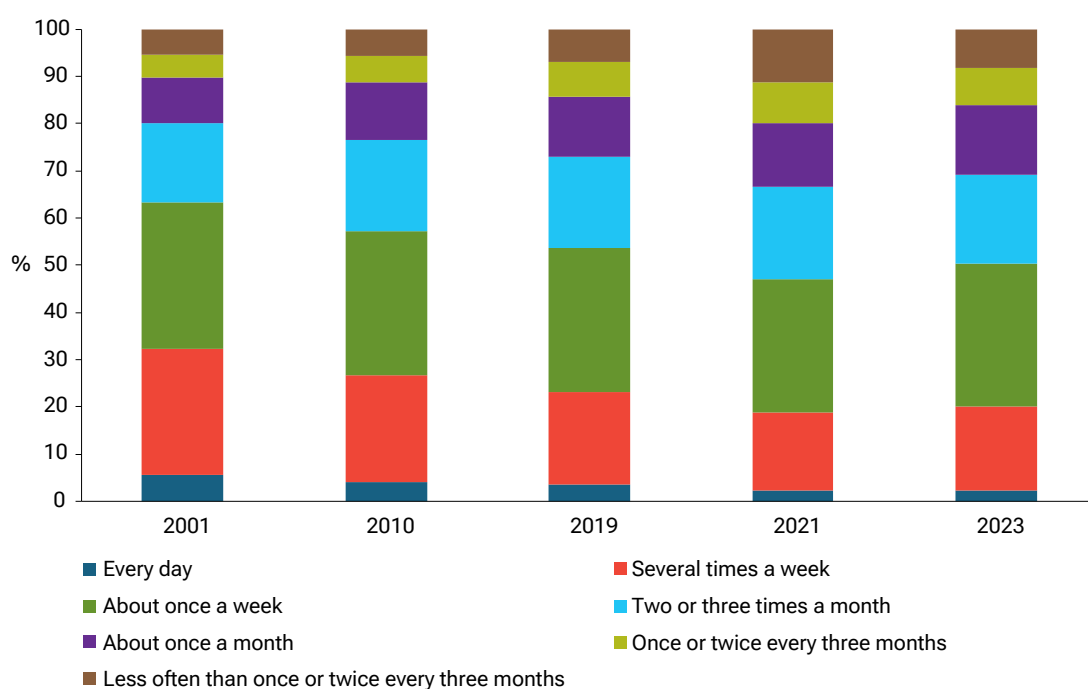

Socialising with friends

Figure 10.5 provides information on how often Australians socialise with others, that is, get together socially with friends or relatives not living in the same household. For the year 2023, it shows that a large proportion of people (30.3%) see their friends or relatives about once per week. The second largest group are those socialising two to three times per month with 18.8%, followed by those socialising several times per week with 17.7% and those socialising about once per month (14.9%). A sizeable minority gets together with friends or relatives less than once per month, either once or twice every three months (7.9%) or even less often (8.2%). On the other end of the spectrum, there is a very small group who meet their friends or relatives on a daily basis (2.4%).

Comparing the frequency of socialising in 2023 with that in 2001, which is also displayed in Figure 10.5, shows that people have substantially decreased their frequency of socialising over the past two decades. In particular, the share of people meeting friends or relatives several times per week has dropped significantly, from 26.9% to 17.7%, and the share of those socialising on a daily basis has more than halved, from 5.5% to 2.4%. Overall, the share of people who meet friends and relatives at least on a weekly basis dropped from almost two thirds (63.3%) to about half (50.3%). On the other hand, the share of people meeting friends or relatives less than once per month has increased from 10.3% to 16.1%.

Figure 10.5 shows that the frequency of socialising declined continuously between 2001 and 2021, but with the drop being particularly marked in the short period between 2019 and 2021. In particular, the share of people socialising very rarely, that is, less than once or twice every three months, increased from 6.9% in 2019 to 11.2% in 2021. The COVID-19 pandemic, which greatly restricted socialising with people outside the household for many Australians, thus reinforced an existing long-term trend towards less personal contact with friends and relatives. Furthermore, in 2023, well after any COVID-19-related restrictions eased, the socialising frequency is still lower than it was before the pandemic. In particular, socialising more than once per week is still less common in 2023 than it was in 2019, whereas the share of people socialising less than once a month is still higher than before the pandemic.

Figure 10.5: Frequency of getting together socially with friends and relatives living elsewhere

Legend:
- ■ Every day
- ■ Several times a week
- ■ About once a week
- ■ Two or three times a month
- ■ About once a month
- ■ Once or twice every three months
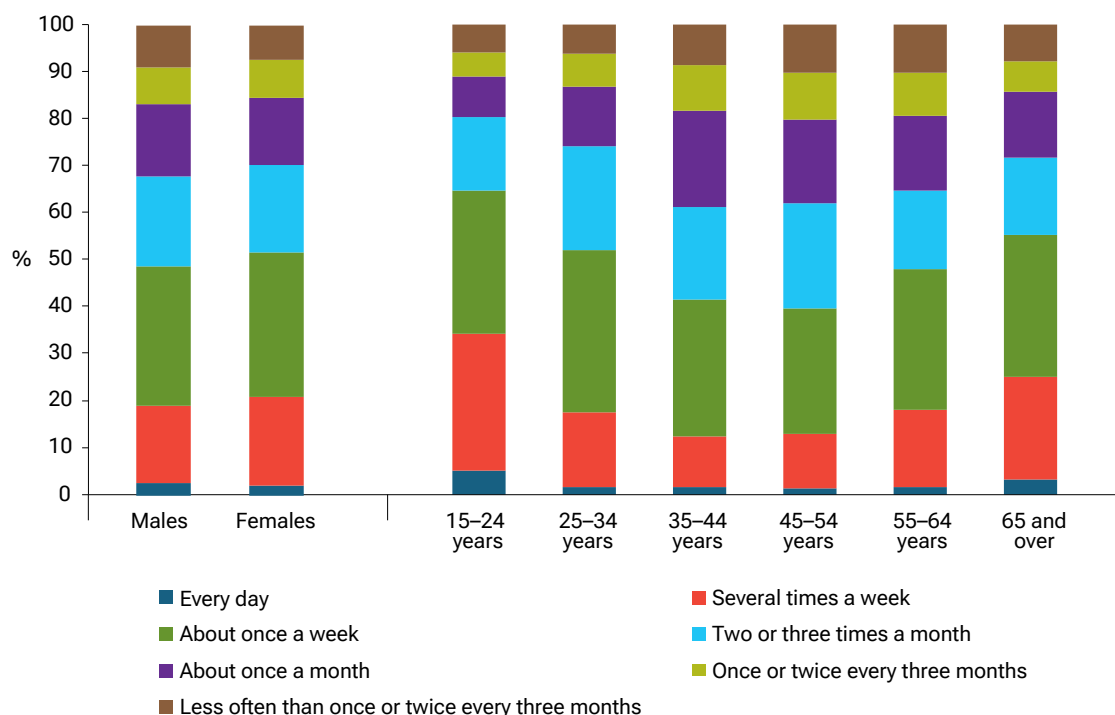- ■ Less often than once or twice every three months

The frequency of socialising in 2023 by gender and age groups is shown in Figure 10.6. Overall, gender differences are relatively small, but there is a slightly greater share of females who socialise at least once per week (51.8%) than males (48.8%). Correspondingly, the share of females who socialise less than once per month (15.3%) is lower than that of males (16.7%).

The figure shows very pronounced age differences in socialising frequency, which roughly align with the pattern of the perceived quantity of friends described in the previous subsection. Young people between 15 and 24 years show the highest frequency of socialising, with almost two thirds (64.7%) getting together with friends or relatives at least on a weekly basis. About 5.1% of this age group does so daily. The group with the second highest frequency is people aged 65 and older, among whom about 55.2% socialise at least once per week and 3.3% daily.

By contrast, people in mid-life show the lowest socialising frequencies. This group is often highly engaged in employment and/or caring for children and thus tends to have less leisure time available. Among those aged 45 to 54, only 39.6% get together with friends or relatives at least once per week, and among those aged 35 to 44, the share is not much higher at 41.5%. Conversely, large proportions of these groups socialise very rarely. Among those aged 45 to 54, 20.4% socialise less than once per month, and among those aged 35 to 44, this share is 18.5%. The group aged 55 to 64 also shows a relatively high proportion of people who socialise less than monthly, 19.6%.

Figure 10.6: Frequency of getting together socially with friends and relatives living elsewhere, by gender and age group, 2023

Legend:
- Every day
- Several times a week
- About once a week
- Two or three times a month
- About once a month
- Once or twice every three months
- Less often than once or twice every three months

Characteristics associated with the perceived quantity of friends

The first section of this chapter showed that there is great variation in the perceived quantity of friends among people, and that gender and age can partly explain those differences. This section looks at the characteristics associated with the quantity of friends in greater detail. Specifically, Table 10.2 presents results from linear regression models of the association between the perceived quantity of friends and various socio-demographic characteristics.

Focusing on the model for all people in the first data column, it confirms the previous finding that females tend to have more friends than males. All else being equal, females score 0.173 points higher than males. The model also reconfirms the stark age differences: those aged 45 to 54 score 0.322 points lower than those aged 15 to 24. By contrast, the oldest group, aged 75 and over, score 0.390 points higher than the youngest group. The model also reconfirms the steep decline in the perceived quantity of friends over time, with people in the 2022–2023 period scoring more than half a point (0.508) lower than those in the 2002–2004 period. It also shows no sign of recovery of friendships since the pandemic since the negative coefficient for 2022–2023 is even slightly larger than that for 2020–2021.

Furthermore, there are notable differences in the perceived quantity of friends by employment status, with part-time workers tending to have more friends than full-time workers, but the unemployed and those not in the labour force having fewer friends. Full-time students tend to have significantly more friends than people who do not study full-time, with a difference of 0.403 points. There is also a clear income gradient, with the perceived quantity of friends growing as income increases.

Family situation also matters. Individuals who cohabit or who have children in the household tend to have fewer friends than those who do not live with a partner or children. Also, immigrants from the main English-speaking countries tend to have fewer friends than non-First Nations Australian-born people. People who are in better physical health tend to have more friends, whereas those who recently moved to another location tend to have fewer friends than others.

Table 10.2: Characteristics associated with the perceived quantity of friends

	All	Males	Females
Female	0.173		
Age category (Reference category: 15–24 years)			
25–34 years	–0.168	–0.345	–0.049
35–44 years	–0.269	–0.612	*ns*
45–54 years	–0.322	–0.715	*ns*
55–64 years	–0.164	–0.526	0.155
65–74 years	0.177	–0.185	0.516
75 and older	0.390	*ns*	0.750
Educational level (Reference category: Year 11 and below)			
Year 12, Certificate III or IV, Diploma	–0.061	–0.055	*ns*
Bachelor's degree or higher	*ns*	–0.134	0.129
Labour force status (Reference category: Full-time work)			
Part-time work	0.046	*ns*	0.075
Unemployed	–0.248	–0.275	–0.238
Not in the labour force	–0.118	–0.211	–0.052
Full-time student	0.403	0.432	0.425
Relationship status (Reference category: Single)			
Married	*ns*	0.096	*ns*
Cohabiting	–0.137	*ns*	–0.214
Age youngest own child in household (Reference category: No child)			
0–4 years	–0.120	–0.112	–0.116
5–14 years	–0.064	–0.059	–0.074
15–24 years	-0.043	*ns*	–0.088
25 and older	–0.161	–0.115	–0.211
Remoteness of residence (Reference category: Major cities)			
Inner regional areas	*ns*	*ns*	*ns*
More remote areas	*ns*	0.135	*ns*
Period (Reference category: 2002–2004)			
2005–2009	*ns*	*ns*	–0.024
2010–2014	–0.096	–0.064	–0.131
2015–2019	–0.250	–0.175	–0.326
2020–2021	–0.486	–0.395	–0.575
2022–2023	–0.508	–0.409	–0.605
Household income quartile (Reference category: Lowest quartile)			
Second lowest quartile	0.064	0.046	0.072
Second highest quartile	0.158	0.132	0.172
Highest quartile	0.278	0.249	0.305
Physical functioning (scale from 0 to 100)	0.007	0.005	0.009
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)			
First Nations	*ns*	*ns*	*ns*
Immigrant, main English-speaking countries	–0.154	–0.208	–0.098
Immigrant, other countries	*ns*	*ns*	*ns*
Moved since last interview	–0.068	–0.070	–0.051
Constant	4.001	4.384	3.777
Number of observations	295,547	137,892	157,655

Notes: Estimates are from linear regression models of the agreement with the statement 'I seem to have a lot of friends' based on pooled data from 2002 to 2023. See the Technical Appendix for an explanation of these models. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

The second and third data columns of Table 10.2 present the characteristics associated with the perceived quantity of friends separately by gender. We see that many characteristics are associated with both males' and females' friendship networks in the same direction, such as physical functioning, time period, being from a main English-speaking country, being a full-time student, unemployment, children, having recently moved and income.

However, there are also some gender differences in the investigated associations. Notably, the relationship between age and perceived quantity of friends is markedly u-shaped among males, with the middle age group of 45 to 54 years scoring 0.715 points lower than the youngest group. By contrast, there is no significant difference between the oldest and the youngest group among males. For females, there are only small and mostly insignificant differences in the perceived quantity of friends between those aged 15 to 24 and the age groups up to age 54. Beyond this age, friendship networks steadily grow, with the group aged 75 and over scoring 0.750 points higher than the youngest group.

There are also gender differences in the association between educational level and the perceived quantity of friends. Whereas males with a bachelor's degree or higher tend to have fewer friends than those who completed at a maximum Year 11, highly educated females tend to have more friends than their lower-educated counterparts. Being outside the labour force is associated with a much larger drop in the quantity of friends for males than for females. Furthermore, part-time work is associated with more friends only for females.

Table 10.2 also shows some gender differences in the associations between the family context variables and perceived quantity of friends. Being married is associated with more friends than being single for males, whereas cohabiting is associated with fewer friends than being single for females.

Friendships and wellbeing

Friends are important social connections and a crucial source of social support, and the lack of friendships can affect people's wellbeing. In this context, Table 10.3 shows the associations between the perceived quantity of friends and factors related to wellbeing from four different areas: social activities, emotional support, instrumental support and mental wellbeing.

Table 10.3: Perceived quantity of friends and select indicators of wellbeing, 2001 to 2023 (pooled) (%)

'I seem to have a lot of friends'	Social activities		Emotional support		Instrumental support	Mental wellbeing	
	Socialises less than monthly	Would like more visits	Nobody to confide in	Nobody to cheer them up	Difficulties getting help	Feels lonely	Poor mental health
1 Strongly disagree	38.4	47.2	33.6	40.2	36.9	40.3	37.2
2	25.2	46.8	27.9	30.9	24.7	33.2	27.7
3	16.9	39.9	21.0	23.9	16.1	24.2	21.0
4	12.0	29.3	11.7	14.7	8.0	15.7	15.1
5	8.2	28.4	11.5	11.1	5.4	14.9	11.6
6	5.8	21.9	8.2	8.1	3.8	10.9	8.0
7 Strongly agree	6.4	20.0	8.7	7.3	3.8	12.3	8.3
Total	12.9	30.6	14.6	16.1	10.5	18.4	15.5

Notes: 'Would like more visits' indicates agreement with the statement 'People don't come to visit me as often as I would like' (values 5–7 on 1–7 scale); 'Nobody to confide in' indicates agreement with the statement 'I don't have anyone that I can confide in' (values 5–7 on 1–7 scale); 'Nobody to cheer them up' indicates disagreement with the statement 'There is someone who can always cheer me up when I'm down' (values 1–3 on 1–7 scale); 'Difficulties getting help' indicates disagreement with the statement 'When I need someone to help me out, I can usually find someone' (values 1–3 on 1–7 scale); 'Feels lonely' indicates agreement with the statement 'I often feel very lonely' (values 5–7 on 1–7 scale) and 'Poor mental health' indicates a value of 52 points or lower on the SF-36 mental health subscale.

The table shows that people who strongly disagree that they have many friends are most likely to be disadvantaged in these four areas. In terms of social activities, around 38% socialise with friends or relatives less than once per month, and almost half (47.2%) would like people to visit them more often. This group is also the most likely to lack emotional support in that they have no one to confide in (33.6%) or to cheer them up (40.2%). Furthermore, almost 37% have difficulties finding someone to help if needed. Finally, about 40% of this group report feeling lonely and around 37% have poor mental health. It should be noted, however, that in some cases the causality can go both ways. Notably, while lack of friendships likely reduces mental wellbeing, mental health problems can also make it more difficult to maintain friendships. Overall, these figures suggest that the lack of friendships can pose a significant risk to people's wellbeing.

Conversely, the bottom rows of Table 10.3 suggest that having a large friendship network works as a strong protective factor against disadvantages in these wellbeing areas. Among those strongly agreeing that they have many friends, the proportion of disadvantaged persons is below 10% in most areas. The exceptions are that even among this group, one in five people would like more frequent visits, and there are still around 12% reporting they feel lonely.

Overall, the clear relationship between the perceived quantity of friends and several indicators of wellbeing suggests that the declining trend in the quantity of friends observed since 2010, which accelerated during the COVID-19 pandemic, has worked towards decreasing people's wellbeing. For example, it is likely that the decline in friendships has contributed to the increase in psychological distress reported on in Chapter 8 of this report.

Persistence of (lack of) friendships

Given the impact friendships (and the lack thereof) can have on people's wellbeing, the question arises how persistent is a lack in friendships for an individual? Do most people with few friends quickly make new ones or do they stay without friends for a long period? Are large friendship networks something that people can rely on long term or are they easily lost?

Table 10.4 presents year-to-year and five-year transition rates between different perceived quantities of friends. This reflects how the quantity of friends varies for the same person from one year to the next and from one year to five years later. On the upside, among those who strongly disagree they have a lot of friends, less than half (45%) give the same answer one year later, while the others have grown their friendship network. However, this share does not decrease much further over the following years. Of those scoring 1 point in the current year, 39.7% still, or again, scored 1 point five years later.

Table 10.4: One- and five-year transition rates in perceived quantity of friends (agreement with the statement 'I seem to have a lot of friends'), 2001 to 2023 (pooled) (%)

Agreement in current year	Agreement one year later								Agreement five years later							
	1	2	3	4	5	6	7	Total	1	2	3	4	5	6	7	Total
1 Strongly disagree	45.0	19.9	11.0	10.8	4.5	3.6	5.2	100.0	39.7	18.7	12.2	13.3	5.6	4.8	5.7	100.0
2	15.8	30.4	23.4	16.9	7.3	4.6	1.7	100.0	16.1	26.7	20.7	19.9	9.0	5.2	2.3	100.0
3	6.0	16.5	28.0	29.8	12.6	5.2	2.0	100.0	7.7	17.3	25.0	28.8	12.9	6.1	2.2	100.0
4	3.1	6.8	17.4	40.2	21.3	8.2	3.0	100.0	4.4	8.4	17.7	37.1	19.9	9.3	3.2	100.0
5	1.5	3.5	8.9	26.8	33.1	21.0	5.3	100.0	2.5	5.0	10.9	28.0	28.5	19.5	5.8	100.0
6	1.2	2.1	4.0	11.9	23.4	41.9	15.5	100.0	1.8	3.0	5.8	15.5	24.5	34.6	14.9	100.0
7 Strongly agree	2.9	1.5	2.2	6.6	10.5	24.8	51.6	100.0	3.5	2.2	3.7	10.2	13.4	25.1	41.9	100.0
Total	6.4	8.7	12.9	23.2	19.3	17.9	11.6	100.0	6.6	9.0	13.1	24.1	19.1	17.2	10.8	100.0

What is more, for those scoring 1 point on quantity of friends in the current year who subsequently managed to increase their friendship network, the improvements were mostly only minor. Most improved their score only by 1 or 2 points. Consequently, of those scoring 1 point in one year, a total of 75.9% still scored below the mid-point of the scale one year later. Even if we focus on a five-year window, this share does not decline much, with a total of 70.6% scoring between 1 and 3 points five years after.

By contrast, it is relatively uncommon to change from 1 point to a score above the mid-point of the scale, which would suggest that the person has made many friends. More precisely, only 13.3% move from 1 point to between 5 and 7 points from one year to the next, and only 16.1% do so over a five-year period.

On the other end of the spectrum, of those who score 7 points in one year and thus strongly agree they have a lot of friends, 51.6% still score 7 points in the year after, and 41.9% still, or again, score this high five years later. Of those whose perceived quantity of friends declined, most still score 5 or 6 points both a year later and five years later. Overall, of those scoring 7 points in one year, 86.9% still score between 5 and 7 points one year later, and 80.4% still, or again, do so five years later. Consequently, the share of people whose score drops sharply from 7 points to 3 points or less is very low, with 6.6% over a one-year and 9.4% over a five-year period.

Overall, these findings suggest that friendship networks are difficult to build, even over a longer period of time. However, once established, they tend to last for many years for most people.

11 Time stress

11. Time stress

Kyle Peyton

Since 2001, the HILDA Survey has tracked Australians' experiences of time stress, defined as the persistent feeling of being rushed or pressed for time in daily life (see Box 11.1, below). This pervasive stressor reflects the growing challenges of balancing work, caregiving and personal responsibilities in modern life. Time stress has been linked to poor health, lower life satisfaction and reduced engagement in health-promoting behaviours, such as regular exercise (Wilkins et al., 2019). Examining the predictors and potential consequences of time stress is essential for understanding its role in shaping wellbeing and work–life balance.

This chapter builds on prior research by analysing more than two decades of HILDA Survey data to examine trends in time stress in Australia between 2001 and 2023 and their implications. It investigates long-term patterns across demographic groups, including gender, age and family structure, while also addressing the unique disruptions caused by the COVID-19 pandemic and the rise of working from home (WFH). In addition, the chapter explores the relationship between time stress and commuting times, as well as its associations with key health and wellbeing outcomes, including mental and general health, life satisfaction and regular exercise.

> **Box 11.1: HILDA Survey measure of time stress**
>
> The measure of time stress is included annually in the self-completion questionnaire (SCQ) HILDA Survey, where respondents are asked: *How often do you feel rushed or pressed for time?* The response options are 'never', 'rarely', 'sometimes', 'often' and 'almost always'. A scale is constructed ranging from 1 ('never') to 5 ('almost always'), which indicates the level of time stress. In this chapter, a person is time stressed if they 'often' or 'almost always' feel rushed or pressed for time.

Changes in time stress from 2001 to 2023

Figure 11.1: Proportion of people aged 18 and over reporting time stress, by gender
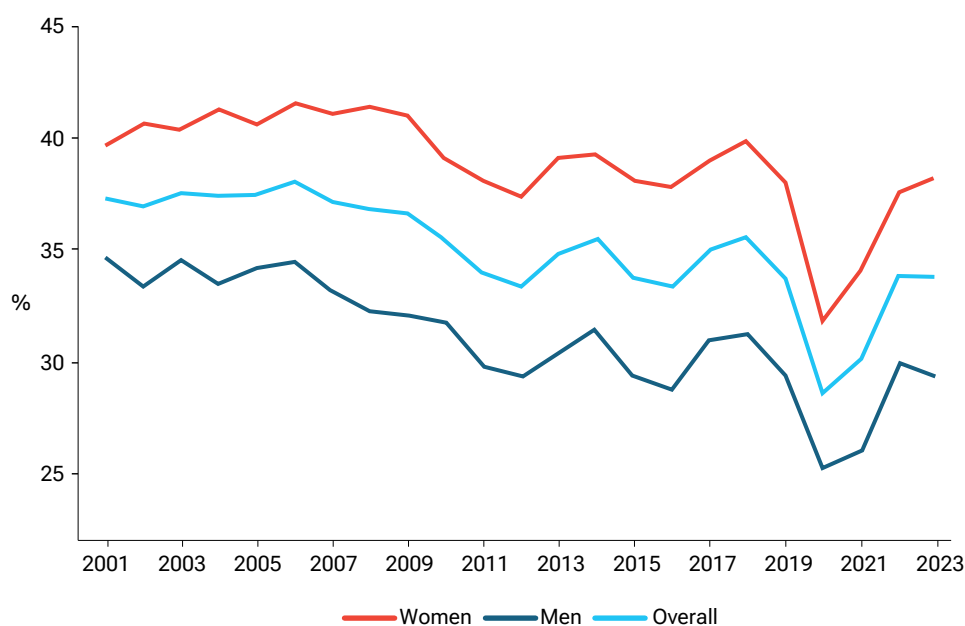
Understanding how time stress varies across demographic groups is essential for identifying patterns and inequalities in work–life balance, as well as informing policies aimed at reducing time-related pressures. Previous research has consistently shown that women report higher levels of time stress than men, likely due to the unequal division of household and caregiving responsibilities (Roberts et al., 2011; Buddelmeyer et al., 2018). Similarly, time stress tends to peak during prime working

and child-rearing years, particularly among those aged 35 to 44, while older individuals typically report lower levels of time pressure as they are more likely to be retired or have fewer caregiving responsibilities (Zuzanek, 1998; Gunthorpe and Lyons, 2004; Wilkins et al., 2019). This section explores trends in time stress from 2001 to 2023 across three key dimensions: gender, age and the number of dependent children under 15 in the household. The analysis highlights the temporary declines in time stress across all groups in 2020, coinciding with the onset of the COVID-19 pandemic, followed by a return to pre-pandemic levels in subsequent years.

Figure 11.1 shows the proportion of men and women reporting 'often' or 'almost always' feeling rushed or pressed for time between 2001 and 2023. Consistent with prior research, women report significantly higher levels of time stress compared to men, with the gap averaging around 7 to 8 percentage points. Prior to the COVID-19 pandemic in 2020, the percentage of Australians experiencing time stress had declined modestly, but this trend was more pronounced among men. For women, time stress remained relatively stable, fluctuating between 37% and 39% across most years. In 2020, time stress dropped sharply for both, likely due to changes in work and caregiving patterns during lockdowns. However, this decline was short-lived, with time stress rebounding to pre-pandemic levels by 2022.

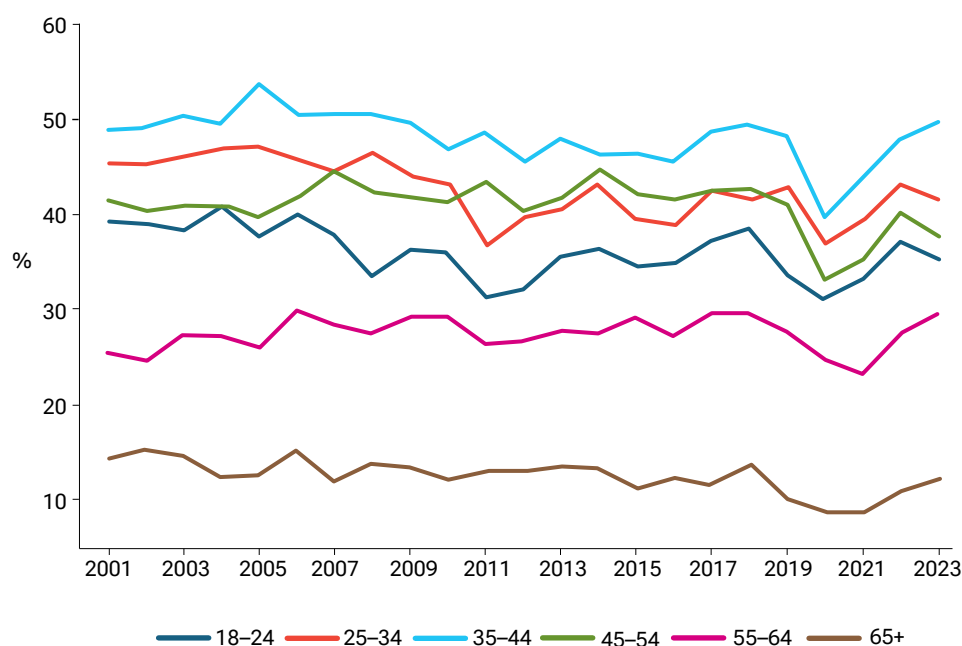**Figure 11.2: Proportion of people reporting time stress, by age group**

Figure 11.2 presents time stress trends by age group from 2001 to 2023. Older individuals consistently report the lowest levels of time stress, with those aged 65 and older averaging about 13% over the entire period. In contrast, time stress is highest for the 35 to 44 age group, with nearly half consistently experiencing time pressure. Those aged 25 to 34 and 45 to 54 also report relatively high levels of time stress, averaging above 40% in most years. Time stress among individuals aged 18 to 24 is moderate, fluctuating between 30% and 40%. Across all age groups, time stress experienced a temporary decline in 2020, with the largest reductions observed among those aged 35 to 44 and 45 to 54. By 2023, time stress levels had returned to pre-pandemic patterns across all age groups.

Figure 11.3 examines time stress trends according to the number of children under 15 in the household. As expected, individuals with more children consistently report higher levels of time stress compared to those with fewer or no children. Those with three or more children experience the highest levels of time stress, with over 50% consistently reporting feeling rushed or pressed for time. Individuals with two children report slightly lower levels, followed by those with one child. In contrast, individuals without dependent children report the lowest levels of time stress, averaging about 30% throughout the period. As with other groups, time stress declined across all categories in 2020, likely reflecting changes in daily routines and caregiving responsibilities during the pandemic. However, these declines were temporary, with time stress rebounding to pre-pandemic levels by 2022. For those with three or more children, time stress rates exceeded pre-pandemic levels by 2023, reaching 64.6%, a notable increase from 58.2% in 2019.

Figure 11.3: Proportion of people reporting time stress, by number of children aged under 15
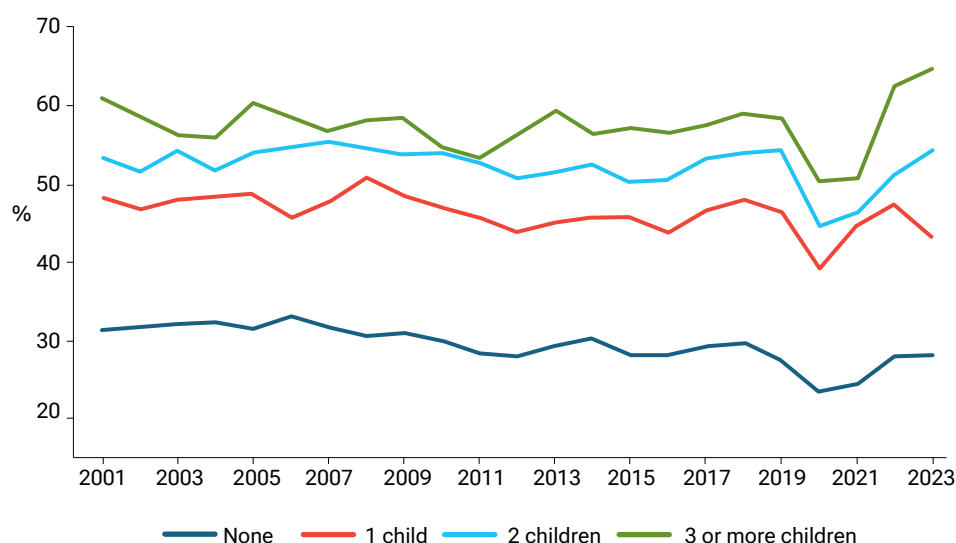
Characteristics associated with time stress

To further explore the factors associated with time stress, logistic regression models were estimated separately for men and women. These models predict the likelihood of being time stressed based on a range of demographic, socio-economic and geographic characteristics. The results, presented in Table 11.1, allow for an examination of how these factors are associated with time stress and whether their relationships differ by gender. Coefficients are reported as average marginal effects, which indicate the change in the probability of being time stressed associated with a one-unit change in each predictor, holding other variables constant.

The results reveal a consistent association between age and time stress, with older individuals being significantly less likely to report time stress compared to younger adults, regardless of gender. For both men and women, those aged 65 and over are approximately 18 percentage points less likely to be time stressed compared to the reference group (18–24 years old). In contrast, differences in time stress among younger and middle-aged groups are less pronounced. These findings demonstrate that, after adjusting for other correlates of time stress, the largest differences by age occur among older adults, who are much less likely to be time stressed than younger adults.

Higher educational attainment is positively associated with time stress. Women and men with a bachelor's degree or higher are 4.2 and 5.6 percentage points more likely, respectively, to report time stress compared to those with less than a bachelor's degree. This result may reflect the greater professional demands and responsibilities often associated with higher levels of education.

For women, being an immigrant from a non-English-speaking country is associated with a significant reduction in the likelihood of experiencing time stress, by 6.5 percentage points. For men, the reduction is similar, at 6.4 percentage points. Additionally, First Nations women are 2.6 percentage points less likely to report time stress than non-First Nations Australian-born women, but no significant difference is observed for men.

Being employed, rather than unemployed, significantly increases the likelihood of reporting time stress for both genders. For women, employment is associated with a 16.2-percentage-point increase in the probability of time stress, compared to 12.6 percentage points for men. In contrast, household income shows limited influence on time stress, with those in the top quintile being 2–3 percentage points more likely to experience time stress than those in the bottom quintile.

Table 11.1: Predictors of time stress among people aged 18 and over, 2002 to 2023

	Women	Men
Age group (Reference category: 18–24)		
25–34	–0.014	0.012
35–44	*ns*	0.015
45–54	*ns*	–0.022
55–64	–0.063	–0.082
65+	–0.186	–0.180
Bachelor's degree or higher	0.042	0.056
Immigrant status and First Nations identity (Reference category: Non-First Nations Australian-born)		
First Nations	–0.026	*ns*
Immigrant, main English-speaking countries	–0.014	–0.009
Immigrant, other countries	–0.065	–0.064
Employment status (Reference category: Unemployed)		
Employed	0.162	0.126
Not in the labour force	0.020	0.025
Household equivalised annual disposable income (Reference category: Bottom quintile)		
Second quintile	–0.020	–0.018
Third quintile	*ns*	*ns*
Fourth quintile	*ns*	*ns*
Top quintile	0.030	0.018
Parenting responsibilities (Reference category: No dependent children)		
Couple parent	0.076	0.059
Single parent	0.118	0.147
Number of children aged under 15 (Reference category: None)		
1 child	0.026	0.023
2 children	0.094	0.051
3 or more children	0.180	0.093
Location (Reference category: Non-urban Australia)		
Sydney	*ns*	*ns*
Melbourne	0.024	–0.017
Brisbane	*ns*	–0.028
Perth	0.016	–0.017
Adelaide	0.020	–0.022
Other urban Australia	–0.014	–0.029
Number of observations	153,981	134,069

Notes: The table reports average marginal effects estimates from logistic regression models of the probability of experiencing time stress. See the Technical Appendix for an explanation of these models. Models for men and women are fit separately on the pooled dataset of 2002–2023 survey waves. Fixed effects are included for years but not reported. *ns* indicates the estimate is not significantly different from 0 at the 10% level.

As expected, parenting responsibilities are strongly linked to time stress, particularly for single parents. Single mothers are 11.8 percentage points more likely to report time stress compared to women without dependent children, while single fathers are 14.7 percentage points more likely. Additionally, the number of children aged under 15 in the household is a significant predictor. For women, having three or more children increases the probability of time stress by 18 percentage points, nearly double the difference of 9.3 percentage points for men. These findings reflect the compounding demands of parenting on time pressure, particularly for women.

Location is a relatively weak predictor of time stress. For women, living in Melbourne, Perth or Adelaide is associated with a slight increase in time stress compared to living in non-urban areas. In contrast, for men, living in any urban area except Sydney is associated with a small decrease in the likelihood of being time stressed relative to living in non-urban Australia. Overall, these results suggest that location plays only a minor role in explaining differences in time stress, with gender-specific effects evident in some urban areas.

Time stress, commuting and working from home

As demonstrated in the previous section, employment status is a significant predictor of time stress, with employed women and men being 16.2 and 12.6 percentage points more likely, respectively, to experience time stress compared to their non-employed counterparts (see Table 11.1, page 190). Among employed individuals, commuting time is a particularly important source of stress, with longer commutes consistently linked to lower subjective wellbeing and poorer mental health (Roberts et al., 2011; Milner et al., 2017; Liu et al., 2022).

In the Australian context, prior research has shown that WFH is associated with substantial reductions in commuting time (Ruger et al., 2024). This section examines the relationship between commuting time and time stress, as well as the impact of WFH on time stress among employed Australians. Notably, the sharp increase in WFH during the COVID-19 pandemic led to a significant decline in commuting times (see Chapter 4), which may have contributed to the temporary reductions in time stress observed in 2020. The analyses presented here focus on employed individuals aged 18 and older, including both commuters and those who work from home.

> **Box 11.2: Measuring working from home in the HILDA Survey**
>
> In the HILDA Survey all employed persons are asked how many hours they *usually* work in a week, both in their main job and in all jobs. This same group is subsequently asked whether, in their main job, any of their *usual hours* are worked at home, and, if yes, how many. From this we constructed measures of the proportions of employed persons that, in their main job, worked any hours at home as well as the percentage of weekly work hours worked from home. Persons reporting working from home but who then do not provide the number of hours worked from home are treated as missing.

We first examine the relationship between time stress, WFH and commuting times during the pre-pandemic period (2002–2019). Our WFH measure is a binary variable that indicates whether a person worked any hours from home in their main job (see Box 11.2, above). Prior to 2020, about 25% of employed adults in Australia spent some of their usual hours WFH and this trend has been stable since 2002 (see Wilkins et al., 2022, Chapter 7). Following previous analysis of commuting times (see Wilkins et al., 2019, Chapter 4; Box 4.3 of this report, page 96), we differentiate three groups of workers according to their daily commuting time: short-distance commuters (less than one hour); medium-distance commuters (at least one hour but less than two hours); and long-distance commuters (two or more hours). Prior to 2020, average commuting times were rising in Australia (see Wilkins et al., 2019, Chapter 4; Chapter 4 of this report).

The likelihood of experiencing time stress (coded as 1 = Yes, 0 = No) was analysed using logistic regression models with WFH and daily commuting time as predictors. As in the previous section, separate models were fit for men and women, with results presented as average marginal effects in

Table 11.2. To adjust for other factors correlated with time stress and these predictors, each model also includes a measure of the person's occupation, as well as other predictors of time stress examined in Table 11.1 (excluding employment status, which does not vary among employed individuals).

Table 11.2: Associations between time stress, working from home and daily commuting time, 2002 to 2019

	Women	Men
Daily commute time (Reference: Short (< 1 hour))		
Medium (1–2 hours)	0.049	0.026
Long (> 2 hours)	0.071	0.048
Working from home (Reference: Does not work from home)		
Work any hours from home	0.042	0.056
Number of observations	88,315	91,511

Notes: The table reports average marginal effects estimates from logistic regression models of the probability of experiencing time stress. See the Technical Appendix for an explanation of these models. Models for men and women are fit separately on the pooled dataset of 2002–2023 survey waves. All predictors of time stress examined in Table 11.1 (excluding employment status), occupation and year fixed effects are included but not reported.

These results indicate that both WFH and daily commuting times were positively associated with time stress in the pre-pandemic period. Among women, those with medium (1–2 hours) and long (>2 hours) commuting times were 4.9 and 7.1 percentage points more likely to be time-stressed, respectively, compared to those with short (<1 hour) commuting times. While rates of time stress were also higher for men with longer commutes, the relationship between commuting time and time stress was significantly stronger for women, consistent with prior research on women's greater sensitivity to commuting times (e.g., Roberts et al., 2011).

Figure 11.4: Proportion of employed people reporting time stress, by working from home
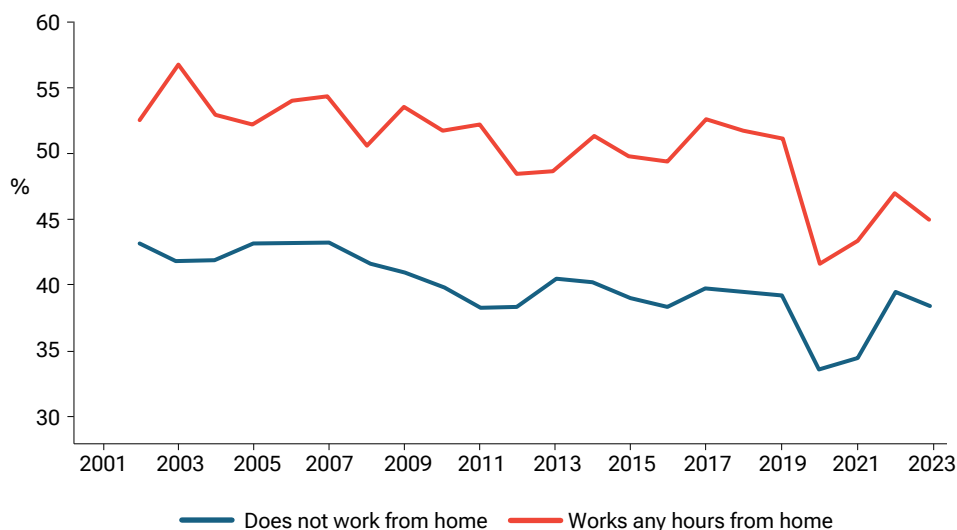
A significant association between WFH and higher time stress was observed for both groups, with no significant differences between men and women. This suggests that, while WFH reduces commuting times, it may introduce new sources of time pressure, such as blurred work–life boundaries, workload intensification or self-selection into WFH by individuals with more demanding jobs. Figure 11.4 shows that, over the past 22 years, individuals WFH have consistently reported higher rates of time stress compared to those who do not work any hours from home. Although both groups experienced declines in time stress during the initial year of the COVID-19 pandemic, this change was short-lived, with rates rebounding after 2021.

Table 11.3 shows how time stress, daily commuting times and time spent WFH changed among employed adults who worked any hours from home between 2019 and 2023. Several key trends are evident. The proportion reporting time stress declined sharply in 2020, coinciding with the widespread adoption of WFH during the COVID-19 pandemic, before gradually increasing in subsequent years. Daily commuting times also dropped significantly in 2020, with the proportion commuting more than 1 hour per day declining from 50.2% in 2019 to 32.9% in 2020. However, commuting times began to rebound in 2021, reflecting a partial return to pre-pandemic commuting patterns. Importantly, as of 2023, commuting times and the proportion commuting more than 1 hour per day remain well below pre-pandemic levels, highlighting a lasting shift in commuting behaviour for those who spend at least some of their time WFH for their main job.

WFH hours also increased dramatically in 2020, with the average weekly hours worked from home rising from 11.3 in 2019 to 23.0 in 2020 and the proportion working 100% from home nearly quadrupling (12.3% in 2019 to 43% in 2020). These increases were partially sustained through 2021 before declining in 2022 and 2023, as more individuals returned to hybrid or in-person work arrangements. Nevertheless, even in 2023, individuals were spending significantly more time WFH compared to 2019, with the average weekly hours worked from home and the proportion working 100% from home remaining substantially higher than pre-pandemic levels. These trends underscore the enduring impact of the pandemic on working arrangements and commuting patterns.

Table 11.3: Time stress, commuting and working hours among those working from home, 2019 to 2023

	2019	2020	2021	2022	2023
Time stress					
Reporting time stress (%)	51.2	41.5	43.5	46.9	44.9
Daily commuting times					
Average daily commute (in minutes)	61.3	42.7	41.6	45.2	46.9
Commuting over 1 hour per day (%)	50.2	32.9	33.4	34.2	35.6
Time spent working from home					
Average weekly hours worked from home	11.3	23.0	24.4	19.1	18.3
Working 50% or more at home (%)	22.7	60.9	63.1	49.1	47.4
Working 100% at home (%)	12.3	43.0	46.9	21.7	17.9
Employed adults working from home (in million)	3.3	4.3	4.7	4.6	4.8
Proportion of adult workers (%)	26.5	35.7	38.5	35.6	36.0

It is important to note that these estimates for daily commuting times and time spent WFH are based on the population of employed adults who work any hours from home in their main job, a group that expanded significantly after 2019. Notably, about 1 million more people (26.5% of employed adults in 2019 versus 35.7% in 2020) were WFH in 2020 compared to 2019. Although this proportion has declined slightly in subsequent years, it remains substantially higher than pre-pandemic levels. While time stress declined for this population in 2020, it also declined among the population that did not work from home. Additionally, individuals WFH during the post-pandemic period differ from pre-pandemic WFH workers in important ways, such as occupation, household structure and job characteristics (see Wilkins et al., 2022, Chapter 7). These differences complicate simple comparisons of time stress trends and highlight the need for a more nuanced analysis.

To better understand the relationship between WFH and time stress, Figure 11.5 compares trends in time stress among three distinct groups: 1) individuals who were not WFH in 2019 but transitioned to WFH in 2020 and remained WFH in subsequent years ('Moved to WFH and stayed'); 2) individuals who transitioned to WFH in 2020 but later returned to not WFH ('Moved to WFH and returned'); and 3) individuals who were not WFH in 2019 and continued not WFH during the entire period ('Never WFH').

Among those who moved to WFH in 2020, time stress declined substantially from 45.9% in 2019 to 37.1% in 2020, a significant reduction of nearly 9 percentage points. Among the 'Never WFH' group, time stress also declined in 2020, but by a more modest 4.5 percentage points, from 35.5% in 2019 to 31%. For individuals who moved to WFH in 2020 and remained WFH at least some of the time in subsequent years, time stress increased to 38.9% by 2023, though it remained below pre-pandemic levels. By contrast, time stress among the 'Never WFH' group remained stable through 2021 but returned to pre-pandemic levels of 35.1% by 2022.

For workers who transitioned to WFH in 2020, a growing proportion returned to not WFH in subsequent years. By 2021, 22.8% of this group had ceased WFH, increasing to 31.4% in 2022 and 31.9% in 2023. Among those who returned to not WFH, time stress remained relatively stable between 2021 and 2022, at around 42%, before rising sharply to 53.4% in 2023. This group reported the highest levels of time stress by 2023, significantly exceeding the levels reported by both those who continued WFH and those who never worked from home.

These findings reveal notable differences in time stress trends across the three groups. Workers who moved to WFH in 2020 but returned to in-person work in subsequent years reported significantly higher time stress levels in 2023 compared to both other groups. This suggests unique challenges faced by those who transitioned to remote work in 2020 but later returned to traditional arrangements. In contrast, time stress levels in 2023 were similar between those who moved to, and remained, WFH and those who never worked from home, reflecting a narrowing of the pre-pandemic gap. These patterns highlight the varying impacts of WFH transitions on workers' experiences of time stress over time.

Figure 11.5: Time stress trends for employed adults by working from home status, 2019 to 2023

Legend:
- Moved to WFH and stayed
- Moved from WFH and returned to in-person
- Never WFH
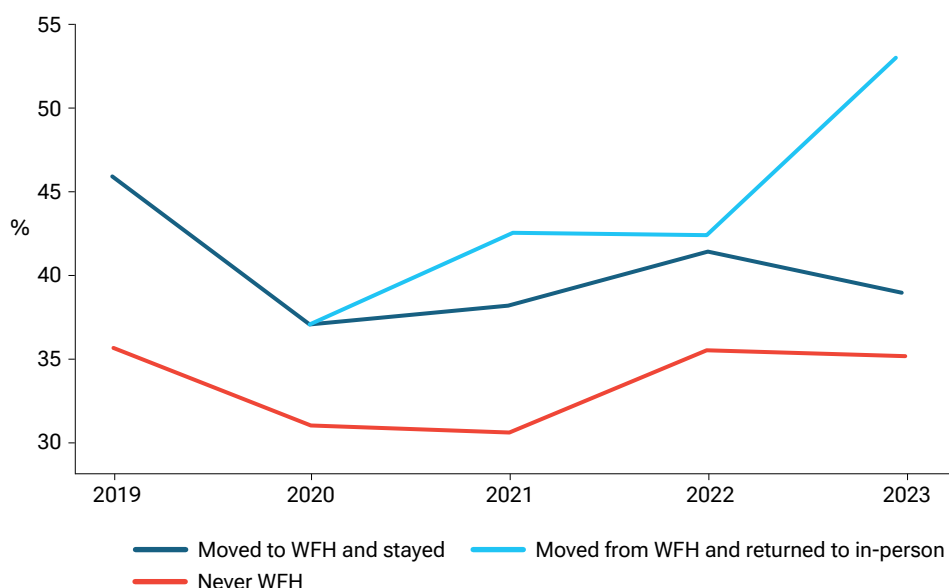
Overall, this suggests that WFH at least some of the time may reduce time stress, particularly for those who transitioned to WFH in 2020 and continued WFH in subsequent years. However, the evidence is not definitive, as workers who returned to in-person work after WFH reported significantly higher time stress, and the benefits of WFH may be influenced by self-selection into WFH arrangements or changes in job demands during the pandemic. These results highlight that the relationship between WFH and time stress is not uniform and may vary depending on workers' specific circumstances and transitions between work environments.

Time stress and health and wellbeing outcomes

This section examines how health and wellbeing outcomes are influenced by time stress, using a range of measures that have been consistently tracked in every wave of the HILDA Survey. Subjective outcomes include self-assessed general health, mental health and overall life satisfaction. Additionally, the relationship between time stress and regular exercise—defined as exercising at least three times per week—is explored. Prior research using HILDA data has highlighted the strong association between regular exercise and various improved health and wellbeing outcomes, including anxiety and depression (see Wilkins et al., 2019).

Mental and general health are measured on a 0 to 100 scale using the SF-36 questionnaire, with higher scores indicating better wellbeing. As shown in Figure 11.6, both mental and general health levels have remained relatively stable over time, yet those who are time stressed consistently report significantly poorer health outcomes. On average, individuals who are time stressed score 8.6 points lower on self-assessed mental health and 2.6 points lower on self-assessed general health compared to those who are not time stressed. This gap has persisted across every wave of the Survey since 2001.

Figure 11.6: Average levels of mental and general health among the adult population, by time stress (0–100 scale)
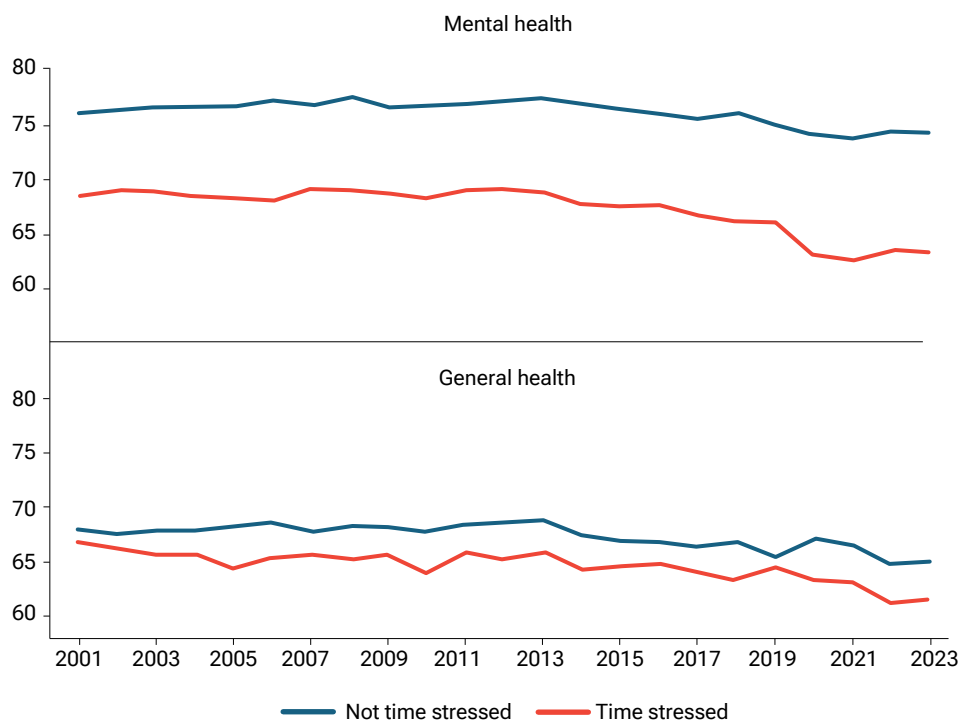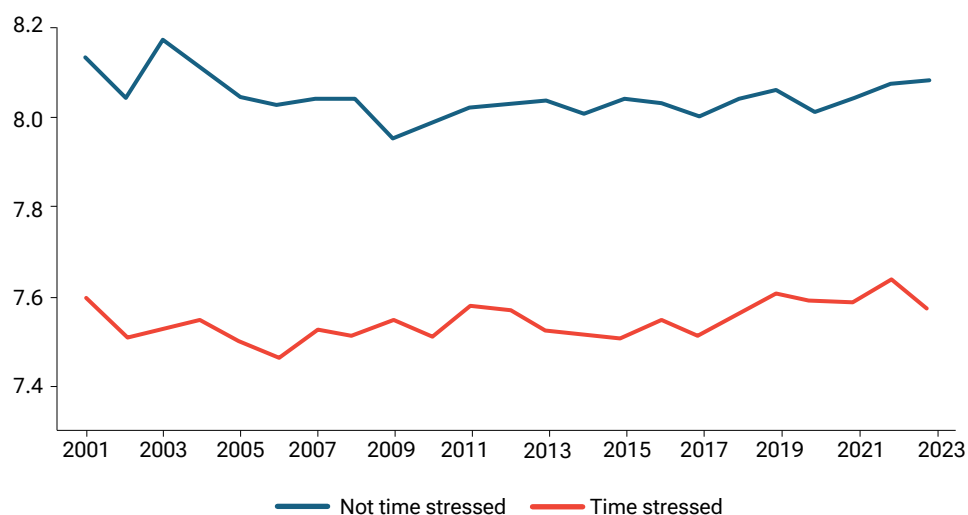
Figure 11.7: Average life satisfaction among adult population, by time stress (0–10 scale)

Trends in overall life satisfaction, measured on a 0 to 10 scale (from 'completely dissatisfied' to 'completely satisfied'), mirror the patterns observed for mental and general health. Figure 11.7 shows that individuals who are time stressed consistently report lower levels of life satisfaction, averaging 0.50 points lower than those who are not time stressed. Similarly, as shown in Figure 11.8, time stress is associated with a lower likelihood of engaging in regular exercise. On average, time-stressed individuals are about 3 percentage points less likely to exercise regularly compared to those who are not time stressed. This persistent disparity underscores that individuals experiencing time stress have been significantly less likely to participate in this important health-promoting behaviour in every wave of the HILDA Survey.

Figure 11.8: Proportion of adult population exercising regularly, by time stress
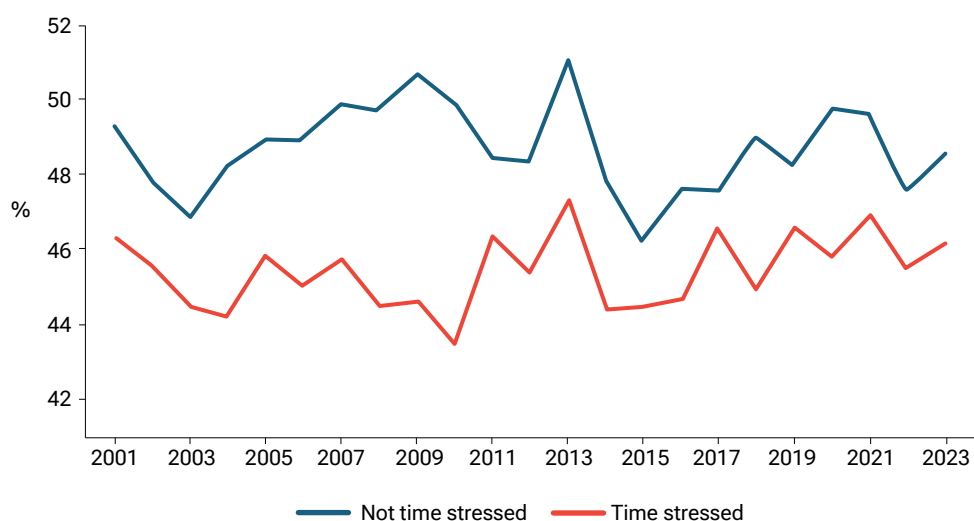
Finally, results from regression models examining the association between time stress and various health and wellbeing outcomes are presented in Table 11.4. The first three outcomes—mental health, general health and life satisfaction—are estimated using linear regression, where coefficients reflect the average increase or decrease in the outcome associated with being time stressed. The fourth outcome, regular exercise, is modelled using logistic regression, with results expressed as the predicted probability of exercising at least three times per week. Separate models are estimated for men and women, controlling for the predictors of time stress outlined in Table 11.1, as well as fixed effects for survey years (2002–2023).

Across all models, the relationship between time stress and wellbeing outcomes is remarkably consistent for both men and women. Time stress is strongly associated with poorer mental and general health, lower life satisfaction, and a reduced likelihood of engaging in regular exercise, with no significant differences observed between genders. This suggests that while men and women may experience time stress differently, time stress is similarly detrimental to the health and wellbeing of both groups.

Table 11.4: Time stress and wellbeing outcomes of people aged 18 and over, 2002 to 2023

	Mental health (0–100)		General health (0–100)		Life satisfaction (0–10)		Exercise 3+ times per week	
	Women	Men	Women	Men	Women	Men	Women	Men
Time stressed	−9.608	−10.315	−7.266	−7.504	−0.501	−0.514	−0.035	−0.047
Number of observations	153,981	134,069	153,981	134,069	153,913	134,021	153,981	134,069

Notes: Estimates for mental health, general health and life satisfaction are from linear regression models. Estimates for exercise are average marginal effects from logistic regression models of the probability of exercising 3+ times per week. See the Technical Appendix for an explanation of these models. Models for men and women are fit separately on the pooled dataset of 2002–2023 survey waves. Fixed effects for years and all predictors of time stress examined in Table 11.1 are included but not reported.

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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 2023 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 2023 prices, the value is multiplied by the ratio of the CPI for the December quarter of 2023 (136.1) 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 2023 prices, the wage is multiplied by 1.82 (136.1/74.7). The interpretation of this adjustment is that prices on average rose by 82% between the September quarter of 2001 and the December quarter of 2023, which means that the amount of money required to buy a given bundle of goods and services had on average increased by 82%. We therefore need to increase the wage measured in the September quarter of 2001 by 82% to make it comparable with a wage measured in the December quarter of 2023. Note that for dollar values measured over an annual timeframe, such as 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 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 models of the probability of providing care to grandchildren presented in Chapter 2, the effects of the number of grandchildren 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 the number of grandchildren is the mean effect on the probability of providing care to grandchildren, evaluated over all members of the sample, of increasing the number of grandchildren by one.

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, quintiles and terciles

Percentiles, deciles, quintiles and terciles 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, five quintiles and three terciles 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, the first quintile identifies the income below which are the lowest 20% of incomes, and the first tercile identifies the income below which are the lowest third of incomes. It is also common to refer to the percentile, decile, quintile or tercile 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, the first quintile and the first tercile.)

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). Multinomial probit and logit models examine variables that take on more than two distinct values, such as the models of the probability of having short, medium or long commutes estimated in Chapter 4. The interpretation of estimates in these models is the same as in the binary models.

- **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 gender). 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).

- **Hazard** models are used to investigate the determinants of duration in a particular state, such as unemployment. They estimate the probability of leaving that state as a function of duration of the 'spell' and other factors. A commonly used model is the Cox proportional hazards model.

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 in descriptive tabulations based on fewer than 20 observations, which will typically 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 of the 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, three 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. Third, in Wave 23 a sample top-up was conducted focusing on adding immigrants to the HILDA Survey. Nonetheless, immigrants arriving after 2011 are under-represented in the HILDA Survey sample from Wave 12 onwards.

Non-response is an issue for all household surveys, and *attrition* (i.e., 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.[19] That is, adjustments are made for non-randomness in the sample selection process that causes some groups to be relatively under-

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19 Further details on how the weights are derived are provided in Watson and Fry (2002), Watson (2004b) and Summerfield et al. (2024).

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. 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 23 excludes most immigrants arriving after 2011. For example, in 2021, based on visa grants and migration flows data, it is estimated that immigrants arriving after 2011 (when the last sample top-up was conducted) accounted for between 4.5% and 6% of the Australian population, translating to between approximately 1.1 million and 1.5 million people. These individuals are largely not represented in the HILDA Survey sample. 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. In Wave 23, the household population weights sum to 10.4 million and the 'person' population weights sum to 26.1 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 (i.e., 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, 18 and 22. 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 (e.g., 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 (e.g., 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.

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 a '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%. In 2023, a 'top-up' sample of immigrants was added. A total of 70 households and 222 people (including children aged under 15) were added to the sample.

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 157 interviewers in Wave 23, 140 of whom were face-to-face interviewers. The remaining 17 were dedicated telephone interviewers. In Wave 23, 3,421 interviews (or 21.4% 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 23).[20] Table A1 presents the number of households, respondents and children under 15 years of age in each wave. In Wave 23, interviews were obtained with a total of 15,987 people, of which 12,504 were from the original sample, 3,351 were from the Wave 11 top-up sample and 132 from the Wave 23 immigrant top-up. Of the original 13,969 respondents in 2001, 5,992, or 52.4% of those still in scope (i.e., alive and in Australia), were still participating at Wave 23.

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 their original household (e.g., 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.

Table A1: HILDA Survey sample sizes

	Households	People 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	9,543	17,612	4,781
Wave 12	9,537	17,475	4,698
Wave 13	9,555	17,500	4,735
Wave 14	9,538	17,511	4,670
Wave 15	9,631	17,605	4,690
Wave 16	9,750	17,693	4,819
Wave 17	9,741	17,570	4,847
Wave 18	9,638	17,434	4,845
Wave 19	9,664	17,462	4,863
Wave 20	9,555	17,070	4,818
Wave 21	9,358	16,549	4,661
Wave 22	9,003	15,954	4,566
Wave 23	8,928	15,987	4,510

Note: Figures include sample recruited in Wave 11 and Wave 23 top-ups.

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

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20 More detailed data on the sample make-up, and in particular response rates, can be found in Summerfield et al. (2024).
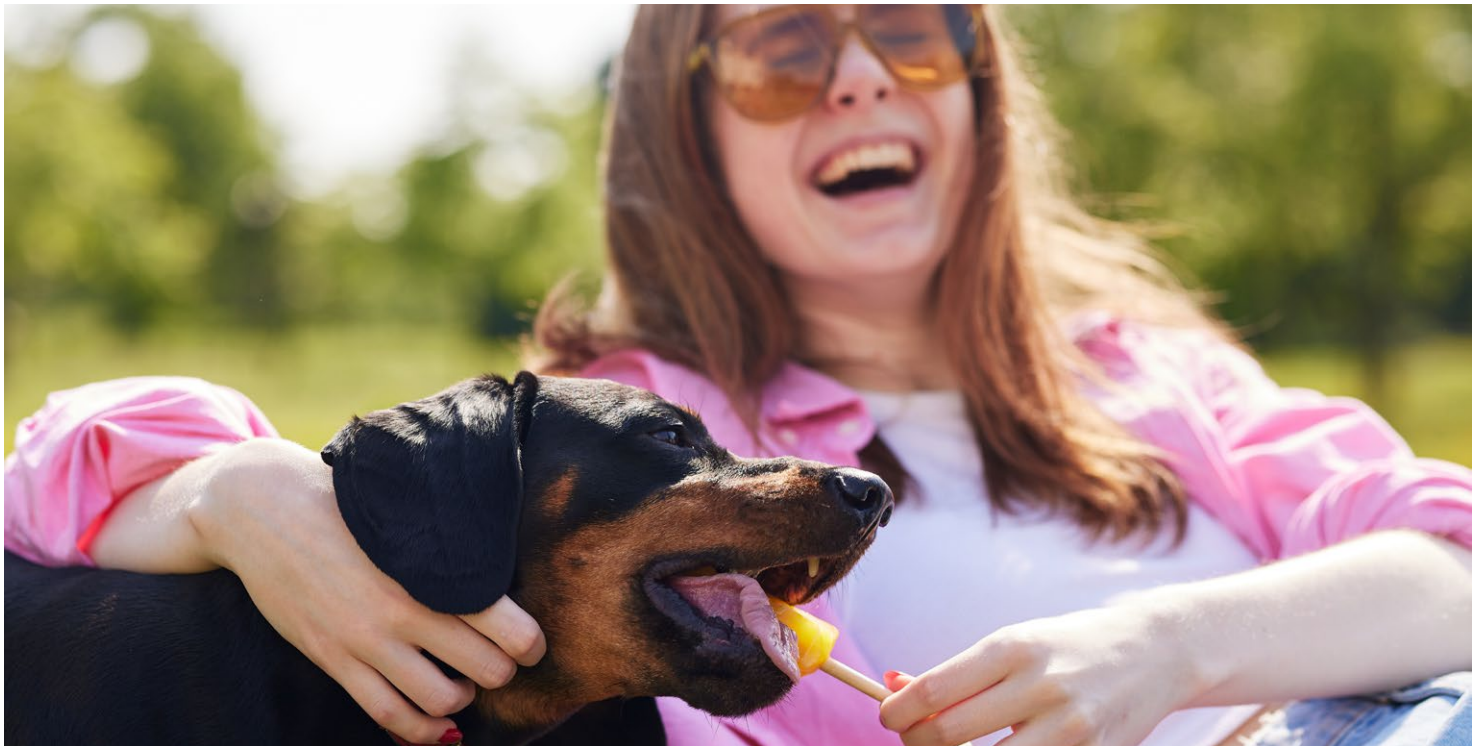
sample are high, exceeding 95% for the first time in Wave 8. However, response rates dropped during the pandemic years. In Wave 23, the re-interview rate was 95% for the original sample and 94% for the Wave 11 top-up sample. We expect much lower response rates among new individuals joining the sample. Nevertheless, response rates for this group have averaged approximately 75% to 80% for much of the period since Wave 4. However, in Waves 22 and 23, the rate dropped below 70% for both the original sample and the Wave 11 top-up sample.

All people who are interviewed are also asked to complete a separate self-completion questionnaire (SCQ), either on paper or (since Wave 20) online. Of the 15,987 people who were interviewed in Wave 23, 14,917 (93.3%) completed this SCQ.

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 22 waves and the proportion responding in Wave 23, disaggregated by characteristics in Wave 1 (i.e., in 2001). Table A3 presents analogous information for the Wave 11 top-up sample.

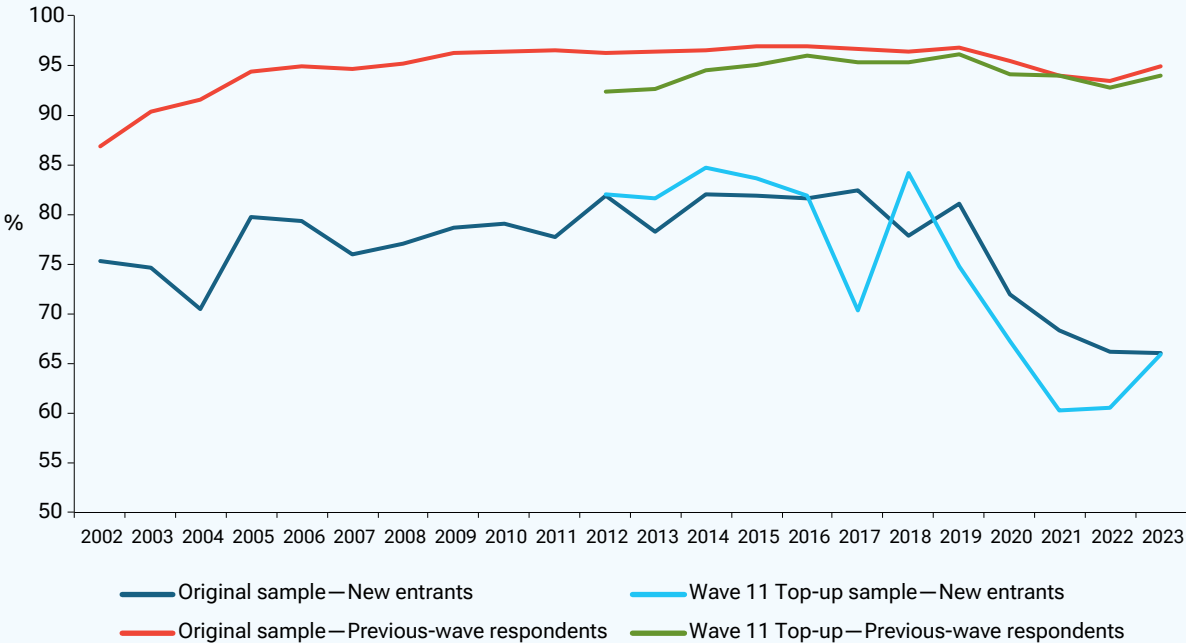**Figure A1: HILDA Survey response rates, Waves 2 to 23 (2002 to 2023)**

Table A2: Percentage of Wave 1 respondents re-interviewed by selected Wave 1 characteristics (%)

Wave 1 characteristics	Interviewed in all waves	Interviewed in Wave 23	Wave 1 characteristics	Interviewed in all waves	Interviewed in Wave 23
Area			*Indigenous status*		
Sydney	40.3	49.7	Indigenous	30.3	53.1
Rest of New South Wales	43.0	52.7	Non-Indigenous	42.6	52.4
Melbourne	41.4	52.9	*Educational attainment*		
Rest of Victoria	39.9	49.1	Year 11 or below	36.1	45.8
Brisbane	47.9	56.5	Year 12	42.2	53.4
Rest of Queensland	43.1	50.8	Certificate 3 or 4	41.2	51.0
Adelaide	44.7	54.6	Diploma	48.6	57.7
Rest of South Australia	40.4	53.7	Degree or higher	55.0	64.8
Perth	41.2	50.7	*Dwelling type*		
Rest of Western Australia	35.4	49.0	House	43.0	53.0
Tasmania	45.9	57.9	Semi-detached	40.6	51.3
Northern Territory	56.7	71.0	Flat, unit, apartment	38.0	47.9
Australian Capital Territory	50.3	62.0	Other	36.6	50.0
Gender			*Labour force status*		
Male	40.6	50.6	Employed full-time	45.0	55.2
Female	43.9	53.9	Employed part-time	47.0	57.1
Age group (years)			Unemployed	33.4	46.2
15–19	31.5	47.0	Not in the labour force	36.1	45.0
20–24	32.1	46.6	*Employment status in main job[a]*		
25–34	40.1	52.1	Employee	46.0	56.3
35–44	47.7	56.8	Employer	43.3	52.6
45–54	51.5	59.9	Own account worker	43.2	53.0
55–64	47.5	55.2	Contributing family worker	39.0	50.8
65–74	27.2	31.5	*Occupation[a]*		
75 and over	3.9	3.9	Managers/administrators	47.5	58.5
Marital status			Professionals	54.8	65.0
Married	45.1	53.7	Associate professionals	45.7	55.5
De facto	40.2	51.1	Tradespersons	37.6	48.6
Separated	41.7	51.4	Advanced clerical/service	44.7	52.9
Divorced	49.3	58.6	Intermediate clerical/sales/service	45.8	55.9
Widowed	36.3	39.9	Intermediate production/transport	40.2	47.3
Single	36.1	50.1	Elementary clerical/sales/service	45.8	57.4
Country of birth			Labourers	37.2	47.4
Australia	43.9	54.0			
Overseas			All Wave 1 respondents	42.4	52.4
Main English-speaking	43.8	51.5	Total number responding	4,655	5,992
Other	33.2	44.5			

Notes: Estimates are for the sample and are therefore not population-weighted.[a] Employed people only.

Table A3: Percentage of Wave 11 top-up respondents re-interviewed by selected Wave 11 characteristics (%)

Wave 11 characteristics	Interviewed in all waves	Interviewed in Wave 23	Wave 11 characteristics	Interviewed in all waves	Interviewed in Wave 23
Area			*Indigenous status*		
Sydney	55.2	61.0	Indigenous	51.7	56.8
Rest of New South Wales	60.4	64.7	Non-Indigenous	56.4	62.5
Melbourne	59.6	65.1	*Educational attainment*		
Rest of Victoria	53.0	60.0	Year 11 or below	48.4	55.4
Brisbane	59.9	67.8	Year 12	56.3	61.7
Rest of Queensland	53.9	62.5	Certificate 3 or 4	57.6	65.0
Adelaide	58.9	62.1	Diploma	59.2	68.1
Rest of South Australia	52.9	54.9	Degree or higher	62.2	65.7
Perth	47.7	55.9	*Dwelling type*		
Rest of Western Australia	37.4	49.5	House	56.2	62.5
Tasmania	65.0	68.6	Semi-detached	53.7	61.6
Northern Territory	47.8	60.9	Flat, unit, apartment	58.4	62.1
Australian Capital Territory	47.9	50.0	Other	100.0	100.0
Gender			*Labour force status*		
Male	55.3	62.4	Employed full-time	58.5	65.8
Female	57.1	62.3	Employed part-time	57.3	62.8
Age group (years)			Unemployed	57.3	62.0
15–19	48.1	54.9	Not in the labour force	52.1	57.2
20–24	52.6	60.5	*Employment status in main job*[a]		
25–34	59.8	66.9	Employee	58.3	65.0
35–44	56.3	63.2	Employer	55.1	64.0
45–54	59.0	65.0	Own account worker	57.1	62.5
55–64	62.2	66.9	Contributing family worker	60.0	70.0
65–74	61.8	65.6	*Occupation*[a]		
75 and over	23.3	27.0	Managers	57.6	68.3
Marital status			Professionals	63.1	69.0
Married	59.2	65.2	Technicians and trades workers	52.9	57.9
De facto	56.2	62.9	Community and personal service workers	58.3	63.6
Separated	60.2	62.8	Clerical and administrative workers	56.4	63.3
Divorced	56.2	62.1	Sales workers	54.8	61.7
Widowed	41.1	44.2	Machinery operators and drivers	57.9	63.8
Single	51.9	58.8	Labourers	60.3	66.8
Country of birth					
Australia	57.7	64.0			
Overseas			All Wave 11 top-up respondents	56.3	62.4
Main English-speaking	54.4	61.7	Total number responding	1,959	2,234
Other	52.2	56.7			

Notes: Estimates are for the sample and are therefore not population-weighted. [a] Employed people only.

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LIVING IN AUSTRALIA

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 of Applied Economic and Social Research at the University of Melbourne. Roy Morgan Research has conducted the fieldwork since 2009, prior to which The Nielsen Company was the fieldwork provider.