eJournal of Tax Research (2018) vol. 16, no. 1, pp. 236-265

Superannuation and economic inequality among older Australians: evidence from HILDA

Helen Hodgson[1] and Alan Tapper[2]

Abstract

This article seeks to identify the effect that the current superannuation system has on economic inequality in later life. The analysis uses income and wealth data from the Household Income and Labour Dynamics in Australia (HILDA) survey, collected between 2002 and 2014, to examine wealth inequality, which includes the balance of a superannuation accumulation account, and income inequality, which includes private pension income. The main findings are that inequality in superannuation holdings is considerably higher than wealth inequality among older Australians and that inequality increases with age, but overall the age pension and home ownership have had a moderating effect on income and wealth inequality over this period.

Key words: Economic inequality; superannuation; income distribution; wealth distribution

[1] Associate Professor, Curtin Law School, Curtin University, helen.hodgson@curtin.edu.au (corresponding author).
[2] Senior Research Fellow, John Curtin Institute of Public Policy, Curtin University.
Research assistance and data analysis in this article was provided by Dr Ha Nguyen, Research Fellow,

1. INTRODUCTION

This article examines the extent of economic inequality among Australians over 55 years of age, and seeks to identify the effect, if any, that the current superannuation system is having on economic inequality in later life. It examines inequality by reference to wealth, which includes the balance of a superannuation accumulation account, and by reference to income, which includes private pension income. It uses income and wealth data from the Household Income and Labour Dynamics in Australia (HILDA) survey, collected between 2002 and 2014.

Economic inequality encompasses income inequality and wealth inequality. Income inequality refers to the distribution of income across a given population. Wealth inequality is a measure of the distribution of net worth across a population. Wealth is concentrated among older age groups as it represents surplus earnings accumulated during working life. However, a significant proportion of this wealth is locked into non-

Superannuation is represented in both income and wealth distributions. Superannuation accumulation funds form part of the wealth data. However, if the purpose of superannuation is to support a person in their retirement (Financial System Inquiry Panel, 2014), the asset must be converted to an income flow as an annuity or pension, and this income flow will appear in the income distribution data.

The retirement income system in Australia is built on three pillars: the Age Pension; the Superannuation Guarantee; and other retirement savings. Saving through the superannuation system, whether mandatory or voluntary, is supported by tax concessions. Recent debate has highlighted the unequal distribution of superannuation, and the consequential unequal distribution of tax concessions (Australian Treasury, 2015b, p. 90; Daley & Coates, 2015).

Government policy in a number of areas will need to address the aging of the population: the age dependency ratio (the ratio of those age 65 and over to those aged 15 to 64) is expected to decrease from 4.5 in 2014-15 to 2.7 in 2054-55 (Australian Treasury, 2015a). The extent of inequality among older Australians is important in designing policy in a number of core areas, including the age pension; health and aged care; housing; and most importantly for this article superannuation.

A recent report by the Organisation for Economic Co-operation and Development (OECD, 2017), *Preventing Ageing Unequally*, highlights concern that modern economies are tending to increase economic inequality in general and amongst the elderly in particular. The report (OECD, 2017, p. 15) says:

> and materialises in old age. It is often the result of specific episodes during rimental effects on health and income at old age. Ageing unequally is not a new phenomenon, but while the current generation of older people is experiencing higher incomes and lower poverty risks than previous ones in most countries, the younger generations are likely to face again higher inequality in old age. They are expected to live longer, but have been experiencing more unstable labour market conditions and widening inequalities in the distribution of earnings and household income.

The present study can be seen in this context as part of the necessary monitoring of inequality trends amongst the older population. It provides some benchmark data against which future trends can be measured.

This article proceeds as follows. Section 2 discusses the state of economic inequality in Australia in recent years. Section 3 reviews the development of the superannuation system, identifying the significant reforms and when they occurred. Section 4 sets out the methodology we used in our examination of the effect of superannuation on inequality among older Australians. Section 5 details our findings. Finally in section 6 we present our general conclusions and identify the implications of our analysis on the development of retirement income policy.

2. INEQUALITY IN AUSTRALIA

It is generally understood that income and wealth are each related to age but the two trajectories are importantly different. Income generally peaks in mid-life and falls in later life. Wealth rises with age more slowly than income and levels off or falls less sharply in later life. A typical life-cycle moves from an asset poor but income rich phase in early life to an income poor but asset rich phase in later life, with an income rich and asset rich phase in mid-life. The joint effect can be thought of as age-related economic well-being.

There has been much recent debate over economic inequality trends globally (Keeley, 2015; Piketty, 2014). The Australian data show that neither income nor wealth inequality overall is increasing in the period since 2000, although there does seem to be an increasing share of income and wealth at the top percentile level (Fenna & Tapper, 2015; Leigh, 2013; Wilkins, 2015 and OECD data (OECD.Stat)). However, there has been little analysis of trends in inequality among older Australians as a subset of the population. Two very different questions arise here. One, are older Australians more or less

This extended framework acknowledges the importance of housing and social services in maintaining well-being into retirement.

The three pillars formalised in the Australian retirement income system are the basic income safety net, mandatory retirement savings, and self-provision. Contributory pensions were rejected as a policy option in Australia in the first half of last century. In 1972 the Hancock Inquiry recommended the introduction of earnings-related supplementary contributions to the age pension that could raise the pension to levels of around 30% of average weekly earnings (AWE) (National Superannuation Committee of Inquiry, 1976), but this proposal was rejected by the Fraser government. Accordingly the age pension is funded through general revenue and is not calculated by reference to pre-retirement income, occupation or contributions. In the Australian system self-provision is encouraged through voluntary additions to the mandatory level of superannuation.

Superannuation in Australia is often described as a maturing system. It has long been a feature of the Australian retirement income system, with schemes for white collar, public sector, and self-employed workers having been in place for many years; however by 1986 less than 40% of employees had superannuation coverage (Australian Treasury, 2001). Superannuation has been supported as a savings retirement vehicle through the federal income taxation system since its introduction in 1915. The *Income Tax Assessment Act 1915* allowed tax deductions for superannuation contributions paid by employers in respect of employees, and exempted the earnings of a superannuation fund, to the extent those earnings supported pension payments.

Employees paid under award agreements were included in award-based schemes from 1987 following the Accord Mark II agreement under which the unions deferred 3% of cost of living wage increases into superannuation: the precursor of the Superannuation Guarantee. The mandatory superannuation guarantee based on a proportion of employee

contributions from sources that have not been taxed, notably superannuation guarantee contributions and other voluntary contributions directly from salary (salary sacrifice contributions). As these contributions are taxed at a flat rate of 15%, where a person is paying a marginal tax rate that is over 15%, there is a tax advantage in diverting income into superannuation. However the second tax expenditure, 15% on the earnings of superannuation funds, creates a potentially greater opportunity to exploit the difference between personal marginal tax rates and the concessional tax rate paid by the superannuation fund. This arbitrage is increased when the fund goes into retirement phase as the earnings on assets set aside to provide a pension are exempt from income tax under section 295-385 of the *Income Tax Assessment Act 1997*.

Superannuation funds -
allowing members to make contributions from other forms of savings. The concessional rate of tax creates incentives to use superannuation as an investment vehicle, an outcome that is specifically encouraged by the policy, but also encourages the use of superannuation accounts as a form of wealth creation rather than as a retirement product.

Clearly someeW* T/F4 10 gentee.H59(retir.yeu)-3(p)s. The p

met, generally at retirement, death or upon reaching age 65. A retiree may draw on this as a lump sum or use it to generate an income stream as a pension or annuity.

A minority of retirees are entitled to a pension from a defined benefit scheme, which is

Retirement benefits are usually calculated using your average salary over the last few years before you retire and the number of years you worked in the company or public [4] These retirees are likely to be either former public sector workers and/or older retirees who were a member of a defined benefit fund before the changes consequential on the introduction of the superannuation guarantee.

For the purposes of this study, which is examining wealth and income inequality, this raises questions over the relationship between superannuation as an asset and the resulting income stream. Superannuation as an asset is a factor in wealth inequality, but as an income stream it is reflected in income inequality. This limitation is also noted by the OECD when discussing the high income inequality rate among the elderly in Australia (OECD, 2017, p. 249).

4. METHODOLOGY

The article identifies and examines trends in inequality from 2002 to 2014 amongst Australians over the age of 55, using the Gini index and the P75:P25 ratio. The Gini index or Gini coefficient is an index of the inequality among values of a frequency distribution. A Gini coefficient of zero represents perfect equality, while a Gini coefficient of one represents perfect inequality. The P75:P25 ratio compares wealth or income at the 75th percentile with wealth or income at the 25th percentile of the population (with the 75th being the wealthier/richer). Both the Gini coefficient and the P75:P25 ratio can be applied to give an indication of the inequality of the distribution of wealth or income.

The wealth module of the HILDA survey is released every four years, with data appearing in waves 2, 6, 10 and 14, collected in 2002, 2006, 2010 and 2014. The time period examined in this article is based on these data waves. The sample size is 36,848 observations over the four waves. For this analysis older Australians are grouped by age in five age bands: 55 59, 60 64, 65 69, 70 74, 75 79 and 80 and over. The resulting sample sizes are considered to be adequate for the level of analysis undertaken.

All monetary data used in the analysis are adjusted to the consumer price index (CPI) in 2014 dollars. Where the data is household data it has been equivalised for household size using the modified OECD equivalence scales which assign a value of 1 to the household head, 0.5 to each additional adult member of the household and 0.3 to each child (aged under 15).

The analysis uses both cross-sectional analysis and panel data to examine trends. The cross-sectional data provides a snapshot of the wealth and income of the participants at the time of the survey, and is used to examine changes across the survey population between each survey wave. Cross-sectional analysis is used to examine trends between age groups across the four waves of data.

4

Chart 1: Household Net Wealth P75:P25 Ratio by Age: HILDA 2002 2014

Table 3: Distribution of Household Equivalent Net Wealth by Age, 2002 2014, HILDA, P75:P25 Ratios

	Age Cohort	**55 59**	**60 64**	**65 69**	**70 74**	**75 79**	**80 and over**
Data Wave	2002	4.64	4.78	3.98	3.45	3.14	5.70
	2006	3.65	4.09	3.75	3.50	3.07	3.76
	2010	3.70	4.32	3.71	3.57	3.73	3.27
	2014	4.31	4.09	3.77	4.39	3.92	3.48

5.1.1 Superannuation

The relevant HILDA variables identify superannuation holdings as a component of household net worth. For superannuation holdings to be valued as an asset the superannuation must either be held as an accumulation account or the capital value of the retirement income stream must be able to be determined, as in a case where an annuity has been purchased. However, it is problematic to determine the capital value of a defined benefit scheme as such a scheme provides an income stream for life, based on factors determined at the time of retirement. Accordingly, the value of defined benefits will not be included in the wealth data.

Table 6: Proportion of Assets held in Superannuation by Age, HILDA 2002 2014

Data Wave	Age Group	55 59	60 64	65 74	70 74
	2002	22%	17%	12%	8%
	2006	26%	22%	14%	11%

Chart 2: Trends in Financial Assets by Panel, HILDA 2002 2014

Source: HILDA 2002 2014

5.1.3 The home

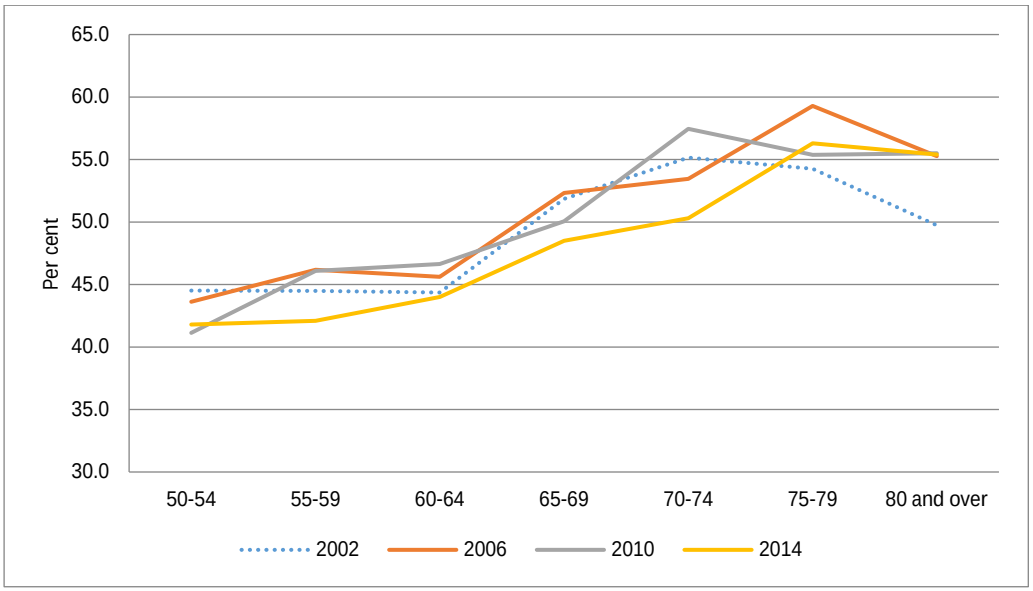
Given that the level of inequality in superannuation holdings significantly exceeds the overall Gini coefficient, the data were then re-examined to identify other asset holdings that may have an equalising effect in later life.

HILDA identifies the home as an asset separately from investment properties, and mortgages on the home are also recorded separately from mortgages on other property. The data in this analysis is based on the home and excludes investment properties. The net value of the home is the market value reduced by the mortgage attributable to the home.

Consistent with the literature (Dockery et al., 2015, p. 58; Productivity Commission, 2015b), we found that the most valuable asset held by most older Australians is the home. Home ownership levels among Australians aged 65 and over were 85.5% in 2014 (Australian le le if0.98 Tf1 0 0 1F4 10.98 Tf1 0 0

stage it levels off or decreases slightly. This reflects the reduction in housing debt among older age groups and the increased value of residential property relative to more liquid assets that will be consumed first in retirement.

Chart 3: Net Value of the Home as a Per cent of Net Wealth by Age, HILDA 2002 2014



Source: HILDA 2002 2014

Table 7 shows the Gini coefficients for equivalent net housing assets by age. In general these are below the Gini scores for equivalent net wealth by age, as can be seen by comparing them with the findings in Table 8.

ABS data (see Table 9) show that over this period the Residential Property Housing Index grew at a substantially faster rate than CPI and the increase in house prices was widespread despite regional variations in timing.

Table 9: Increase in Residential Property House Index, ABS

Increase from June quarters	**2002 06**	**2006 10**	**2010 14**
Increase in Residential Property House Index: 8 capital cities	31%	35%	11%
CPI			

Table 11: Proportion of Respondents Retired in Each Wave by Age, HILDA 2002 2014

Data Wave	Age	55 59	60 64	65 69	70 74	75 79	80 and over
	2002	31%	58%	79%	89%	93%	93%
	2006	25%	50%	78%	84%	92%	93%
	2010	19%	41%	73%	89%	90%	94%
	2014	19%	38%	69%	87%		

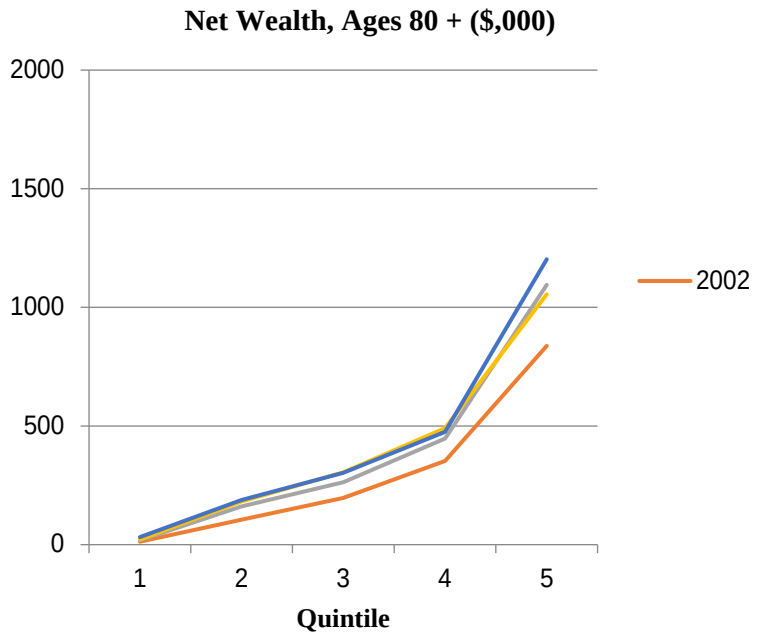


Chart 7: Quintile Analysis of Disposable Income for Certain Age Groups, HILDA, 2002-2014

Source: HILDA 2002

First, as the inequality measures used are the Gini coefficient and the P75:P25 ratio, our findings are not informative about the outliers: the top 5% and the lowest 5% of the population. Regardless of whether the superannuation changes are reducing inequality among the population as a whole, policy measures need to address the circumstances of those in most need.

Second, the data spanned the period of the Global Financial Crisis (2007-2009). To the extent that superannuation balances are affected by changes in the value of investments, this external shock will be reflected in the data. As growth in superannuation balances is a combination of investment growth and mandatory contributions, we have not been able to control for this factor.

Third, the relationship between wealth inequality and income inequality is complex, and out of scope of this research. We do not know how closely the two forms of material well-being are correlated at the household level (OECD, 2017, p. 249). Superannuation assets are identified as wealth, but the purpose of superannuation is to support the

Australian Health Review, vol. 38, no. 5, pp. 523-527.

Australian Economic Review, vol. 48, no. 1, pp. 93-102.

Wilkins, R 2017, *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 15*, Melbourne Institute of Applied Economic and Social Research, Melbourne.

Wilkins, R 2018, economic w in Wilkins, R & Lass, I (eds), *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to* 16, Melbourne Institute of Applied Economic and Social Research, Melbourne, pp. 27-53.

World Bank 2008, The World Bank pension conceptual framework , World Bank pension reform primer series, Washington, DC.