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The Growing Gap Between Rich and Poor in Australia

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Abstract

Economic inequality has emerged as a policy issue as recent academic studies have documented the extent of change and raised questions about its underlying causes and economic and social impacts. This paper examines the levels of income and wealth inequality and recent changes using data from the Survey of Income and Housing *(SIH) conducted by the Australian Bureau of Statistics (ABS). Attention focuses on where different groups fit in the overall income distribution - how specific assets (particularly owner-occupied housing) affect the distribution of wealth within and between different generations, the joint distribution of income and wealth and how both distributions have changed in recent years. The observed changes cover the period before and after the 2008 financial crisis and have occurred against a background of increases in real income and real net wealth, although the gains have been greater for those at the top of both distributions than for those at the bottom.*

JEL classifications: D30; D31; D630

Key words: economic inequality; income distribution; distribution of net wealth; recent trends

1. Introduction and Background[1]

Concern over growing inequality has been a feature of recent developments in many OECD countries, including in Australia. The OECD has drawn attention to the issue, arguing that the long-term rise in income inequality 'does not only raise social and political but also economic concerns: income inequality tends to drag down economic growth' (OECD, 2015: 3). Although its data indicate that income inequality changed little on average between 2007 and 2011, an increase was experienced in half of the countries covered (17 out of 34). Australia was not one of these, with income inequality declining between 2008 and 2012, although the level of inequality remained above the average, exceeded in only nine countries (OECD, 2014a: Annex Table).

[1] The authors acknowledge the incisive and helpful comments provided by an anonymous referee and the editors, but remain responsible for any remaining errors.

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This paper provides a detailed examination of recent changes in inequality of income and wealth in Australia, in order to establish what has happened and assess the distributional impact of the global financial crisis (GFC) which began to exert an influence on Australia towards the end of 2008. It is widely acknowledged that the stimulatory fiscal policy responses introduced in 2008 and 2009 contributed (along with the mining boom) to the Australian economy avoiding the post-crisis recession experienced in many other countries. One would expect the stimulus measures to affect movements in income inequality, since they included a series of one-off payments to many existing recipients of government cash benefits (Saunders and Deeming, 2011) but other factors (including the rise in unemployment and reduction in hours worked) exerted an offsetting influence, making the net effect unclear.

Growing public concern over inequality was brought to a head in Australia in response to the 2014 federal budget that contained many measures that were seen as unfair, resulting in many of them being delayed or rejected in the Senate. Concern about the level of inequality has focused on the ends of the distribution – the gap between rich and poor – with the substantial gains secured by those at the very top contrasting with the more modest gains of those at the bottom. Public sentiment remains opposed to excessive levels of inequality, a recent survey conducted by Oxfam Australia (2014) indicating that 79 per cent of those surveyed think that the gap between rich and poor has widened over the last decade, most of them agreeing that the government should take action to close it. Academic studies report similar findings, Saunders and Wong (2013: Table 2) showing that concern over the rising incomes of the rich increased sharply between 2006 and 2010.

The diverging incomes of rich and poor have been reinforced by policy changes, as Whiteford (2013, 2015) has noted, particularly since the mid-1990s when government policies overall became less progressive and hence less effective in reducing inequality. This period has seen the rich gain most from income tax cuts, while the failure of successive governments to index the level of Newstart Allowance (NSA) has seen the real incomes of the unemployed remain unchanged since 1994, falling well below average community incomes, other social security payments and the poverty line (Saunders, Wong and Bradbury, 2015).[2] Another issue that has been the focus of much attention is the structure of superannuation-related tax concessions, which are estimated to involve a revenue loss of $39.6 billion in 2014-15, much of which benefits those with highest incomes. There are many in the community who share the concern expressed by ex-academic economist and now ALP parliamentarian Andrew Leigh (2013, p 141) 'that we will sleep-walk into a more unequal Australia without realising what is being lost' if we do not take action to reverse these trends.

Inequality has been attracting increased attention from scholars, with recent contributions from Picketty (2014), Stiglitz (2010) and Atkinson (2015) generating enormous interest internationally – not only among academics but also among the general population. They have been accompanied by important outputs from two major international collaborations – the Luxembourg Income Study (LIS) project (e.g. Gornick and Jäntti, 2013) and the Growing Inequalities' Impacts (GINI) project (Salverda *et al*., 2014; Nolan *et al*., 2014) that have examined recent inequality trends

[2] The OECD (2010) has called for an increase to restore the adequacy of NSA while the Business Council of Australia (BCA) has pointed to the perverse incentives created by the growing gap between payments for the unemployed and people with a disability (BCA, 2012).

with a view to better understanding what is happening, and why. In Australia, work by The Melbourne Institute's Roger Wilkins (2014a, 2014b, 2015) has examined income inequality using ABS and HILDA data, focusing on changes in cross-sectional inequality using the former and on income mobility and the dynamics of income inequality using the latter. A recent issue of *The Australian Economic Review* contains a Policy Forum 'On the Economics and Politics of Inequality' with contributions from several of Australia's leading economists (see below). The ABS has released a series of Fact Sheets that describe various aspects of well-being and inequality, including the main data sources, definitional issues and recent trends (e.g. ABS, 2013a), while trends in income distribution have been examined by The Treasury (Fletcher and Guttman, 2013), The Productivity Commission (Greenville *et al*., 2013) and The Australia Institute (Richardson and Denniss, 2014). The issue has also been the subject of a recent Senate Inquiry (Community Affairs References Committee, 2014).

In his Introduction to the Policy Forum mentioned above, McDonald (2015: 66) expresses the hope that 'the current surge of interest in inequality may lead to an increased research effort into both the causes and consequences of inequality'. The role of political forces is highlighted in contributions from Frijters and Foster (2015) and Triffit (2015), the latter arguing (p. 78) that the welfare sector has ceded ground to the business lobby in the debate over growing inequality, leaving the poor and disadvantaged 'voiceless in the shaping of policy decisions that have an acute impact on them'. Whiteford's (2015) analysis leads him to conclude (p. 89) that although the evidence on the socioeconomic impact of rising inequality is unclear; '…the evidence for social gradients is compelling'. While these aspects of inequality are important, the focus of this paper is on measurement, including which groups are at the bottom of the income distribution and the role of housing wealth in shaping overall wealth inequality – factors that have clear implications for tax and welfare policy. The analysis builds on that presented to the Policy Forum by Whiteford (2015) and Wilkins (2015). Whiteford (2015: Figure 1) shows that the longer-term trend in income inequality is upwards (reaching a peak in 2007-08) and identifies several policy failings that have allowed this to happen, including a fall in the redistributive impact of direct taxes. Wilkins' analysis (2015: Figure 1) confirms this broad upward trend in income inequality, but shows how different data sources and income measures exert a considerable influence on short-run movements around the longer-term trend. Neither author examines the distribution of wealth and how it relates to the distribution of income, but both aspects are given prominence in the analysis that follows.

Against this background of growing interest in, and concern about, economic inequality, this paper draws on data from recent ABS surveys to examine the extent of income and wealth inequality in 2011-12 and recent changes. Such an approach is needed because concepts such as 'rich' and 'poor' cannot be adequately captured by focusing on either income or wealth in isolation – particularly in the Australian context where home ownership plays an important role in shaping both distributions, not only among the aged but also between aged and non-aged groups (Yates and Bradbury, 2010). The role of housing wealth is thus given particular attention by examining the joint distribution of income and wealth among those aged below and above 65. The methods used to produce the results are explained in Section 2, while Sections 3 and 4 present the main findings on the distributions of income and wealth and recent trends therein, respectively. The main conclusions are summarised in Section 5.

2. Data Sources and Methods

The data source for most academic studies of the distributions of income and wealth in Australia is the confidentialised unit record files (CURFs) based on the *Survey of Income and Housing* (SIH) conducted biennially by the ABS.[3] The SIH is conducted across the four quarters of the financial year and the reported quarterly incomes have been adjusted to allow for the rise in consumer prices that took place over the course of the year by expressing all incomes in the prices that prevailed mid-way through the year, i.e. at the end of December in each year. Income is collected in these surveys in current form (i.e. in the week before the survey) and in annual form (i.e. over the previous financial year).[4] The estimates reported below are based on current (weekly) income, which is the measure used by the ABS when presenting its main findings (see ABS, 2013b: Table 1). Wilkins (2015, p 96) argues that the annual income measure 'is the more natural accounting period for measuring most components of income' and is used in most international comparisons of income distribution (including by the OECD in the reports cited earlier and later). Against this, the use of weekly rather than annual income allows a better match of household characteristics (which may change over the course of a year) with reported income, and also means that the latest data are more recent (because the annual data have a one-year lag). The ABS also claims that some income components (specifically income from government pensions and allowances) appear to be more accurately reported on a weekly basis. The advantages implied by these considerations are reinforced by Wilkins' (2014a) estimates, which show that the weekly income series better captures recent ABS measurement changes (see below) and that the ABS weekly income data better track the HILDA (annual) income series than the ABS annual income data.[5] For these reasons, we base our analysis on the weekly income measure.

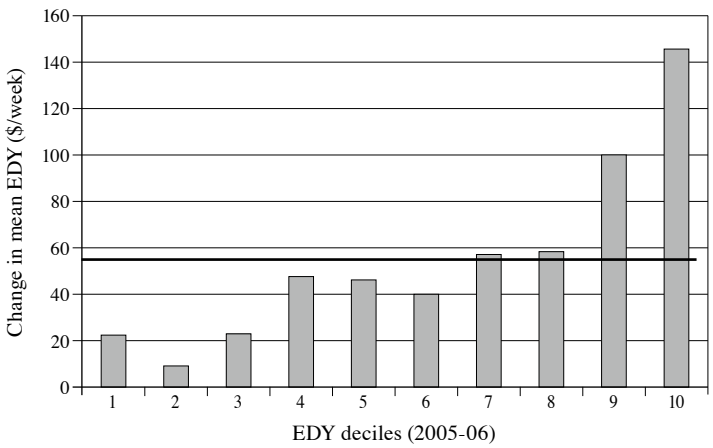
The key variable in the income analysis is disposable income, which is defined as gross income from all sources minus (estimated) personal income tax and other income-related levies like the Medicare levy and surcharge. Households reporting zero or negative values of disposable income have been excluded from the analysis, on the grounds that income is unlikely to provide a reliable indicator of the living standards of these households.[6] Differences in household needs are adjusted for by deriving equivalised disposable income (EDY), which is equal to disposable income divided by the modified OECD equivalence scale.[7] The EDY variable captures the ability of income available for spending to meet the consumption needs of the household, and is now widely used in studies of income inequality (and poverty) conducted in Australia (e.g. Wilkins, 2014a, 2015: Phillips *et al*., 2013) and elsewhere (e.g. Jenkins, 2015) and

[3] The HILDA data are being increasingly used to examine the distributions of income (Wilkins, 2014b; 2015) and wealth (Wilkins, 2013) although the focus here is on the use of ABS data.
[4] Although the ABS provides estimates of imputed rent in its latest income distribution analysis (see ABS, 2013: Table 18), these estimates are not available for earlier years and have not been included in the definition of income used in this analysis.
[5] Wilkins (2014a: Figures 5 and 6 and Table 5 and 2015: Figure 1) presents comparisons of movements in inequality based on the ABS weekly and annual series and the HILDA (annual) income variable. The results lead him to conclude (2014a, p 78) that: 'the SIH annual series is the outlier of these three series'.
[6] This exclusion results in the removal of 93 households (out of a total sample of 14,569, equivalent to 0.64 per cent).
[7] The OECD scale assigns a score of 1.0 to the first adult in the household, 0.5 to each subsequent adult and 0.3 for each child (defined as those aged under-15).

by international bodies like the OECD (2008, 2011). It is assumed that all people in the household have the same living standard, and (except where otherwise indicated) we describe the distribution of equivalent household disposable income among persons.

Over the period covered by this analysis, the ABS has introduced a series of measurement changes to improve the quality of its income data, most recently in 2007-08 (see ABS, 2009: Appendix 4). These changes impact on measured inequality in each year and need to be taken into account when estimating inequality and (particularly) when examining changes over time. In some cases, this can be done by continuing to use earlier income definitions which have been calculated for some later years. For example, estimates based on the latest income measure are only available from 2007-08 onwards, whereas estimates based on the changes introduced in 2005-06 are available from then up to 2011-12. The ABS summarised the changes introduced in 2007-08 as including, for the first time, more comprehensive estimates of 'non-cash benefits, bonuses, termination payments and payments for irregular overtime worked' and stated that 'most of the changes have been to the scope of employment income and at the higher end of the income distribution i.e. fourth and highest quintiles' (ABS, 2009, p 61 and 63). (ABS, 2009, p 61).[8] In fact, as Figure 1 indicates, the latest measurement change impacted on mean incomes across the entire distribution, not just at the top end. Despite this, Wilkins (2014a) confirms the ABS claim, finding that the overall impact was to increase measured inequality.

Figure 1: Impact of the 2007-08 Income Measurement Change on Income Distribution (mean change in equivalised disposable income, EDY, by pre-change EDY decile)



Source: Author calculations based on SIH 2011-12, CURF.

[8] The ABS estimated at the time that this change affected 3.4 million (43 per cent) households, resulted in an increase in mean weekly gross household income of $85 (5.2 per cent) and an increase in the Gini coefficient from 0.319 to 0.331 (3.8 per cent) (see ABS, 2009: Appendix 4 and Kindermann and McColl, 2012).

Unlike Wilkins (2014a), no attempt has been made to directly adjust for the definitional changes introduced by the ABS in 2007-08 over the period covered by the analysis reported here, i.e. 2005-06 to 2011-12. Instead, comparability has been achieved by employing the income definition applying in 2005-06, which is available on a consistent basis over the sample period. As noted, income data based on the most recent measure are only available from 2007-08, but wealth estimates are not available for that year, hence our focus on the period since 2005-06. When conducting the inequality trend analysis, current year monetary estimates have all been expressed in 2011-12 dollars by adjusting by movements in the CPI.

Net wealth is defined as the sum of the following five main components of wealth: estimated value of own home (less mortgage); estimated (net) value of other real estate; estimated (net) value of other non-financial assets; balance of government and non-government superannuation accounts; estimated (net) value of shares, business and financial assets; minus the estimated value of other debts.[9] Compared to income distribution research, there is less of a consensus in the literature about the most useful way to report household wealth distributions. From one perspective, wealth represents the potential for future consumption, which suggests that it should be pooled within the household, equivalised and counted in the same way as income. However, in many circumstances, wealth held by a household at a point in time will be used to finance future consumption in circumstances when the household composition may differ from that at the time of observation – for example, when people retire or when wealth is passed on to descendants. In this case, equivalising to adjust for current household circumstances will not be appropriate, and a more straightforward accounting of wealth might be more informative. Wealth can also be seen as representing social power, in which case adults in the household might be considered differently from children (as in the case of the OECD income equivalence scale described earlier).

Three examples of recent international research on the distribution of wealth follow these different approaches. Jantti, Sierminska and Van Kerm (2013), examine the equivalent wealth of persons, Sierminska, Smeeding and Allegrezza (2013) examine household wealth without equivalisation (though it is not clear whether they count households or persons) and a report by Credit Suisse Research Institute (Shorrocks, Davies and Lluberas, 2014) describes the distribution of per-adult wealth across the adult population. Most Australian studies of the distribution of wealth follow the second approach, with no equivalence adjustment and examining how wealth is distributed among households (ABS, 2013c; Headey, Warren and Wooden, 2008). However, in order to make our comparison with income distribution as straightforward as possible, the analysis that follows reports the distribution of wealth using the first of these approaches. That is, we examine the distribution of equivalent household wealth of persons, in the same way that we examine the distribution of the equivalent household income of persons, with the joint distribution of both variables thus consistent and meaningful. In both cases, each quantile/quintile contains the same number of individuals.

[9] It should be noted that these wealth components do not add up to the Total Net Wealth variable provided on the latest CURF. The ABS has advised the authors that there are (minor) errors in the total wealth variable provided on the CURF, and that summing the components provides the best estimate of net wealth. The definition of wealth is very similar across the period, although in the earlier years there is less disaggregation of investment wealth and liabilities (which might imply an under-estimation if these components were not included elsewhere).

Our analysis of the distribution of wealth and the joint distribution of income and wealth are (for consistency) both based on the most recent definitions of both variables. This differs from the approach used to examine changes in the income distribution and this difference needs to be kept in mind when reviewing the results. As in the case of the income inequality analysis, all wealth values are reported in 2011-12 dollars, using the CPI to inflate estimates for the earlier year. Because the Gini coefficient is not necessarily bounded between zero and one if some households have negative wealth (as some do), negative wealth values have been set to zero prior to calculation of the Gini coefficient – although this has a negligible impact on the results reported. The summary measures of both income and wealth inequality are basic quintile shares (of the relevant variable) supplemented by the shares of the top and bottom 10 per cent and 5 per cent of the distributions to capture what is happening in the extremes of both distributions.

3. Results

3.1 Income Inequality

As noted above, two basic adjustments were made to the raw income data before the distributional analysis was conducted: the quarterly data within each year was adjusted by movements in the CPI over the year so that the observations are all centred on the mid-year; and households reporting a zero or negative value for disposable income were removed. However, the top rows of each panel in Table 1 show what the 'raw' data imply for income inequality in 2011-12, before any of these data adjustments have been applied and before equivalisation. (All our tables have two panels. The top panel shows characteristics of the top and bottom 5 and 10 per cent and the totals, and the bottom panel the characteristics of each of the quintile groups). It is clear from the other rows that the CPI adjustment has almost no impact on the distributional measures shown here and is not discussed further. Table 1 also shows what impact the exclusion of zero and negative incomes and the equivalence adjustment have on the measured income distribution.[10] The exclusion of zero and negative incomes causes inequality to fall (by definition), but not by much – across the income quintiles, the income shares change by no more than 0.2 percentage points in the case of unequivalised income, and by even less in the case of equivalised income.[11] Applying the equivalence scale has a larger impact on inequality, particularly at the bottom of the distribution, where many households with low income are single people (e.g. full-rate pensioners), who move up the distribution after the equivalence adjustment is applied.

[10] The unequivalised income measures shown in Table 1 show the distribution of actual disposable income among households.

[11] For both unequivalised and equivalised income, the post-CPI and exclusion adjustment distributions satisfy the Lorenz domination criteria (Atkinson, 1970), which unambiguously implies more equality. The post-CPI and exclusion adjustment distribution of equivalised income is also more equal than that of unequivalised income.

Table 1: Sensitivity of the Income Distribution to Data Adjustments in 2011-12 – mean incomes ($/week) and income shares (%) (in brackets)

	Bottom 5%	*Bottom 10%*	*Top 10%*	*Top 5%*	*Total*
Unequivalised income:					
No CPI adjustment; no exclusions	226	359	4546	5601	1810
	(0.6)	(2.0)	(25.1)	(15.5)	(100.0)
CPI adjustment & zero/negative incomes excluded	298	403	4552	5605	1819
	(0.8)	(2.2)	(25.0)	(15.4)	(100.0)
Equivalised income:					
No CPI adjustment; no exclusions	166	259	2255	2805	919
	(0.9)	(2.8)	(24.5)	(15.3)	(100.0)
CPI adjustment & zero/negative incomes excluded	211	284	2258	2810	924
	(1.1)	(3.1)	(24.4)	(15.2)	(100.0)
			Quintiles:		
	1	*2*	*3*	*4*	*5*
Unequivalised income:					
No CPI adjustment; no exclusions	532	1084	1589	2158	3687
	(5.9)	(12.0)	(17.6)	(23.9)	(40.7)
CPI adjustment & zero/negative incomes excluded	558	1092	1595	2163	3693
	(6.1)	(12.0)	(17.5)	(23.8)	(40.5)
Equivalised income:					
No CPI adjustment; no exclusions	342	581	795	1060	1818
	(7.5)	(12.7)	(17.3)	(23.1)	(39.6)
CPI adjustment & zero/negative incomes excluded	356	584	797	1062	1820
	(7.7)	(12.7)	(17.3)	(23.0)	(39.4)

Source: SIH 2011-12, CURF.

Information on the distributional profile of selected socio-demographic groups in 2011-12 using the 2007-08 income measure is provided in Table 2. The measure used for this purpose is the share of each group in the different quantiles of the overall distribution of equivalised income (measured on the latest, 2007-08, basis). If the group was randomly distributed across the distribution, these shares would be similar to those that define the quantiles themselves, i.e. 5 per cent, 10 per cent, or 20 per cent. The difference between these hypothetical shares and those that actually exist thus provides an indication of how well the group is faring, distributionally.

In terms of the main divergences, groups that are heavily concentrated in the lower portion of the distribution (the bottom two quintiles) are older people (where the concentration is 70.6 per cent), single people (57.9 per cent), and lone parent families (69.2 per cent). Even larger differences exist for those mainly reliant on a government pension or allowance (96.1 per cent) and unemployed households (78.5 per cent). The former concentration reflects the fact that the social security system provides an income floor (or safety net) in times of need, while the latter highlights the low level of Newstart Allowance referred to earlier. The groups that are disproportionately represented in the top two quintiles are those mainly reliant on income from a wage or salary and those employed full-time. Employment is thus an important factor driving the shape of the income distribution, both at the top (through the earnings it generates) and (through its absence) at the bottom.

Table 2: Distributional Position of Specific Socio-demographic Groups (row percentages of people in each demographic group)

	Bottom 5%	*Bottom 10%*	*Top 10%*	*Top 5%*	*Total*
Children (aged under 15)	5.5	9.9	6.7	3.3	100.0
Older people (aged 65+)	4.7	18.4	4.1	2.5	100.0
Single people	8.6	27.1	7.7	4.3	100.0
Lone parent families	9.0	16.2	0.7*	0.6*	100.0
Couples with children	4.7	7.9	8.7	4.2	100.0
Primary income source is wage and salary	1.3	2.3	12.6	6.0	100.0
Primary income source is government pensions and allowances	14.4	35.7	0.0*	0.0*	100.0
Employed full-time [a]	1.3	2.0	14.6	7.2	100.0
Unemployed [a]	31.5	45.6	0.2*	0.2*	100.0
Born in Australia [b]	4.2	9.3	11.1	5.5	100.0
Born in a non-English-speaking country [b]	7.1	12.7	7.6	3.6	100.0
	Quintiles:				
	1	*2*	*3*	*4*	*5*
Children (aged under 15)	20.6	24.4	24.1	17.6	13.3
Older people (aged 65+)	44.9	25.7	13.2	9.3	6.9
Single people	43.5	14.4	15.3	13.4	13.5
Lone parent families	36.0	33.2	19.5	8.8	2.5
Couples with children	15.0	21.6	23.9	21.7	17.9
Primary income source is wage and salary	6.0	17.8	24.0	26.2	26.1
Primary income source is government pensions and allowances	69.7	26.4	3.8	0.1*	0.0*
Employed full-time [a]	5.5	15.7	23.1	26.8	28.9
Unemployed [a]	58.9	19.6	12.2	4.2*	5.1*
Born in Australia [b]	18.3	18.9	19.3	21.0	22.5
Born in a non-English-speaking country [b]	25.5	21.5	18.8	18.9	15.3

Notes: [a] Based on the labour force status of the Household Reference Person; [b] For adults only; An asterisk (*) indicates that the estimate has a relative standard error (RSE) that exceeds 25 per cent.
Source: See Table 1.

3.2 Wealth Inequality

Estimates of the distribution of net wealth among persons in 2011-12 are shown in Table 3.[12] Separate distributions are shown in order to highlight the role of (net) housing wealth and age (which are related). In terms of wealth holdings across all persons, over three-fifths (61.0 per cent) of net household wealth was held by the wealthiest 20 per cent of individuals. This compares with the share of the lowest quintile of one per cent, implying a top-to-bottom quintile share ratio of 61 to one, far above the corresponding

[12] It should be noted that all of the wealth distribution estimates presented here are based on responses to a household survey. Given the likelihood of non-response and under-reporting, the share of wealth held by those at the top is almost certainly an under-estimate. Shorrocks, Davies and Lluberas (2014: Table 4-4) report synthetic estimates which take into account national 'rich lists' of the wealth held by the richest individuals. On this basis, the top 10 per cent of Australian adults (not households) are estimated to hold 51 per cent of the wealth (compared with the household top 10 per cent share of 43.8 per cent shown in Table 3), leading the authors to conclude that the share of wealth held by the richest 10 per cent is relatively low in Australia compared with other countries – mainly because of the high level of home ownership.

income quintile share ratio of just above 5 to one (Table 1; final row). The richest 10 per cent have over 43 per cent (more than 4 times the no inequality share), while the top 5 per cent hold over 30 per cent of all wealth (6 times their share if there was no inequality). Wealth is more equally distributed (particularly at both extremes of the distribution) among people aged 65 and over than among those aged under-65, although the differences are not that large. The lowest quintile of older people have only 2.7 per cent of all older person wealth while the lowest two quintiles together hold just over 11 per cent of the total. Not surprisingly, the average level of wealth is higher among older people, at over $666,000, more than 80 per cent higher than the average wealth holding of households aged under-65 ($370,000).

Table 3: The Distribution of Wealth by Age in 2011-12 – mean net worth ($'000) and net worth shares (%) (in brackets)

	Bottom 5%	*Bottom 10%*	*Top 10%*	*Top 5%*	*Total*
All households					
Equivalent net wealth	-3.2	5.2	1810.3	2534.3	413.7
	(-0.0)	(0.1)	(43.8)	(30.6)	(100.0)
Own home (less mortgage)	-2.8	-1.4	550.6	666.0	166.7
	(-0.1)	(-0.1)	(33.1)	(20.0)	(100.0)
HRP aged under 65					
Equivalent net wealth	-4.8	3.6	1637.0	2280.3	369.8
	(-0.1)	(0.1)	(44.3)	(30.9)	(100.0)
Own home (less mortgage)	-3.3	-1.6	495.7	610.5	142.0
	(-0.1)	(-0.1)	(34.9)	(21.6)	(100.0)
HRP aged 65 and over					
Equivalent net wealth	10.7	26.0	2618.4	3586.7	666.1
	(0.1)	(0.4)	(39.4)	(27.1)	(100.0)
Own home (less mortgage)	0.0	0.9	747.0	921.1	308.3
	(0.0)	(0.0)	(24.3)	(15.1)	(100.0)
			Quintiles:		
	1	*2*	*3*	*4*	*5*
All households					
Equivalent net wealth	21.2	113.1	243.8	428.0	1261.5
	(1.0)	(5.5)	(11.8)	(20.7)	(61.0)
Own home (less mortgage)	0.6	37.7	127.0	226.6	441.0
	(0.1)	(4.5)	(15.2)	(27.2)	(53.0)
HRP aged under 65					
Equivalent net wealth	18.1	96.4	212.7	383.3	1138.5
	(1.0)	(5.2)	(11.5)	(20.7)	(61.6)
Own home (less mortgage)	-0.2	27.6	100.6	190.9	391.2
	(-0.0)	(3.9)	(14.2)	(26.9)	(55.1)
HRP aged 65 and over					
Equivalent net wealth	90.9	288.9	432.8	678.6	1835.5
	(2.7)	(8.7)	(13.0)	(20.3)	(55.3)
Own home (less mortgage)	44.4	201.5	289.0	394.9	610.8
	(2.9)	(13.1)	(18.8)	(25.5)	(39.7)

Note: HRP = Household Reference Person.
Source: See Table 1.

Table 3 also highlights the equalising effect of home ownership, which accounts for around 40 per cent of total wealth holding overall, slightly less than this among those aged under 65, but over 46 per cent of the total wealth of older people. Taking account of housing wealth results in the share of net wealth owned by the top quintile declining across the whole population, as well as among those aged below and (particularly) above aged 65. In fact the distribution of net housing wealth among older people shown in the final row of Table 3 is (except at the bottom) similar to the distribution of income among the whole population shown in the final row of Table 1.

3.3 The Joint Distribution of Income and Wealth

The joint distribution of income and wealth is shown in Table 4, which shows a breakdown by age but not the totals (for reasons of space – these results are available on request from the authors).[13] These results indicate that for those aged under 65, those in the bottom and top income quintiles are both more than twice as likely to be in the bottom and top wealth quintiles, respectively. This relationship is stronger among those with the lowest 5 per cent of incomes and even stronger among those with the lowest 10 per cent of incomes. (All the 'diagonal' cells in the table are highlighted in bold). However, the relationship between income and wealth is strongest at the very top of the distribution with 33.1 per cent of those in the top 5 per cent of the income distribution also in the top 5 per cent of the wealth distribution. The pattern of joint quintile shares shown across the diagonal cells of Table 4 is as expected, with the two extreme percentages higher (because movement can only be in one direction) than those in the middle three joint quintiles.

Among those aged 65 and over the pattern of a weaker association at the bottom than at the top is even more prominent – as can be seen by comparing the diagonal quantile group shares, again shown in bold. For the older group, those in the lowest 5 per cent income groups are less likely than expected (3.0 per cent rather than 5 per cent) to also be in the low wealth groups, while those in the lower income groups generally are quite likely to have middle to high wealth (see the lower left-hand cells). A plausible explanation for this pattern is the existence of considerable numbers of older people with substantial assets held in non-income-generating form, who receive a reduced or zero pension because of the pension asset test.

[13] Although not shown in Table 4, the aggregate analysis indicates that wealth is more equally distributed across the income quantiles than across the wealth quantiles. This is consistent with the pattern of inequality recently described by Whiteford (2013).

Table 4: The Joint Distribution of Income and Wealth by Age in 2011-12

	Within-age household equivalent income group				
Within-age household equivalent wealth group	*Bottom 5%*	*Bottom 10%*	*Top 10%*	*Top 5%*	*Total*
HRP aged under 65:					
Bottom 5%	**14.2**	20.3	0.9	0.5	5.0
Bottom 10%	25.0	**34.0**	1.2	0.5	10.0
Quintile 1	36.6	46.3	3.1	1.1	20.0
Quintile 2	14.2	13.6	8.6	5.3	20.0
Quintile 3	16.0	14.6	14.2	8.9	20.0
Quintile 4	16.2	13.4	18.1	13.9	20.0
Quintile 5	17.0	12.0	56.0	70.8	20.0
Top 10%	8.1	5.4	**36.5**	51.5	10.0
Top 5%	3.3	2.0	21.4	**33.1**	5.0
All	100.0	100.0	100.0	100.0	100.0
HRP aged 65 and over:					
Bottom 5%	**3.0**	5.4	.	.	5.0
Bottom 10%	7.6	**11.0**	2.0	.	10.0
Quintile 1	17.2	21.4	6.9	6.4	20.0
Quintile 2	14.9	17.1	1.8	0.9	20.0
Quintile 3	13.9	20.7	7.2	4.7	20.0
Quintile 4	34.5	26.6	13.5	6.8	20.0
Quintile 5	19.5	14.2	70.5	81.2	20.0
Top 10%	10.4	6.3	**52.9**	65.6	10.0
Top 5%	1.6	1.3	32.4	**46.9**	5.0
All	100.0	100.0	100.0	100.0	100.0
	Quintiles:				
	1	*2*	*3*	*4*	*5*
HRP aged under 65:					
Bottom 5%	15.9	5.6	1.3	1.3	1.0
Bottom 10%	28.7	13.3	4.3	2.3	1.5
Quintile 1	**43.0**	27.9	14.0	11.0	4.5
Quintile 2	16.6	**23.6**	23.6	22.3	14.0
Quintile 3	15.8	21.5	**25.5**	20.5	16.6
Quintile 4	13.4	16.6	24.1	**25.1**	20.7
Quintile 5	11.2	10.5	12.9	21.1	**44.2**
Top 10%	4.6	5.1	5.3	9.0	25.9
Top 5%	2.2	2.5	2.5	3.8	14.0
All	100.0	100.0	100.0	100.0	100.0
HRP aged 65 and over:					
Bottom 5%	8.9	8.7	4.3	3.1	.
Bottom 10%	14.9	16.4	9.8	7.4	1.6
Quintile 1	**27.5**	30.9	19.4	13.6	8.7
Quintile 2	21.9	**26.8**	21.9	19.9	9.6
Quintile 3	22.3	24.1	**23.6**	19.5	10.3
Quintile 4	19.2	12.2	25.3	**25.7**	17.5
Quintile 5	9.1	6.0	9.8	21.3	**53.8**
Top 10%	4.1	2.6	2.8	6.9	33.5
Top 5%	1.1	1.0	1.6	2.3	18.9
All	100.0	100.0	100.0	100.0	100.0

Note: As explained in the main text, the latest (2007-08) income definition has been used to construct this table.
Sources: see Table 1.

4. Recent Trends in Inequality

As noted earlier, the income measurement changes that the ABS has introduced in recent SIHs to improve the quality of the income data collected make it difficult to track changes over time.[14] Given that the SIH is currently conducted every second year, the best period on which to base such an analysis would be by comparing results for 2011-12 with those for 2007-08. However, while this can be done for income, it has already been noted that wealth data were not collected in 2007-08, only in 2005-06. For this reason, the analysis of recent changes that follows examines changes over the period 2005-06 to 2011-12, an approach that requires us to use the 2005-06 income measure in order to maintain comparability.

Changes in the distributions of income and wealth between 2005-06 and 2011-12 are summarised in Table 5, which also includes the income inequality estimates for 2007-08 for completeness. It is important to note that the period was one in which average levels of both income and wealth increased in real terms – by 13.4 per cent in the case of income, and by 6.9 per cent in the case of wealth. Income inequality displays a clear pattern, increasing in the initial (pre-GFC) period then declining between 2007-08 and 2011-12, and ending up virtually the same at the end of the period as at the beginning.[15] The increase in the earlier sub-period and the decrease in the later sub-period are both statistically significant but the change over the period as a whole is not. This picture of overall stability conceals differences in how those at different points in the income distribution fared over the period. Thus, while not shown in Table 5, the mean real (equivalised) incomes of those in quintiles 1 and 3-5, the top 10 per cent and the top 5 per cent all increased by around 13 per cent, those in quintile 2 experienced an increase of almost 15 per cent, while income growth for those in the lowest 5 per cent and 10 per cent averaged only 2 per cent and 10 per cent, respectively. The rising tide thus did lift all boats, but not to the same degree with those at the very bottom missing out almost entirely.[16]

Inequality in the distribution of wealth increased slightly overall between 2005-06 and 201112, although this difference is not statistically significant. However, this conceals the somewhat more nuanced picture that emerges when the changes at the very top are examined, this revealing a substantial (but again not statistically significant) decline in the share of the top 5 per cent of almost one percentage point. The picture becomes further complicated when the distribution is broken down by age, where an almost significant increase in the Gini coefficient among those aged under 65 ($t = 1.6$) contrasts with no significant change for those aged 65 and over ($t = 0.8$). What is striking here is the differing changing fortunes of those at the top of the two distributions: for those aged under 65, the share of wealth owned by the top quintile, top decile and top 5 per cent all increased, while for those aged 65 and over the wealth shares of all three richer groups declined substantially – by 3.2, 5.3 and 7.3 percentage points, respectively – although none of these changes are statistically significant. Further examination would

[14] We agree with Wilkins (2014a: 88), who has expressed the hope that; 'future revisions to ABS concepts and survey methods for its household income survey collections will be kept to a minimum'.

[15] This pattern is consistent with that estimated by the OECD and cited earlier (see OECD, 2014a: Annex Table), and with that estimated by the ABS (2013a: Table 1), despite the OECD's use of annual rather than weekly income (and a different equivalence scale).

[16] It is also important to recall that those with zero or negative incomes have been removed from the sample.

be needed to identify what caused these diverging patterns, although it seems likely (and is consistent with the evidence) that the decline in the stock market after the GFC played an important role for those older people with significant investment portfolios.

Table 5: Changes in Income and Wealth Inequality, 2005-06 to 2011-12 (share percentages)

	Bottom 5%	*Bottom 10%*	*Top 10%*	*Top 5%*	*Gini coefficient*
Income Inequality [a]*:*					
2005-06	1.3	3.3	23.5	14.4	0.303
2007-08	1.2	3.1	24.9	15.8	0.319
2011-12	1.2	3.2	23.4	14.3	0.302
Wealth Inequality (total):					
2005-06	0.0	0.2	43.6	31.5	0.580
2011-12	-0.0	0.1	43.8	30.6	0.590
Wealth Inequality (HRP under 65):					
2005-06	0.0	0.2	43.1	30.4	0.579
2011-12	-0.1	0.1	44.3	30.9	0.597
Wealth Inequality (HRP 65 and over):					
2005-06	0.1	0.5	44.7	34.4	0.544
2011-12	0.1	0.4	39.4	27.1	0.511
			Quintiles:		
	1	*2*	*3*	*4*	*5*
Income Inequality [a]*:*					
2005-06	8.1	12.9	17.5	23.2	38.3
2007-08	7.8	12.7	17.2	22.7	39.7
2011-12	8.1	13.1	17.5	23.1	38.2
Wealth Inequality (total):					
2005-06	1.3	6.2	12.1	20.2	60.2
2011-12	1.0	5.5	11.8	20.7	61.0
Wealth Inequality (HRP under 65):					
2005-06	1.2	6.1	12.0	20.4	60.2
2011-12	1.0	5.2	11.5	20.7	61.6
Wealth Inequality (HRP 65 and over):					
2005-06	2.8	8.4	12.2	18.1	58.5
2011-12	2.7	8.7	13.0	20.3	55.3

Note: [a] Based on the 2005-06 income measure.
Source: See Table 1.

How does the Australian experience income distribution since 2007-08 shown in Table 5 compare with that experienced in other OECD countries over the post-GFC period? Recent figures published by the OECD (OECD, 2014a: Annex Table) indicate that income inequality increased between 2007 and 2011 in just over half of the countries for which data are available and declined in the remainder, including Australia (although many of the changes were very small). Despite this, Australian income inequality remained above that in 22 of 30 OECD countries in 2011, its Gini coefficient being exceeded in only 8 countries: Chile, Israel, Mexico, Portugal, Spain, Turkey, the United Kingdom and the United States.

5. Summary and Conclusions

Concern over growing inequality has placed the issue at the centre of an economic debate that has for too long refused to engage with it, preferring instead to endorse (at least implicitly) the theory of 'trickle down economics', which sees increased inequality as a pre-condition for economic growth and growth as the solution to inequality. This view has been challenged by many prominent academic economists, including Joseph Stiglitz who refers (2010: xxiii) to '… the now widely accepted view that inequality is bad for the economy'. The OECD (2014b) has also noted that the old orthodoxy is now largely discredited, arguing that the recent increase in inequality has dragged down economic growth (by restricting the ability of those at the bottom to invest in their human capital and skills development and by lowering social mobility). It notes that:

> 'While previous work by the OECD has clearly shown that the benefits of growth do not automatically trickle down across society, the new evidence closes the circle by suggesting that inequality also matters for growth. Policies that help to limit or reverse inequality may not only make societies less unfair, but also wealthier' (OECD, 2014b: 3)

Reinforcing this view, the OECD Secretary-General has argued that:

> '… inequality has become a universal concern, among both policy makers and societies at large. … Without a comprehensive strategy for inclusive growth, inequality will continue to rise. We need to put better policies for better lives at the centre of our policy efforts, while providing people with hope and equal opportunities' (OECD, 2011: 17 and 19)

In the Australian context, Leigh (2013) has produced compelling evidence that although equality has long been a central feature of the Australian social and economic landscape, inequality has been growing in many dimensions over recent decades.

Growing economic inequality has been a feature of recent development in many countries and the evidence presented here shows that Australia has not been immune from this trend. Changes in how income is measured in the household surveys that form the basis of most studies of income distribution have made it harder to establish precisely what has been happening using consistent data covering the recent period, but the general picture that emerges is nonetheless clear and appears robust in the face of these changes. Factors that have contributed to the observed distributional changes include the failure to increase the real level of NSA for over two decades, reduced progressivity of the income tax system and the concessionary treatment of housing in the tax and transfer systems – although with the home ownership rate declining, it is unclear whether this factor will continue to play a similar equalising role among future generations.

There have been shifts in how both income and wealth are distributed that have benefitted those in the top quintiles of both distributions at the expense of those in the four quintiles below them. Critics may point out that, despite this, those who have not increased their share of income or wealth have still experienced an increase in their real absolute levels and are thus better-off. Such claims are being increasingly challenged by those who now challenge the proposition (implicit in 'trickle down

economics') that increases in the real income or wealth of individuals automatically imply improved standards of living, irrespective of how they compare with how others are faring. There is a need to move beyond a narrow economic focus on living standards that emphasises the importance of material resources to a broader notion of well-being that encompasses notions of inclusion and equality in order that future economic gains do not compromise social goals.

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