RECENT WEALTH AND INCOME TRENDS IN NEW ZEALAND

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During the run-up to the 2014 General Election, some opposition parties attempted to make political capital out of claims that inequality in New Zealand had increased during the term of the National-led government of John Key and Bill English. Evidence for such claims was at best mixed and at worst hardly compelling. What evidence that was produced did not really cast any light on exactly how unequal New Zealand is in income and wealth terms but merely on recent trends in income inequality. Income and wealth inequality is, in fact, deeply embedded into New Zealand's social and economic make-up and has been for some time – at least since the late 1980's. Clearly then, it is the actions, or rather inaction, of all governments since the 1980s that has contributed to such inequality, and this reality was ignored in the most recent inequality debate perhaps because of the culpability of some opposition parties and some opposition MPs.

The recent publication of French economist Thomas Piketty's *Capital in the Twenty-First Century* has not only taken the economics profession by storm, but it has become a best seller in the English speaking world. Piketty's efforts have placed inequality centre stage in economic debate in part because of his soundly researched case which suggests that inequality is rising to historic record levels. What is perhaps most discouraging about Piketty's analysis is the picture he offers around current levels of income and wealth inequalities and the mechanisms already in place to make these worse.

In closing his *Capital in the Twenty-First Century* Piketty comments: *'Yet it seems to me that all social scientists, all journalists and commentators, all activists in the unions and in politics of whatever stripe, and especially all citizens should take a serious interest in money, its measurement, the facts surrounding it, and its history. Those who have a lot of it never fail to defend their interests. Refusing to deal with the numbers rarely serves the interests of the least well off.'*[1]

So, to meet this challenge at least in a small way and for the New Zealand context, this paper is an initial attempt to popularise inequality. The paper attempts this task by reviewing now decade old data on wealth inequalities and then analysing income trends and changes in wealth over the past decade or so. The paper uses a number of sources of data for this analysis, and somewhat typically, given the vagaries of economic statistics, the pictures offered by the data and analysis are by no means consistent. Nevertheless it is, as always, important to honestly interpret the data and to accept that the trends identified by it may not exactly align to your world view.

The paper first considers the last published data on wealth distribution and looks at more recent data to offer an up-to-date picture of wealth distribution today. It then considers income distribution at a national level and at an individual and household level. Conclusions on current trends around wealth and income distribution are offered.

Recent distributions of wealth in New Zealand

The last published survey of wealth distribution in New Zealand dates back to 2003 and 2004 and to work undertaken in the Survey of Family Income and Employment or SoFIE.[2] This survey involved over 20,000 individuals, and the responses from these people was used to estimate the distribution of wealth across 2.9 million New Zealanders aged over 15 years at the time. A very useful summary of the results of this wealth survey is offered as an appendix by Chang (2007),[3] and this summary forms the basis of the data provided in Table 1.

Essentially, wealth distribution in 2003/04 was very skewed. The wealthiest 10% of New Zealanders owned 52% of the wealth, while the poorest 50% owned just 5%. The skew is even worse if we consider the position of the wealthiest 1% who owned over 16% of the total wealth – or more than three times more than the poorest 50%. The middle class – that 40% of the population who fell in between the richest 10% and the poorest 40% – owned 43% of the wealth[4].

There is, of course, a demographic overlay to this distribution – an overlay based on age and ethnicity and, to an extent, the combination of these. As we should expect, younger people are less wealthy simply because they have not had time to accumulate wealth through work, saving, investment and, if they are lucky, inheritance. With the exception of 15 to 24-year-olds and 25 to 34-year-olds, wealth is fairly evenly distributed across other all other age groups. Notably, it was 55 to 64-year-olds who had both the highest average personal net worth and the highest median net worth. Such an outcome should probably be expected, given that people tend to build wealth more quickly towards the end of their working life when their incomes are highest and obligations to dependent children least. Because there are no times series data or longitudinal data[5] available there is no way of knowing if this age distribution of wealth is exceptional or has changed over time.

The ethnic distribution of wealth is even starker. In 2003/04, European/Pakeha made up 83% of the over 15s population yet held 93% of the reported wealth. By comparison, Maori made up 10% of the same population yet owned 4% of the wealth. Even worse off are Pacific people, who made up nearly 5% of the over 15s population but owned just 1.3% of the reported wealth. This wealth inequality is even worse when you add children into the mix. Children, of course, rely on the wealth of their parents and other adults in their households and in 2003/04 European/Pakeha children comprised around 70% of the under 15s population, while Maori children made up 24% and Pacific children 12% of this age group.[6]

It is likely that the overall wealth distribution identified by SoFIE actually under reports the extent and share of the wealth held by the very rich. Chang (2007) notes *'that population based surveys are known to have difficulties in capturing the most wealthy, and hence the upper end of the net worth distribution is more likely to be underestimated when compared with other parts of the distribution'*.[7]

The overall wealth distribution reported by SoFIE is similar to that identified by Pikkety for European countries and the United States.[8] In effect, the middle class personally own about the average level of wealth, while the poorest 50% own almost nothing, and the richest 10% more than half the wealth. Pikkety suggests such a distribution is becoming even more skewed, although the paucity of more recent information for New Zealand makes it difficult to confirm such a trend.

Table 1A: Distribution of wealth in New Zealand in 2003/04[ix]

	Population	Total value of assets *$millions*	Median assets	Total liabilities $millions	Median liabilities	Net worth $millions	Median net worth	Average net worth	Ratio average to median	% of total net worth
AGE GROUP										
15-24	526,700	12,407	5,100	5,421	0	6,986	2,400	13,264	5.5	1.5%
25-34	506,800	52,881	54,500	19,947	10,800	32,934	31,100	64,984	2.1	7.0%
35-44	586,600	126,267	137,300	30,989	22,300	95,278	82,400	162,424	2.0	20.4%
45-54	504,800	149 ,690	187,500	24,580	15,000	125,110	142,900	247,841	1.7	26.8%
55-64	374,200	116,349	190,500	9,586	700	106,763	170,000	285,310	1.7	22.8%
Over 65	430,500	101,819	151,500	1,203	0	100,617	149,500	233,721	1.6	21.5%
All ages	2,926,600	559,414	106,100	91,726	2,400	467,668	69,800	159,600	2.3	
GENDER										
Male	1,413,300	294,369	108,200	48,472	300	245,897	70,800	173,988	2.5	52.6%
Female	1,516,300	265,045	104,000	43,255	2,000	221,790	68,500	146,271	2.1	47.4%
ETHNICITY										
European	2,430,700	515,642	125,500	81,924	2,900	433,717	86,900	178,433	2.1	92.7%
Maori	303,800	25,858	25,100	5,876	2,400	19,982	18,000	65,774	3.7	4.3%
Pacific	143,900	8,647	10,600	2,683	1,500	5,964	6,700	41,445	6.2	1.3%
Asian	186,800	22,236	25,500	4,376	400	17,861	21,000	95,616	4.6	3.8%
Other	54,300	7,151	25,400	1,709	2,900	5,442	19,000	100,221	5.3	1.2%

Table 1B: Distribution of wealth in New Zealand in 2003/04

	Population	Total value of assets *$millions*	Median assets	Total liabilities $millions	Median liabilities	Net worth $millions	Median net worth	Average net worth	Ratio average to median	% of total net worth
PERSONAL INCOME (deciles)										
<$1,500	291,700	21,510	4,500	4,258	0	17,253	3,200	59,146	18.5	3.7%
$1,501 - $9,300	293,000	28,379	20,900	4,993	1,300	23,386	15,100	79,816	5.3	5.0%
$9,300 - $13,400	294,300	35,908	77,700	3,700	100	32,208	67,000	109,439	1.6	6.9%
$13,401 - $18,000	293,900	38,004	98,000	3,344	0	34,660	81,500	117,931	1.4	7.4%
$18,001 - $24,100	292,200	41,506	74,300	5,133	1,300	36,373	50,800	124,480	2.5	7.8%
$24,101 - $30,400	291,200	45,177	90,000	7,501	3,500	37,676	53,500	129,382	2.4	8.1%
$30,401 - $38,100	295,800	50,295	105,500	10,675	6,700	39,620	64,100	133,942	2.1	8.5%
$38,101 - $48,100	291,600	61,276	143,600	12,510	1,500	48,766	88,500	167,236	1.9	10.4%
$48,100 - $65,200	296,700	86,231	192,000	17,043	25,900	69,118	132,300	232,956	1.8	14.8%
$65,201+	289,000	151,126	333,800	22,570	26,000	128,556	25,500	444,830	17.4	27.5%

Changes in the distribution of wealth

Subsequent waves of wealth research through SoFIE have not been published by Statistics New Zealand, although the research has continued in Wave 4, 6 and 8 of the programme concluding in September 2010.[10] Because it was a longitudinal study based on surveying the experiences of the same individuals over eight consecutive years, it was inevitable that there would be some attrition during the programme. Even so, in the final survey of wealth (and other things such as employment and income), over 10,000 individuals participated.[11]

Law and Scobie (2014) report some of the otherwise unpublished results of the wealth questions in Waves 4, 6 and 8 of SoFIE, and the most relevant of these are provided in Table 2. Table 2 reports net wealth of individuals at various percentiles across the wealth distribution. In addition, it compares the relative positions of individuals at the 90th and 99th percentiles of wealth, with an individual's wealth at the 25th percentile.

It does not appear from the limited analysis in Table 2 that wealth inequalities are becoming worse and, in fact, it appears that although these inequalities are significant if not extreme, they are narrowing a little. Two caveats must be registered with this data and analysis, however.

The first is that because this is a longitudinal survey and wealth is related to age – in that people most often acquire wealth during their working life – we should expect people participating in the survey to become wealthier during the time of the survey. At the end of the survey, in 2010, 80% of the poorest age group (15 to 24-year-olds) were not included because they were too young to participate at the beginning of the survey.

The second caveat is around the impact of the global financial crisis (GFC) from 2007 onwards. As we will see in later data, the GFC impacted on the total value of household wealth at least for a period from 2007 to 2011. It seems likely, although there is no data available to support this, that the wealthiest were most affected by GFC on account of how they held their wealth. The wealth held by the poorest 50% of individuals is normally quite straightforward and consists of household durables, small bank deposits and perhaps a superannuation policy. The value of these assets were least affected by the collapse in asset values following the GFC so the GFC had limited effect on them. For the wealthy the situation would have been more complex and perhaps the GFC had a greater impact on their wealth especially if some of it was held in non-bank deposits or risky equities and especially foreign equities. What we may be seeing in Table 2 with the apparent compression of the wealth distribution in Waves 6 and 8 – which occurred in 2007/08 and 2009/10 – are the impacts of the GFC on the wealthy. In other words, the least wealthy 50% of New Zealanders did not become wealthier during these Waves, but rather the wealthy lost some of their wealth – albeit temporarily.

Table 2: Estimates of distribution of net wealth for SoFIE – *nominal $s*[12]

	Survey Wave			
	2	**4**	**6**	**8**
1st percentile	-31,446	-37,052	-44,494	-38,435
5th percentile	-1,466	-2,276	-1,680	1,012
10th percentile	3,066	3,964	6,534	10,089
25th percentile	23,365	30,636	40,112	50,183
50th percentile (median)	90,776	119,590	149,543	168,484
75th percentile	203,173	258,032	311,429	340,493
90th percentile	363,051	461,672	539,845	587,258
95th percentile	506,952	664,795	741,948	809,307
99th percentile	983,264	1,378,290	1,501,057	1,561,014
Mean	154,162	200,329	238,282	257,242
90th percentile as ratio of 25th percentile	15.5	15.1	13.5	11.7
99th percentile as ratio of 25th percentile	42.1	45.0	37.4	31.1

Trends in household wealth over the past decade

The Reserve of New Zealand (RBNZ) publishes comprehensive estimates of household wealth on a quarterly basis. Although this data is based on households rather than individuals and is not entirely consistent with estimates of total wealth offered in SoFIE,[13] it is quite comprehensive and consistent, as well as being the best data available.

RBNZ estimates of net household wealth and of household net equity in housing are reported in Figure 1, while the actual data behind this graph is provided as a table in the appendix.

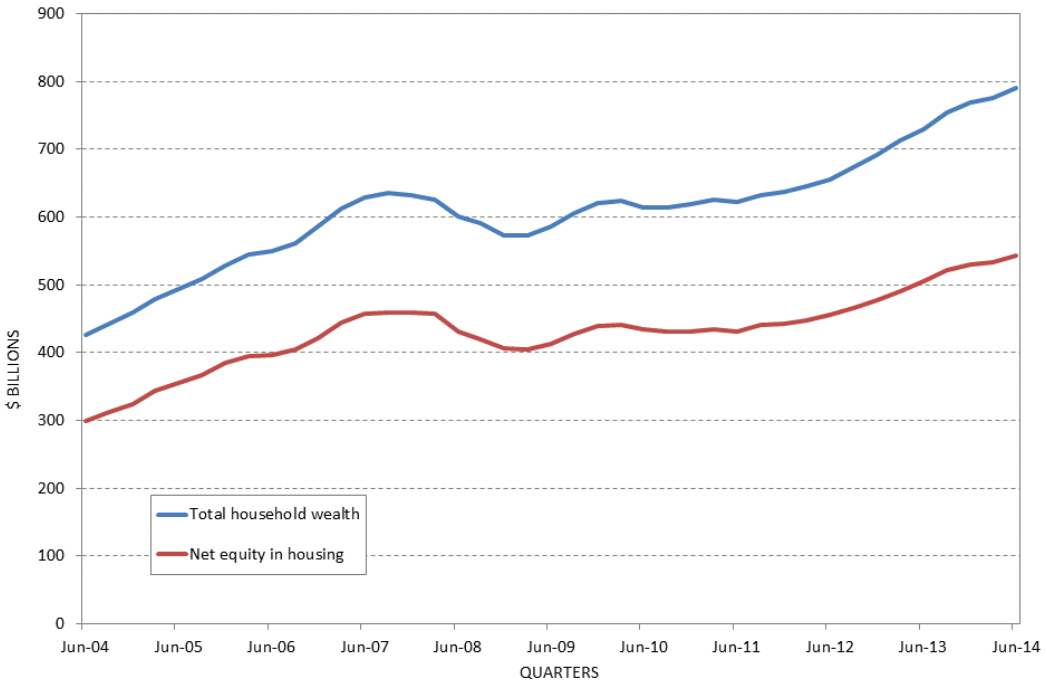
The gap in Figure 1 between the net equity in housing line and the total household wealth line measures the extent of household wealth held in financial assets such as deposits, equities, securities and life insurance and superannuation policies. It is apparent from Figure 1 that this gap has widened – especially since 2009 and following the GFC. In June 2004, New Zealand households held $128 billion in financial assets (the net value of financial assets excluding housing related debt). By September 2007, this wealth had reach $176 billion, but fluctuated around this level though until June 2010 when it stood at $179 billion. In the four years since, the net financial wealth held by New Zealand households has grown 38% (in nominal terms) to $248 billion. As discussed below, this expansion in wealth is through New Zealanders saving more and holding more cash deposits.

Two other trends are noticeable in Figure 1. The first is the impact which the GFC had on flattening although not destroying New Zealanders' wealth. While there was a decline in overall wealth between September 2007 and June 2009 – of around 8% or $50 billion – this wealth had been

recovered or rebuilt by late 2011. Ninety per-cent of this loss in wealth was in the housing market, with just $5 billion being lost in financial assets.[14]

The second trend apparent both in Figure 1 and in our collective memory of the New Zealand economy over the past decade, is the huge importance of the housing market in terms of how New Zealanders hold their wealth and accumulate it. The net equity held in housing markets by New Zealand household rose 53% in nominal terms between June 2004 to June 2007, from just under $300 billion to just over $450 billion. Following a slump in fortunes between late-2007 and mid-2009, the housing market stumbled along at about the same overall value until mid-2012. Since June 2012, the net value of wealth held in the housing market has increased by 20% to almost $550 billion in late 2014. As we will see later this growth in value is not New Zealand wide – a trend likely to have skewed further the distribution of wealth in New Zealand.

Figure 1: Changes in household wealth 2004-2014[15]



Given that 70% of New Zealand household's net wealth is held in housing, it is worthwhile to gain some appreciation of the recent dynamics of housing markets to establish the source and distribution of the wealth invested and perhaps accumulating in this asset type. Figures 2 and 3 offer an idea of some of these dynamics. The data behind these figures is provided in tables in the Appendix.

Figure 2 outlines changes in the total value of New Zealand's housing stock and the value of debt secured against this stock for the period 2004 to 2014. In mid-2014, New Zealand's housing stock was worth around $750 billion and the value of housing loans was just under $200 billion. Over the past 10 years (2004-2014), the value of the nation's housing stock has grown by 86%, while housing

debt has doubled. Most of this growth in housing debt occurred before the GFC, with growth of just 20% in housing debt since 2009.

Figure 2: Changes in housing value and housing debt 2004 - 2014[16]

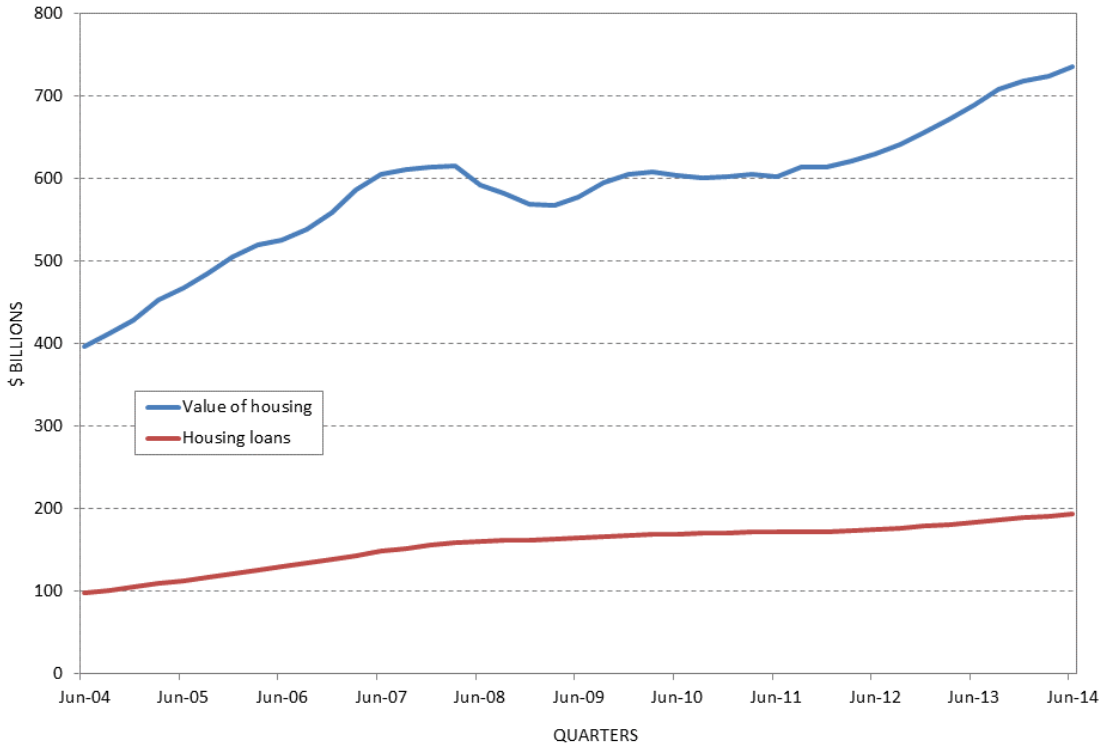
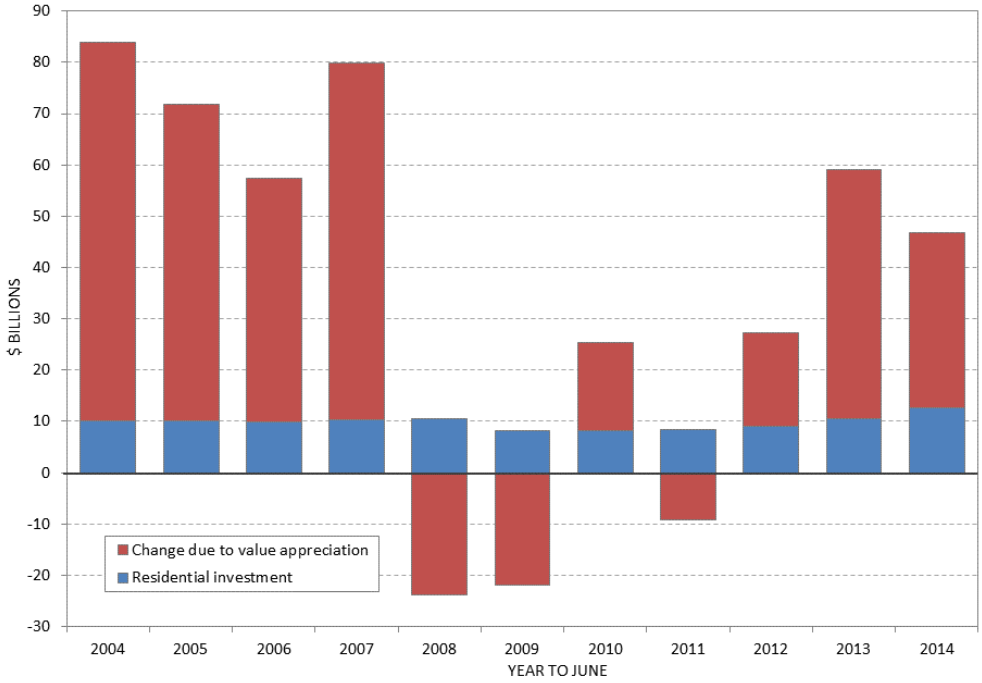


Figure 2 shows clearly that much of New Zealanders' recent accumulation of wealth has been due to appreciating house prices. Between June 2011 and June 2014, New Zealand household wealth grew by almost $170 billion – two thirds of which was due to increased equity in housing. Figure 3 provides further background to the sources of this increased equity.

During the decade 2004-2014, the value of New Zealand's housing stock grew by $340 billion in nominal terms. Over this period, New Zealanders invested $98 billion in new housing, which means that around 70% or about $240 billion of this increase in housing wealth was due to asset appreciation.[17] Over the shorter period since 2011 when house values grew by $133 billion, investment in new stock contributed just $32 billion or 24% of this growth. In other words, $100 billion of New Zealanders' increased wealth since 2011 is due to appreciation in house values.

Figure 3: Contributions to house value changes 2004-2014[18]



So, who has benefited from increasing house values?

The bonanza of increasing house values is, of course, not evenly shared – neither in terms of geography nor income. To be the beneficiary of this bonanza clearly you had to have been able to afford to buy a house or to have owned housing in regions where there was this value appreciation. This has only been a small proportion of the population.

Chang (2007) helpfully reports the geographical distribution of wealth as surveyed in 2003/04 from Wave 2 of SoFIE. Some of this data is offered in Table 3.

Table 3: Distribution of wealth by region in 2003/04[19]

	Net worth *$millions*	Median net worth $s	Average net worth $s	Ratio average to median	Share of population	Share of total net worth
Auckland	133,453	52,400	153,100	2.9	29.7%	28.5%
Waikato	59,512	77,000	197,300	2.6	10.3%	12.7%
Wellington	49,809	69,500	149,000	2.1	11.4%	10.7%
Rest of North Island	98,563	73,300	146,900	2.0	22.9%	21.1%
Canterbury	68,085	73,500	171,000	2.3	13.6%	14.6%
Rest of South Island	58,266	79,600	165,200	2.1	12.0%	12.5%
Total NZ	467,688	69,800	159,648	2.3		

This data shows some interesting and perhaps unexpected features. The most obvious is around how much poorer Auckland is than the rest of New Zealand. In particular, the typical Aucklander is significantly less wealthier than South Islanders and those living in Waikato. Furthermore, inequality appears more severe in Auckland, as demonstrated by the ratio of average wealth to median wealth. While Auckland's share of total national wealth is slightly below its population share, this difference is not significant.

A partial explanation of Auckland's relative poverty is the fact that its population is younger than other regions and that it has the majority of Asian and Pacific people – groups that have significant lower net wealth than European/Pakeha.

In addition, Auckland has lower rates of home ownership than the rest of New Zealand as indicated in Table 4. Table 4 also illustrates how quickly and how recently home-ownership has collapsed, not only in Auckland but in many other parts of New Zealand. Clearly, the house price boom has benefited a minority of New Zealanders and it would appear that this minority is becoming smaller by the month.[20]

Table 4: Changes in housing tenure by tenure holder 2001 - 2013[21]

	People not owning usual residence 2001	% not owning usual residence 2001	People not owning usual residence 2006	% not owning usual residence 2006	People not owning usual residence 2013	% not owning usual residence 2013
Auckland	410,391	50%	493,410	52%	595,839	57%
Waikato-BoP	186,552	44%	209,136	45%	242,913	49%
Wellington	142,446	46%	159,915	47%	180,378	50%
Rest of North Island	197,640	43%	211,956	44%	233,943	47%
Canterbury	149,985	41%	169,959	42%	192,711	46%
Rest of South Island	128,127	40%	141,255	41%	156,984	44%
Total NZ	1,215,408	45%	1,385,856	47%	1,603,011	50%

It is well known that the most recent episode of house price inflation is really just an Auckland phenomenon. Although there have been significant increases in median and average house values in Christchurch, these increases are largely on account of the re-build, which may or may not be sustained once this is completed in two years or so. Table 5 provides estimates of changes in the values of broadly defined regional housing markets over the past 10 years. These estimates are broken into the five-year periods 2004 to 2009 and 2009 to 2014. The earlier period, as shown in Figure 3, corresponds to the last part of the pre-GFC house price boom and the post-GFC slump, while the later period covers the post–GFC recovery. Between 2004 and 2009, house prices increased fairly evenly across the whole country, although Auckland and the South Island outside of Canterbury lagged behind the national average a little. Since 2009, approximately 60% to 65% of the

total increase in house values have been in Auckland, and by value of sales transactions Auckland now represents over half the New Zealand housing market.

Over the decade 2004-2014, house values nationally increased by around 85%-90% while they doubled in Auckland and Canterbury. To have been the beneficiary of these increases in value, which the Reserve Bank estimates to be $340 billion,[22] you had to have had a stake in the housing market. The individuals identified in Table 4, or around half of adult New Zealanders, have no such stake, so clearly the windfall wealth gains from this house value appreciation have gone to just one half of the adult population. In Auckland, over the past 10 years, the total value of the housing market has grown by around $160 billion, or 48% of the national total of $340 billion. Auckland house owners make up less than 15% of the adult population, but because people outside Auckland also own property in Auckland it seems likely that perhaps no more than 20% of the adult population have shared in this 48% of the total increase in house values. In other words, nearly half the benefits of this house price appreciation have gone to just a small proportion of New Zealanders, whom it seems likely were already amongst the wealthiest 25% of New Zealanders identified by SoFIE in 2003/04.

Table 5: Changes in housing market values 2004 - 2014[23]

	Average house sale price 2004	Average house sale price 2009	Average house sale price 2014	Value of housing stock ($billions) 2004	Value of housing stock ($billions) 2009	Value of housing stock ($billions) 2014
Auckland	388,900	506,900	696,900	166	228	329
Waikato-BoP	225,200	349,500	373,200	52	85	95
Wellington	286,100	409,200	447,200	47	70	79
Rest of North Island	180,400	276,900	300,100	44	71	79
Canterbury	217,200	333,900	426,900	45	72	94
Rest of South Island	269,400	311,000	343,200	42	52	59
New Zealand	279,400	390,600	503,400	396	578	736

Trends in other wealth over the past decade

By its own admission, the Reserve Bank's estimates of household wealth is lacking and it is taking steps to remedy this situation.[24] In particular, it would appear that household ownership of unincorporated businesses, such as in smaller family-owned businesses and businesses not listed on the stock exchange, are not included in estimates of household assets. Ownership of residential investment property is, however.

Reported household wealth outside of house ownership is represented by the gap between the graphed lines in Figure 1. This wealth grew by 94% between 2004 and 2014 from around $128 billion to $248 billion.

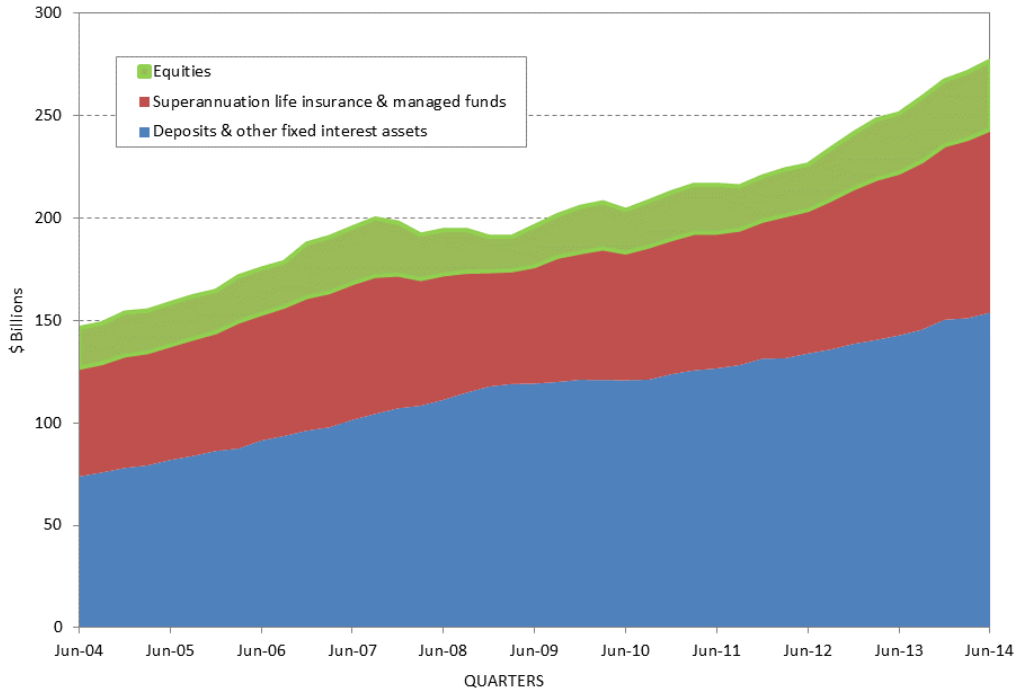
Figure 4 and data included as an appendix provide indications of recent changes in household ownership of financial assets. Over the decade 2004 to 2014, the gross value of household assets (ignoring related debt) rose by $130 billion, or by 89% to $276 billion. Of this increase, 61% or $80 billion was in additional interest-bearing deposits or investments, while 20% or $26 billion was in superannuation funds. Just 11% of this extra financial wealth has been in equities, although the value of assets held in equities has risen sharply since 2010 on the back of rising share prices and privatisations.

Two somewhat countervailing things stand out amongst these changes. The first is the extent to which New Zealanders are accumulating cash assets – the $80 billion growth in deposits and interest-bearing investments represents a growth of 108% in nominal terms in 10 years. It is difficult to know where this cash has come from, although it appears unlikely that it has come from households universally shifting their wealth from other types of assets such as property and equity. This is unlikely because these asset types have not shown any signs of divestment although it appears that there is not a lot of extra investment in these either.[25] It would seem – on the basis of little contrary information – that most of the extra $80 billion has come from income. While we have little information on the prior wealth of the people and households doing this saving, it would seem from the analysis of income distribution considered later in this paper, that those individuals saving the most are receiving above average incomes.

The second feature of these changes in households' financial wealth is the growing importance of superannuation savings in household balance sheets. From 2009 to 2014, the proportion of total household assets made up of superannuation savings rose from around 11% to 16%, and from $21 billion to $45 billion in value.

This growth can be attributed to KiwiSaver, which since 2008 has cost taxpayers $5.8 billion in subsidies and seen contributions of $13.3 billion from individuals and employers. Just over 70% of people aged between 18 and 55 are enrolled in and contributing to a KiwiSaver scheme. While in 2014 nearly one third of KiwiSaver members earned less than $20,000 per year, 15% of all members were aged under 17, so probably not working at all. Their participation is most likely to be funded by their families to take advantage of the Government subsidies, and if this is the case these are most likely to be middle to high-income households with sufficient resource to do this.[26]

Figure 4: Changes in financial assets held by New Zealand households 2004 -2014[27]



National income and income distribution

Levels of income at a personal or household level depend, in part, on how well the economy is doing, and within this on how the economic cake is being divided between labour and capital.

A popular slogan around income distribution and one touted by many neo-liberal economists is that 'a rising tide lifts all boats'. The thinking behind this slogan is that questions of poverty or inadequate levels of income for some groups can best be addressed by having strong economic growth. Such growth increases the ability of the economy to support higher incomes for everyone, and so (the argument goes) it is better to focus on policies that enhance economic growth, rather than on re-distributing existing incomes and wealth. To some extent, this rising tide argument has borrowed from Simon Kuznets' original idea that there was initially a trade-off between economic growth and income equality, but that in time and as an economy matured or become more developed, incomes were re-distributed downwards and inequality decreased.[28] Such a thesis has, however, been convincingly refuted, with one author even suggesting that *'It's the share of the rich, stupid'* that determines distributional outcomes for the poorest 40% of citizens.[29]

Nevertheless, unless there are strong re-distributional policies put in place or a significant economic shock that shifts distributional patterns, it is unlikely that individual and household incomes will change much in an economy which is growing slowly or not at all. Background economic growth is of some interest to those who are interested in income distribution, in part, to provide an understanding of the potential that exists for incomes to grow without re-distributional policies or shocks.

Figure 5 charts changes in per capita gross national income (GNI) in inflation-adjusted terms over the period 2003 to 2014. Over the most recent 10 years (2004-2014), per-capita GNI has grown by just over 13% in real terms. Almost two-thirds of this growth has occurred since 2011, with total real growth between 2004 and 2011 amounting to just over 4%. Given this stability (or some would say stagnancy), it is probably unreasonable to expect individual and household incomes to change a great deal. Furthermore, if some incomes did grow during this period, it most likely was at the expense of someone else. There is some evidence of this later outcome in data presented later.

At the whole of the economy level, a key distributional issue is that of the division of the national cake between labour, capital and the government. Figure 6 reports the shift in each of these shares for the period 2003 to 2014. While the share going to labour by way of compensation for employees, and to capital as a gross operating surplus, has been moderately volatile over this period, a trend involving modest change is still apparent. This data suggests that between 2003 and 2014, labour's share of national income rose by around 4% and from 40% to 44%. Over the same period, capital's share diminished by around 5% from around 47% to 42%. The share of national income being claimed in taxation rose slightly from 12% to 13%. The numbers behind these percentages match quite closely with other data,[30] and although the extent of these shifts are not precise they do point to a likely trend of an increasing share of the economic cake going to labour and a fairly constant share going to the state.

These shifts are perhaps contrary to what might be imagined to be occurring under a centre-right wing government. Given per capita GNI and the share of national income going to labour are both increasing, there is the possibility of a broad improvement in incomes across the income range. This possibility is considered in the following section.

Figure 5: Per capita gross national income 2003-14[31]

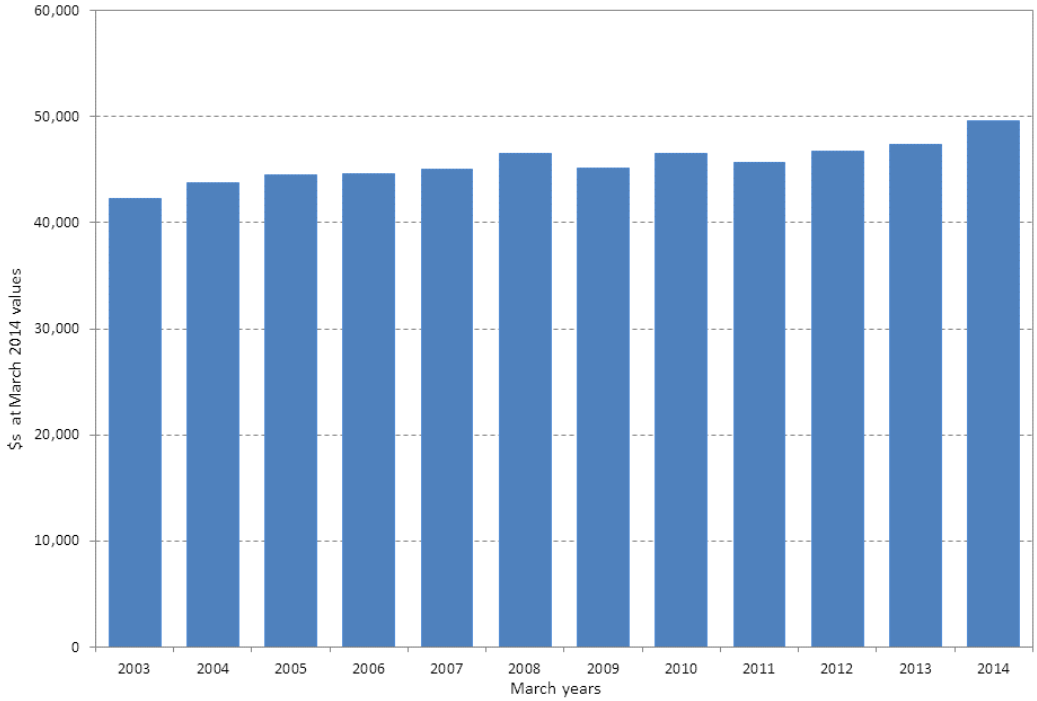
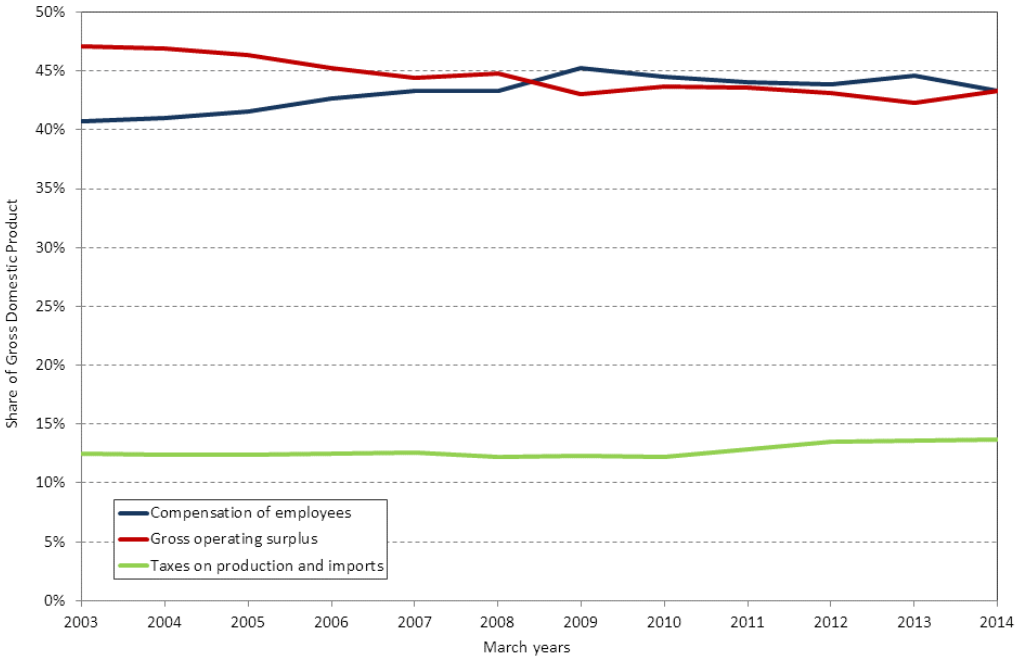


Figure 6: Shares of Gross Domestic Product 2003-14[32]



Income distributions over the past decade

There are a number of public sources of data on income distribution, and although none of them are complete or completely reliable, they provide us with some insights into how incomes have changed over time. These sources include income tax return data published by the Inland Revenue Department (IRD) and various survey based datasets published by Statistics New Zealand such as the Quarterly Employment Survey, the Household Economic Survey and, related to this, the New Zealand Income Survey. At a broader level, there are also individual and household income statistics from Censuses and national income estimates that provide broad estimates of income shares between different groups in society. Both of these sources are also published by Statistics New Zealand. Of some value also are the regulatory impact statements published by Treasury in support of changes to minimum wage legislation. The results offered by these sources are presented below.

Tables 4 and 5 provide some summary analysis of reported income distributions from IRD data and for the period 2003 to 2013. Table 4 provides summary data for wage and salary earners reported incomes. Table 5 provides the same summary for all reported income from all sources.

Two main things stand out from the data presented in Tables 4 and 5. The first is just how skewed the income distributions offered here actually are. The final row on each table offers a ratio between the total income earned by the top 10% of income earners and that earned by the bottom 50% of earners. Overall, the top 10% of earners receive twice the total income received by the poorest 50% of adult New Zealanders.

The second noticeable feature of the analysis offered in Tables 4 and 5 is how little things have changed over the decade or so covered by the data. If anything, inequality has subsided a little,

although the evidence of such a decline is not compelling. For example, the ratio of the total income received by the top10% of wage and salary earners and the bottom 50% of such earners has dropped from 2.1 in 2003 to 1.8 in 2013. This change is due to a slight decline in the income share received by the best paid 10% of wage and salary earners, alongside a slight increase in the share earned by those earning less than the lowest quartile income and those earning between the lowest quartile income and the median income. As well, the greatest increase in nominal incomes between 2003 and 2013 was amongst those earning less than the lowest quartile income. This group saw their incomes lift by around 80%, while the nominal incomes from those further up the income scale increased by around 50%. Clearly, in pure dollar terms, the better paid received the greatest wage and salary increases between 2003 and 2013. The lift in incomes amongst the poorest paid wage and salary earners is most likely related to the continual increases in the adult minimum wage, which as noted elsewhere in this paper, has risen 68% from $8.50 per hour in 2003 to $14.25 per hour in 2014.

The distribution of reported incomes from all sources is summarised in Table 5. These sources include wages and salaries, welfare benefits and pensions as well as income from capital such as rents, interest and dividends.

The dataset behind Table 7 reports tax returns in 2013 for almost 3.5 million people, while the dataset behind Table 6 reports returns for 2.3 million wage and salary earners in 2013. These numbers correspond closely with the figures offered elsewhere by Statistics New Zealand on the numbers of people in jobs and in the adult population.[33]

The income distribution reported in Table 7 is slightly more compressed than that offered in Table 6 for wage and salary earners alone. Without access to more detailed data, it is difficult to know why this is, although it would appear to be related to the fact that most of the additional individuals covered in Table 5 are people receiving either a welfare benefit or New Zealand Superannuation. It would appear that approximately 800,000 people of the additional 1.2 million who report income to IRD and are not wages and salary earners are either receiving Superannuation or a welfare benefit.[34] This would suggest that the remaining 400,000 or so people gain an income either through self-employment or from capital.

Of the 3.5 million people, their reporting incomes to IRD between 3% and 4%, or just over 100,000 people report nil income. This feature of the overall income distribution will, of course, tend to weigh down such statistical measures as median and average incomes. There is, however, some doubt about the authenticity of this level of nil incomes, so these have been left out of the analysis offered in Table 5. No nil income returns have been reported in the data on wages and salaries, so this has not been an issue in the analysis behind Table 6.

A comparison of Table 6 and 7 shows that lower quartile incomes of wage and salary earners is significantly lower than the lower quartile incomes of incomes overall – around 15% to 30% lower. At the level of median incomes, the reverse is true – wages and salaries median incomes have been 30% to 40% higher than for incomes overall. The reason for this is the clustering of incomes around $14,000 to $16,000 and $20,000 to $21,000. This clustering is shown in Figure 7, which indicates the overall distribution for reported incomes for 2013. These spikes correspond with rates for benefits and New Zealand Superannuation[35]

Figure 7: Distribution of reported personal incomes – 2013[36]

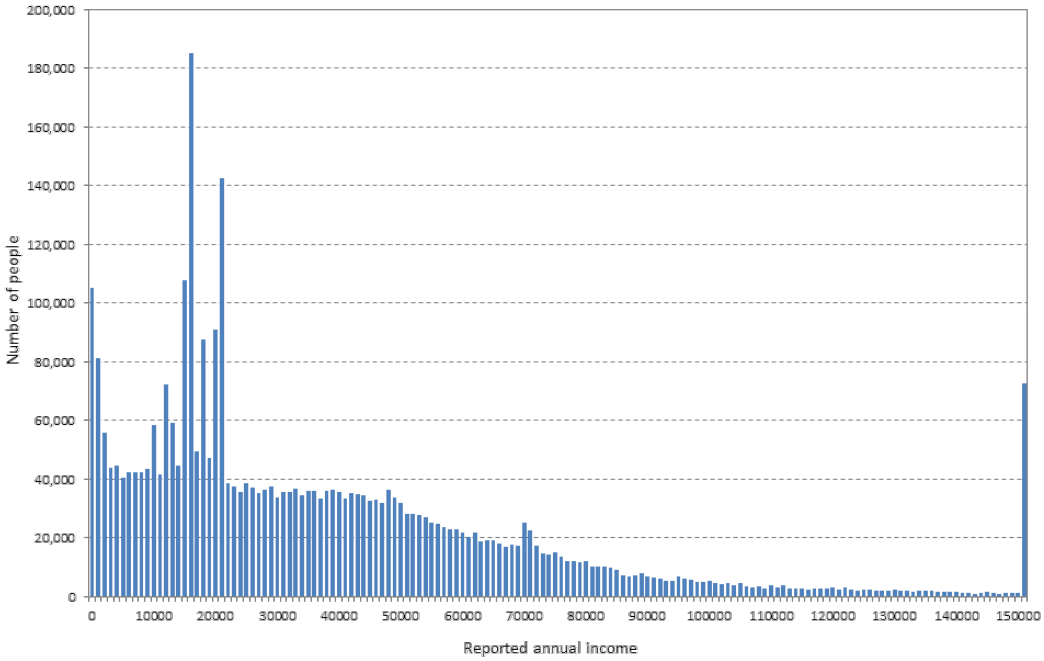


Table 6: Reported individual incomes from wages and salaries - 2003-2013[37]

March years	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change 2003-2013
INCOMES in nominal $s												
Lower quartile	6,583	6,375	6,285	7,884	7,748	9,212	10,209	10,481	10,543	11,400	11,892	81%
Median	21,927	23,526	24,729	25,949	26,230	26,143	30,475	31,474	32,000	32,870	34,684	58%
Upper quartile	38,092	40,540	41,333	43,785	45,664	48,072	46,901	51,999	52,444	54,265	57,015	50%
9th decile	55,737	58,528	60,403	63,182	65,865	68,469	72,268	74,728	76,911	79,955	81,813	47%
INCOME SHARE of total incomes reported												
Lower quartile range	2.4%	2.4%	2.5%	2.5%	2.5%	2.8%	2.9%	2.6%	2.9%	2.9%	3.0%	
Second quartile range	12.9%	13.1%	13.3%	13.3%	13.3%	13.9%	14.1%	14.1%	14.1%	14.1%	14.3%	
Third quartile range	27.9%	27.9%	27.8%	27.7%	27.6%	27.6%	27.5%	27.5%	27.4%	27.3%	27.2%	
Top quartile range	56.8%	56.7%	56.4%	56.5%	56.6%	55.8%	55.5%	55.8%	55.6%	55.7%	55.5%	
Top 10% of earners	31.5%	31.4%	31.2%	31.4%	31.6%	31.0%	30.7%	31.0%	30.8%	30.9%	30.9%	
Top 10% as ratio of bottom 50%	2.1	2.0	2.0	2.0	2.0	1.9	1.8	1.9	1.8	1.8	1.8	

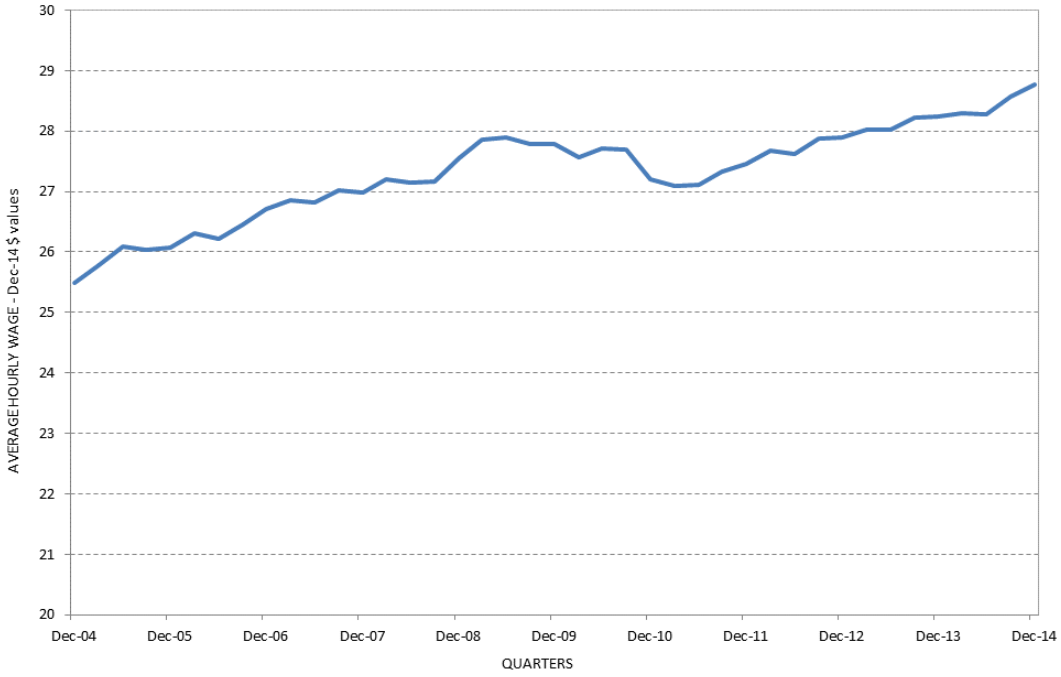
Table 7: Reported individual incomes from all sources - 2003-2013[38]

March years	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change 2003-2013
INCOMES in nominal $s												
Lower quartile	9,047	10,104	10,548	10,759	11,304	11,513	12,595	12,436	12,413	13,228	13,970	54%
Median	16,589	17,861	18,622	19,370	21,445	22,271	23,722	22,417	23,901	24,692	26,436	59%
Upper quartile	35,271	37,520	39,062	40,114	41,863	43,979	45,984	46,391	47,459	49,976	51,134	44%
9th decile	54,935	57,625	58,903	60,863	63,502	66,077	68,718	69,515	71,845	75,223	78,813	45%
INCOME SHARE of total incomes reported												
Lower quartile range	3.9%	3.9%	3.7%	3.6%	3.8%	3.8%	3.7%	3.8%	4.0%	4.1%	4.2%	
Second quartile range	12.6%	12.5%	12.3%	12.3%	12.4%	12.5%	12.5%	12.3%	12.4%	12.2%	12.1%	
Third quartile range	24.9%	24.9%	25.0%	25.3%	25.4%	25.5%	25.4%	25.3%	25.3%	25.0%	24.7%	
Top quartile range	58.6%	58.7%	59.0%	58.9%	58.5%	58.3%	58.4%	58.6%	58.3%	58.7%	59.0%	
Top 10% of earners	33.7%	34.0%	34.4%	34.1%	33.8%	33.7%	33.9%	33.8%	33.4%	34.1%	34.7%	
Top 10% as ratio of bottom 50%	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	

Wage trends over the past decade

It is important to appreciate that working New Zealanders have received modest growth in their incomes over the past decade, albeit that this growth stalled for the five years following the beginning of the GFC in late 2007. The trend for the average hourly wage at December 2014 values is reported in Figure 8. Over the 10-year period 2004 to 2014, real wages grew by almost 13% from the equivalent of $25.50 at 2014 values to $28.77. This is almost the same as the real growth in per-capita GNI discussed earlier in the paper. In real terms, wages grew at around 2.4% annually during 2005 and 2006, and then more or less stagnated from 2007 to 2012, before growing at a rate about 1.6% per year from 2011 to 2014. The rising tide part of the rising tide lifts all boats argument has proved true, although there was a five-year lull in the rising caused by the GFC, which should be seen (hopefully) as a once in a generation event.

Figure 8: Changes in average real ordinary time wages 2004-2014[39]

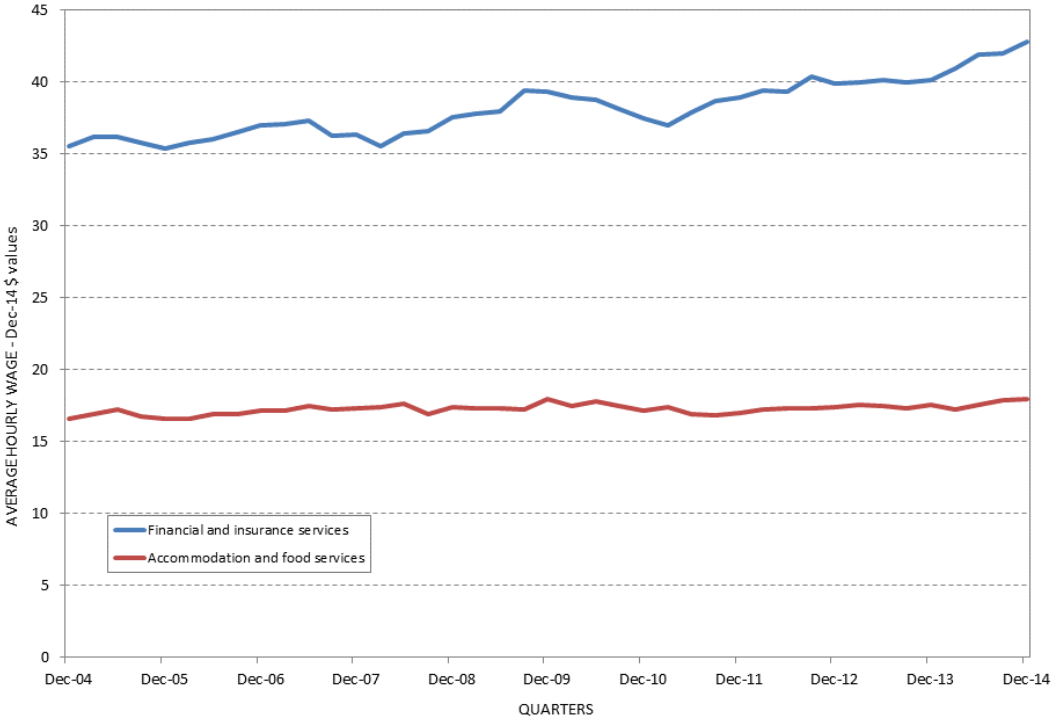


This rising tide argument, however, only applies to some New Zealanders. While the value of New Zealand Superannuation payments are tied more or less to trends in real wages other welfare benefits are not. Instead, these other benefits are simply tied to the consumer price index (CPI) and are effectively the benefit levels set by the benefit cuts of the National led government of Jim Bolger in 1991. Working for Families income top-ups – for beneficiary households with children – have contributed to some adjustment to the real value of some beneficiary households, although not to the extent of keeping up with the real wage growth reported in Figure 8.[40]

The rising tide argument also apparently only applies partially to some working New Zealanders. The wages of some of the poorest paid workers are not rising as quickly as those of better paid workers, and they may be rising because of legislation rather than through the market forces. Figure 9 compares changes in the real average hourly wages of people working in the highest paid sector –

the financial services sector – with those received by an average worker in the poorest paid sector – the accommodation-restaurant or hospitality sector. Over the 10-year period 2004 to 2014, average real wages for workers in the finance sector rose by around 20%, from $35.56 to $42.77 per hour, while average real wages for workers in the hospitality sector rose around 8%, from $16.58 to $18.00 per hour.[41]

Figure 9: Real hourly wages in finance and service sectors 2004 – 2014[42]



Regular adjustments of the adult minimum wage have become a consistent feature of Government's income policy since 2000, when it was adjusted to $7.55 per hour from $7.00, where it had sat for some years previously. In April 2014, the adult minimum wage was adjusted from $13.75 per hour to $14.25. In April 2004, the adult minimum wage was $9.00 per hour, so in inflation-adjusted terms, it has risen 23% over the period, which is commendable given that average wages have risen by only 13% in real terms over the same period.

Table 8 reports changes in the adult minimum wage since 2006, alongside estimates of the number of people likely to be receiving the adjusted wage at the time of this adjustment. These estimates of the numbers of workers affected by minimum wage changes indicate both the importance of these changes and of the supporting legislation to improvements in the incomes of the lowest paid workers.[43] In 2014, around 4.7% of workers or around 109,000 people were estimated to be receiving the minimum wage, as against 0.6% of workers or 13,000 individuals in 2006. It would appear that while minimum wage legislation is lifting the wages of the poorest-paid workers, these increases are not necessarily driving up the wages of those workers who are earning just above this minimum. Instead, these workers are becoming the beneficiaries of the next review of the minimum

wage and are not receiving market determined increases that might be expected in an economy with some overall wage growth.

Table 8: Changes in the adult minimum wage 2006- 2014[44]

Year	New adult minimum wage (per hour)	No of working receiving adult minimum wage	Number of people in jobs (June figures)	Proportion of workforce receiving adult minimum wage
2006	$10.25	13,000	2,141,000	0.6%
2007	$11.25	52,600	2,174,000	2.4%
2008	$12.00	71,200	2,191,000	3.2%
2009	$12.50	70,000	2,173,000	3.2%
2010	$12.75	36,300	2,174,000	1.7%
2011	$13.00	64,000	2,218,000	2.9%
2012	$13.50	89,600	2,228,000	4.0%
2013	$13.75	91,500	2,248,000	4.1%
2014	$14.25	109,000	2,331,000	4.7%

Conclusions

This paper has presented something of a mixed picture of recent trends in the distribution of wealth and income in New Zealand although a small number of features stand out that are worth repeating as a summary**.**

1. Wealth distribution was already skewed in 2004, with the richest 10% of people owning more than half the wealth and the poorest 50% of people owning just 5% of the wealth.
2. Wealth has predominantly be held in housing, but rates of home-ownership have fallen while net wealth held in housing has risen by $250 billion – this accumulation has benefited just half the adult population.
3. Auckland's house price boom over the past five years has dominated the New Zealand housing market and the distribution of New Zealanders' wealth in housing. The benefits of this increase in wealth have gone to perhaps only 20% of adult New Zealanders, while the economic settings which result from this house price inflation are endured by all New Zealanders.
4. There has been modest growth of around 13% in real terms in both per-capita gross national income and in wages suggesting the labour's share of the economy has remained relatively stable over the past 10 years. This income growth while being modest in still significant given the huge set-backs – in New Zealand and elsewhere – caused by the GFC.
5. Reported incomes by wages and salary earners show the extent of inequality in wages and salaries. The best paid 10% of workers in total earn around twice the overall income earned by the poorest paid 50% of workers. This ratio has fallen a little over the past 10 years, suggesting

at least that income inequality is not getting worse. Other comparisons of the trends in wages received by the best paid and worst paid workers offer an opposing picture, however.

6. The poorest paid quartile have shown some small gains in terms of income share, which may have been driven by minimum wage adjustments. Minimum wages levels have been increased by 23% in real terms over the past 10 years, compared with real average wage growth of 13%.
7. Against such increases, welfare beneficiaries – excluding those receiving New Zealand Superannuation – have lost ground as benefit levels are indexed against inflation. Effectively benefits remain at the arbitrary levels determined by the benefit cuts of 1991 creating in effect a class of citizens of around 500,000 people[45] who do not get the benefits of economic growth shared by the remaining four million New Zealanders

Statistics New Zealand reports that it is including saving-related questions in the 2015 Household Economic Survey (HES).[46] While the HES is not as an extensive survey as SoFIE, so may not be able to offer the same reliability around wealth distribution, it will provide a much needed update to wealth trends in New Zealand.

This paper has attempted to piece together the available information on what has happened to the extent and nature of wealth over the past decade, and in doing so has perhaps been a little too speculative given the paucity or limitations of this data. The forthcoming HES report as well as proposed improvements in Reserve Bank household assets and liabilities estimates will offer an opportunity to test the accuracy of the conclusions offered in this paper.

Regardless of this accuracy, two things stand out in data around wealth which somehow need to be explained by some distributional analysis: who has saved the $80 billion in cash deposits recorded by the Reserve Bank over the past decade, and who have been the main beneficiaries of the housing price boom in Auckland over the past five years? This paper suggests this additional wealth has accrued to the already wealthy and that perhaps wealth inequalities have worsened as a result. If the forthcoming HES report shows otherwise, then so much the better for a more equitable fairer New Zealand.

APPENDIX:

Household assets & liabilities - *$millions*

Source Reserve Bank of New Zealand statistics Table C.19 and C.21

June years	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Ten years 2004-14
Total financial assets	146,330	158,374	175,287	195,365	194,144	196,063	203,915	216,176	226,083	251,002	276,859	130,529
Financial liabilities *exc housing debt*	18,556	20,294	21,914	23,432	24,075	24,151	24,696	25,497	26,462	27,318	28,756	10,200
Net financial assets	127,774	138,080	153,373	171,933	170,069	171,912	179,219	190,679	199,621	223,684	248,103	120,329
Housing assets	396,000	467,792	525,206	605,005	591,589	578,039	603,335	602,427	629,749	688,836	735,586	339,586
Housing debt	97,225	112,723	129,382	147,756	160,425	164,786	169,246	171,448	174,519	183,775	193,270	96,045
Net housing assets	298,775	355,069	395,824	457,249	431,164	413,253	434,089	430,979	455,230	505,061	542,316	243,541
Total household assets	542,330	626,166	700,493	800,370	785,733	774,102	807,250	818,603	855,832	939,838	1,012,445	470,115
Total household liabilities	115,781	133,017	151,296	171,188	184,500	188,937	193,942	196,945	200,981	211,093	222,026	106,245
Net total household wealth	426,549	493,149	549,197	629,182	601,233	585,165	613,308	621,658	654,851	728,745	790,419	363,870
Growth in value of housing assets	84,000	71,792	57,414	79,799	-13,416	-13,550	25,296	-908	27,322	59,087	46,750	339,586
Residential investment	10,021	10,061	9,965	10,418	10,442	8,295	8,230	8,351	9,039	10,598	12,712	98,110
Change due to value appreciation	73,979	61,731	47,449	69,381	-23,858	-21,845	17,066	-9,259	18,283	48,489	34,038	241,476

Endnotes

[1] Piketty, T. (2014) *Capital in the Twenty-First Century*, Harvard University Press, Cambridge MA p.577.

[2] The Survey of Family Income and Employment was a longitudinal survey of New Zealanders' living circumstances and lifestyles. The survey initially incomes 22,000 participated and commenced in 2003 and concluded in 2010 after eight waves of surveys were undertaken.

[3] Chang, J. (2007). *Wealth disparities in New Zealand.* Statistics New Zealand Wellington.

[4] Ibid Table 2 p.7.

[5] Repeat wealth questions were asked in Waves 4, 6 and 8 of the SoFIE programme but these have not been reported.

[6] These estimates are based on census data and are based on grouped ethnic identity which over-count ethnic identities because of people claiming multiple ethnicities.

[7] Chang (2007) p.5.

[8] Piketty, T. (2014) p.248.

[ix] Chang (2007) p.16 for both Table 1A and Table 1B.

[10] Law, D. and Scobie, G. (2014) *KiwiSaver and the accumulation of net wealth*. New Zealand Treasury Working Paper 14:22 The Treasury, Wellington p.2

[11] Ibid p.4.

[12] Ibid table 1. P.5.

[13] Chang (2007) p.4 reported that estimates of the total wealth held by adult New Zealanders at the start of the survey in 2003 was around $559 billion of which $92billion was debt producing a net wealth of $467 billion. In June 2004 the RBNZ Household Asset & Liability data set (Table C.21) reported net household wealth of $427 billion, debt of $116 billion and total gross wealth of $543 billion. These estimates are broadly similar although debt in the RBNZ version is significantly higher. RBNZ data has to date not included household wealth held in what it calls non-corporate businesses such as family or privately owned businesses (as opposed to corporate businesses listed in the stock exchange) and is looking to include this category of wealth into its data set soon. This omission may account for much of the difference in the estimates offered by SoFIE and RBNZ and does at present limit the usefulness of the RBNZ dataset for assessing overall trends in New Zealanders' wealth.

[14] These are broad shifts in the total value of assets. Household behaviour both individually and in aggregate is likely to have been more subtle than this perhaps with households cashing up financial assets to reduce housing related debt or otherwise changing the form of their wealth in the face of greater uncertainty,

[15] Source: Reserve Bank of New Zealand statistics Table C21. Available at http://www.rbnz.govt.nz/statistics.

[16] Ibid.

[17] The actual contribution of increased housing value due simply to value appreciation is a little more complex than this on account of owner investment in upgrading or renovating houses. Much of this expenditure may be included in other construction related expenditure and classed as maintenance spending which would otherwise be offset against depreciation. This expenditure clearly extends the life of the asset in question and so contributes to the current value of the asset.

[18] Reserve Bank of New Zealand Statistics data series Table M.10 Housing.

[19] Chang (2007) Appendix p.16.

[20] Statistics New Zealand's household estimates suggest that homeownership rates are gradually falling. SNZ estimate that the proportion of owner occupied housing has fallen gradually from 64.9% at the time of the Census in March 2013 to 64.2% in December 2014. The Reserve Bank in a new data series suggest that about 6% of the mortgage market or 8,100 people over the past five months (Aug-14 to Dec-14) are first homebuyers. See RBNZ Table c.31 New residential mortgage lending by borrower type http://www.rbnz.govt.nz/statistics/tables/c31/. Such an estimate is at variance with SNZ estimates of household formation is around 10,000 to 15,000 each year.

[21] Source: Statistics New Zealand census datasets which are available at http://www.stats.govt.nz/tools_and_services/nzdotstat/tables-by-subject/2013-census-tables.aspx.

[22] This data is taken from Reserve Bank statistics series Table C.21 and is based on the June quarters for the respective years.

[23] Data on this table are based on sale data reported by the Real Estate Institute of New Zealand - for average house sale values, and Statistics New Zealand census for housing stock estimates. Estimates of the total value of each region's housing stock is based on the crude estimates of the housing value (average price x number of houses) with these estimates reconciled on a proportional basis back to the Reserve Bank's estimates of the total value of the national housing stock.

[24] See Reserve Banks discussions on proposed improvements to its Household Assets & Liabilities data set at http://www.rbnz.govt.nz/statistics/tables/c18/specialnote.html.

[25] As shown on Figures 2 and 3 over the decade 2004-2014 new investment in housing totalled $98 billion while at the same time housing related debt rose by $96 billion.

[26] This data is table from Inland Revenue Department reports which are available at http://www.kiwisaver.govt.nz/statistics.

[27] Source: Reserve Bank of New Zealand Statistics Table C.19 available at http://www.rbnz.govt.nz/statistics/tables/c19.

[28] Kuznets, S. (1955). Economic Growth and Income Inequality. *American Economic Review* 45 (March): 1–28.

[29] See Palma, G. (2011) Homogeneous middles vs. heterogeneous tails, and the end of the 'Inverted-U': the share of the rich is what it's all about. *Cambridge Working Papers in Economics* (CWPE) 1111.

(Available at http://www.econ.cam.ac.uk/dae/repec/cam/pdf/cwpe1111.pdf). For a useful refutation of Kuznets see Pikkety, T. (2014) pp 271-274?.

[30] For example Inland Revenue reports in its 2013 income tax return statistics that the total declared earnings for wage and salaries earners in that year was $97 billion. In 2013 the share of GNI going to employees was assessed at around 42% on a GNI of around $210 billion or about $96 billion.

[31] Statistics New Zealand's National Accounts dataset available at http://www.stats.govt.nz/browse_for_stats/economic_indicators/NationalAccounts.aspx.

[32] Ibid.

[33] In June 2013 the Household Labour Force Survey estimated that there were 2.25 million people in work.

[34] In June 2013 there were 635,000 people receiving NZ Superannuation or a war veteran's pension and almost 310,000 adults receiving an income-tested welfare benefit. Many of these people may also been employed during the year, so would have been included in the wages and salaries earners count. For example, in June

2013 the Quarterly Employment Survey reports that around 117,000 people aged over 65 were in employment.

[35] For example in 2013 the gross income for a person with a child receiving a Jobseeker Payment was $17,000 while that for a single person on the NZ Superannuation and living alone was around $21,000.

[36] Data for this table is taken from Inland Revenue Department's tax statistics available at http://www.ird.govt.nz/aboutir/external-stats.

[37] Ibid.

[38] Ibid.

[39] Source: Statistics New Zealand Quarterly Employment Survey Infos database.

[40] In 2007 a working parent below required thresholds received $142 per week in the then Family Support Payment and the In-work Tax credit. A person in the same situation with two children would have received $199. By 2014 these payments had risen to $152 and $217 respectively. If these payments had kept pace with inflation they would now be worth $166 and $233 respectively.

[41] Ibid. These hourly wage figures are for the December quarters in 2004 and 2014. These quarterly figures have some volatility however. The average annual growth rate for the ten year period for the financial sector was 1.9% while that for the hospitality sector was 0.8%.

[42] Source: Statistics New Zealand Quarterly Employment Survey.

[43] Beneath the Adult Minimum Wage is a youth pay rate known as the Starting Out wage which in April 2014 was increased to $11.70 from $11.00.

[44] Source: Regulatory Impact Statements on minimum wage reviews undertaken by Department of Labour and The Treasury. The most recent statement for 2014 is available at http://dol.govt.nz/er/pay/backgroundpapers/2013/.

[4545] This figure is based on there being around 300,000 adults receiving a working age benefit and 200,000 children dependent on them. See Johnson, A.(2015) *A mountain all can climb: A state of the nation report from The Salvation Army* p.17 for detailed estimates.

[46] See Statistics New Zealand's discussion of the 2014/15 Household Economic Survey (Savings) at http://www.stats.govt.nz/survey-participants/a-z-of-our-surveys/household-economic-survey-in-the-field.aspx. And the Reserve Bank reference to changes in household assets and liabilities statistics see http://www.rbnz.govt.nz/statistics/tables/c18/specialnote.html.