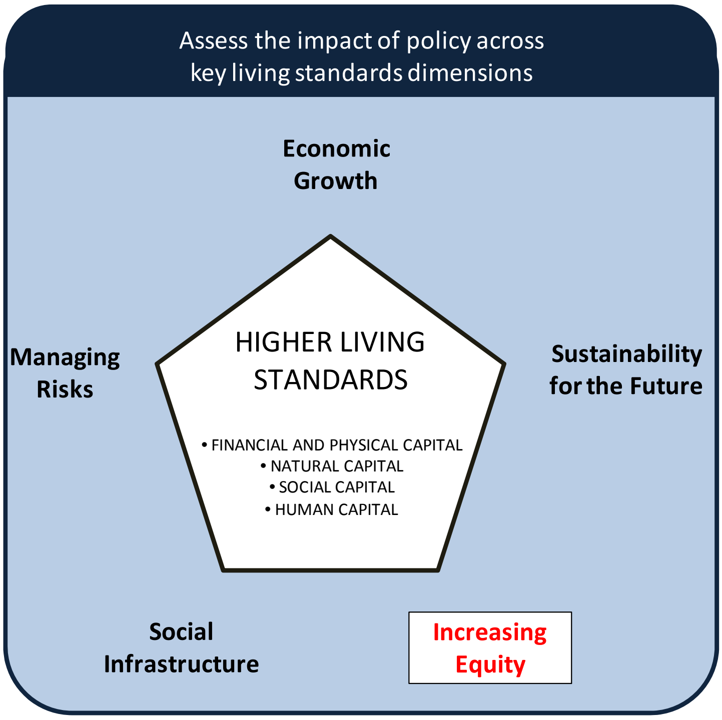
Living Standards
Background Note: 'Increasing Equity'

The purpose of this note



The Treasury's vision is to be a world-class Treasury working for higher living standards for New Zealanders. This means thinking beyond just economic growth and considering the broad range of human, social and environmental factors that contribute to wellbeing. We recently released our Living Standards policy tool which highlights five dimensions that we think are fundamental for us to consider when providing policy advice consistent with our vision (Treasury 2012b).

Each of these five dimensions is important in its own right, but on occasions government will need to be advised of the way they interact – either strengthening each other or coming into tension. The Treasury's overall advice should strive to identify options that strengthen all dimensions of living standards across a broad set of policies.

One of these dimensions is "Increasing Equity". We are aware that equity can mean different things in different contexts, and to different people. When we think about equity, the Treasury focuses on increasing the ability of people to participate in the economy and society. This means our living standards work has focused on what is needed to enhance opportunities and reduce barriers to participation (e.g., Treasury 2001 and Treasury 2012b).

This note provides a short summary of evidence on equity and living standards in New Zealand. It concentrates mainly on income mobility and inequality, but it is important to note that hardship also varies across the population, and there is inequality in outcomes for education, health, ethnicity, region and gender.

The note is not intended to be a comprehensive review of all of the available data and academic literature, but rather is designed as an aid to those using the Treasury Living Standards Framework and an entry point to areas of academic debate.

Summary

Our view of the meaning of ‘equity’ is drawn from successive choices made by New Zealand governments and the New Zealand public. Successive governments have, at a broad level, made similar choices about economic and social rights and opportunities, the extent of social services that are provided, and about the redistribution of income. This consistency underpins our view of what New Zealanders mean by ‘equity’ and, in particular, our emphasis on the role of work, education and the welfare safety net.

The Treasury’s starting point is the ability to participate in society. Throughout our history New Zealanders have demonstrated a strong attachment to fairness and opportunity, while at the same time accepting that some level of inequality is the inevitable consequence of just rewards for skill, hard work, and entrepreneurial flair.

New Zealand’s income inequality after taxes and benefits is about the OECD average. New Zealand’s Gini coefficent (the most common measure of income inequality) is near the OECD average. It is a little lower than in Australia and the United Kingdom. Inequality is much higher in the United States and lower in Scandinavian countries. As in most countries, wealth is more unequally distributed than income.

The drivers of recent changes in inequality are similar across developed countries. Most OECD countries, including New Zealand, experienced longer term declines in inequality from the 1920s, which reversed after the late 1980s. Since then inequality has increased largely because average to high incomes grew faster than lower incomes. In New Zealand, people on low incomes did not experience falling incomes since the 1980s over the period as a whole, but their income failed to rise as fast as the average income. Technological change, globalisation, and household structure have been identified as the major causes of these changes both in New Zealand and around the world.

New Zealand has a unique pattern of inequality. A large amount of research exists on inequality trends, their causes and consequences, particularly focused on the situation in the United States and Europe. New Zealand is a unique society with its own pattern of inequality that differs in important ways from these countries.

New Zealand’s income mobility is about average, but educational mobility is low. Short term income mobility is significant, with many households with low incomes at any point experiencing higher incomes within a short time, though there is also a group that doesn’t. Intergenerational mobility (the extent to which individuals’ income tends to differ from their parents’) appears to be about average for developed countries. But the link between parents’ socioeconomic status and a child’s educational outcome is very high in New Zealand compared internationally, suggesting that New Zealand’s education system does not lean against socioeconomic background as much as the education systems of other countries.

The difference between top and bottom incomes is not as great in New Zealand as the UK and US. While New Zealand’s *change* in income inequality between the 1980s and 1990s was high compared internationally, the growth in the very high incomes of the top 10% seen in the United Kingdom or the United States today are not as evident in New Zealand.

Low income does not automatically mean hardship in the sense of being deprived of key material possessions. A proportion of New Zealanders experience hardship on a persistent basis, which may severely compromise their living standards and limit their ability to take advantage of opportunities. Current low income is not a good guide to whether a person has a chronically low income or to whether they are in hardship, and hardship is also not tightly linked to other characteristics such as age, educational level and ethnicity.

Taxes, benefits and social spending have always had a significant impact on the level of inequality in New Zealand. Inequality is significantly lower once direct taxes and transfers such as welfare payments are taken into account, and the distribution of in-kind services (like education and health) and indirect taxes (such as GST) lower it a little further still. The increase in inequality since the late 1980s has been driven by more unequal market incomes rather than by changes in the distribution of benefits and in-kind services. The impact on the Gini coefficient from the tax and benefit system has been fairly stable.

There is no clear link between economic growth, inequality, equity and social mobility. A growing economy does not necessarily mean that inequality must rise or fall, nor is higher inequality always necessary for economic growth. The evidence of a causal link between income inequality and social problems is currently contested by experts and we reserve judgement on this until the balance of evidence changes. Policies that support people to participate are likely to encourage both greater equity and economic growth. On the other hand higher incomes through economic growth provide options for both the individual and government.

The Treasury's advice on equity and inequality emphasises mobility. We think the primary focus of policy should be to enhance mobility – removing the barriers and increasing the opportunities that matter for people seeking to make the most of their chances in life, especially for people experiencing hardship.

- For many adults, work is a key opportunity both because it can lift people out of poverty, but also because it lifts living standards through providing networks for social interaction and support.
- For children, education is the main way to break the transmission of low incomes across generations. Treasury has produced an evidence brief on education and its importance for economic performance. The evidence also shows the very strong links between education and the transfer of inequality across generations. This means policies that create a strong education system that works for all regardless of background target inequality, participation and productivity at the same time.
- The "safety net" role of social welfare needs to be carefully designed so that it protects those who need it but does not reduce the incentives on people to take advantage of work or education where that is appropriate.

And we suggest caution in other potential policy responses. On current evidence, governments should be cautious about assuming raising incomes alone will address social outcomes, given the complexity of social disadvantage. When considering distributional outcomes, attention should be on the total impact of government policies (including targeted spending). We also recommend looking at the whole impact of policies to ensure that the benefits of increased equity are not offset by losses on other key aspects for living standards.

There are some consistent features across successive governments about their views on equity

The meaning of the words “equity” and “inequality” have been the subject of debate for centuries. Many different philosophers and economists have provided insights into the rationale for and consequences of different distributions of economic and social rights and opportunities for the members of society. While these debates continue, the Treasury has also observed that in New Zealand there has been a significant level of consistency in the decisions taken by successive governments that impact on equity, at a broad level. The consistency of these decisions has underpinned our view of what New Zealanders mean by ‘equity’, and in particular our emphasis on the role of work, education and the welfare safety net.

For instance:

- Successive New Zealand governments have signed up to a number of United Nations declarations and covenants which commit the government to treat our citizens in ways that uphold their rights and meets various needs. The most recent examples of this are the Convention on the Rights of the Child and the Declaration on the Rights of Indigenous Peoples.

- The role of social welfare as a safety net, along with an expectation that many of those receiving it will actively seek to increase their skills or seek to re-enter the workforce, has underpinned the social security system since it was introduced in 1938, and has been reaffirmed in the Royal Commissions on Social Welfare of 1972 and 1988, and is currently reflected in the principles section of the Social Security Act 1964;

  Every person exercising or performing a function, duty or power under this Act must have regard to the following general principles:

  (a) work in paid employment offers the best opportunity for people to achieve social and economic well-being;

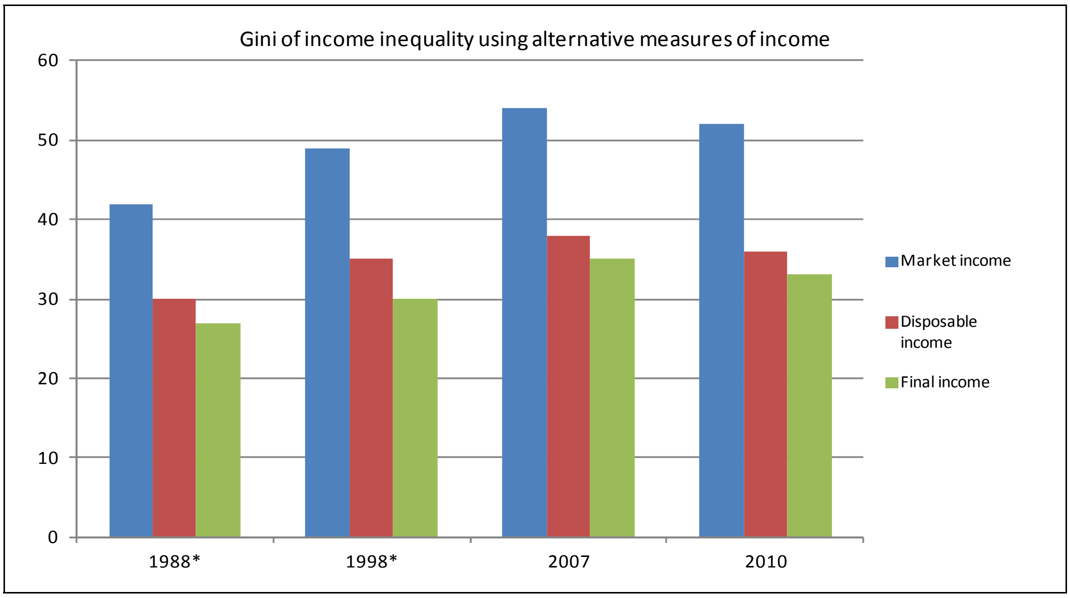
  (b) the priority for people of working age should be to find and retain work;

  (c) people for whom work may not currently be an appropriate outcome should be assisted to prepare for work in the future and develop employment-focused skills;

  (d) people for whom work is not appropriate should be supported in accordance with this Act.

- The level of redistribution through the tax and benefit system has remained fairly constant over the last few decades. Despite significant changes in benefits in the early 1990s, the reduction in inequality between the market and the disposable income as shown by the Gini coefficient has been fairly constant across time. (The Gini coefficient is widely used to measure inequality. It varies between zero for complete equality and 100 when one person has everything.)

Figure 1: Gini of income inequality using alternative measures of income

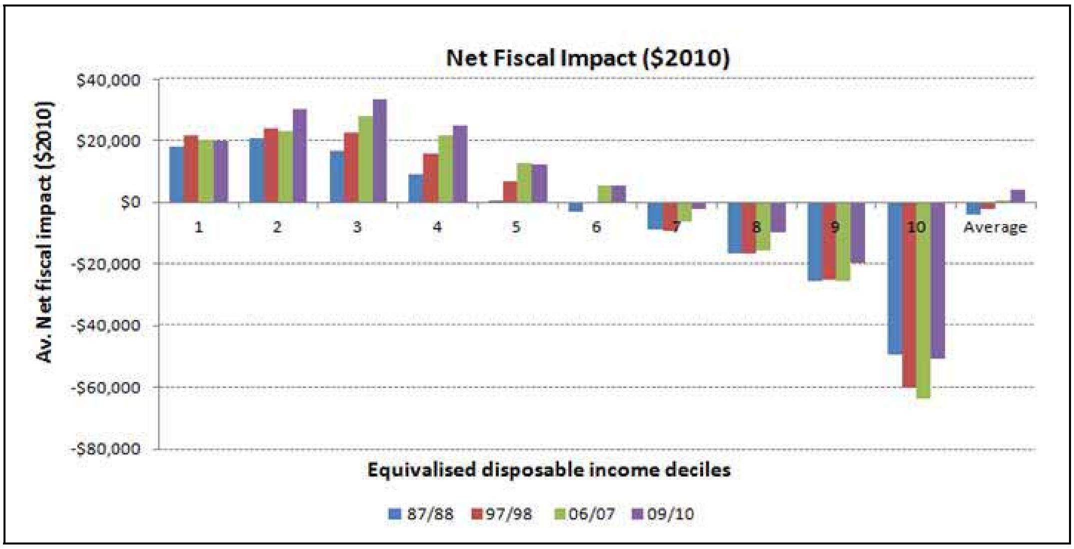


Notes: (1) Market income is what is earned in the labour market. Disposable income is the income after taxes and benefits. Final income takes into account the value of the goods and services provided by the government.
(2) The Gini is calculated in this graph using an older methodology than the OECD's used later in this report, and the Gini coefficients are higher and not comparable with the later ones. This methodology was used to ensure the results are consistent across all four time periods.

Source: Aziz et al, 2012

- Where changes have occurred, successive governments have made very similar choices on how to use the tax and benefit systems to redistribute income. When the population is broken into deciles (income groups that each contain 10 percent of the population), there has been a consistent pattern of an increasing level of support for those on moderate incomes in the deciles 2, 3, 4 and 5. The bottom 50% of households receives more from the government than they pay in taxes.

Figure 2: The impact on each income decile of taxes, benefits and in-kind government services, 1987/88 to 2009/10



Source: Aziz et al, 2012

Treasury's starting point – the ability to participate in society

The Treasury's role is to advise governments on how policy choices influence a range of outcomes, including equity. In doing this, we bring to bear evidence and tools from economics to inform decisions about more or less effective ways of pursuing different objectives. Different judgements about the dimensions of equity that are most important (such as health, income, or educational opportunities), and the appropriate level of equality are possible and legitimate. Resolving these issues is one of the key roles of the process of democratic government.

The Treasury's advice emphasises that living standards are enhanced if everyone in society has the opportunity to participate in society (eg, Treasury 2001 and Treasury 2011a). This is consistent with the principles in the current Social Security Act and close to Amartya Sen's capability and opportunity approach to human development. We do not have a view on a 'right' level of equality, but instead focus on providing each individual with the opportunity to fully live a life in accordance with their own values, subject to the limits of the law and the rights of others.

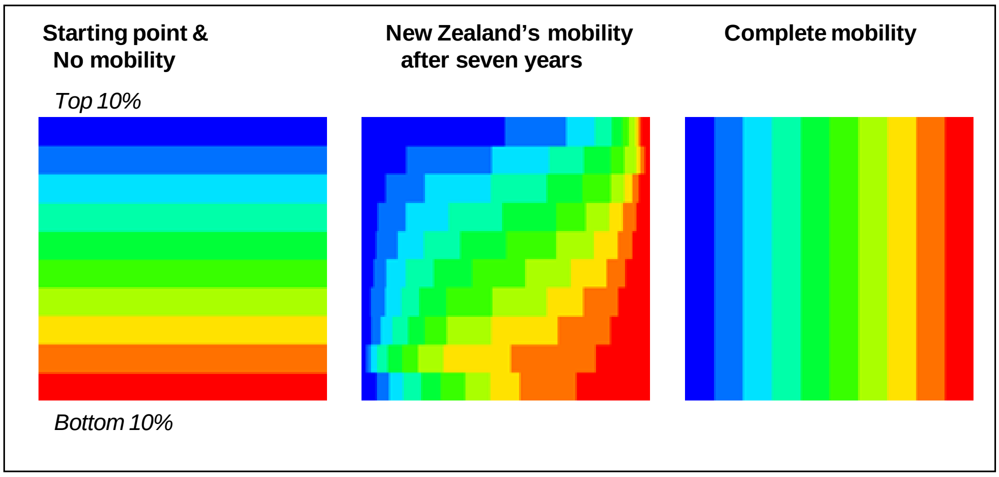
This means that we particularly focus on barriers that prevent people from making the most of their life chances, such as long term income immobility, persistent deprivation, and, because of its long-term implications, inequitable educational outcomes. Because it may provide options for assisting people, we have worked with researchers to understand better the dynamics of income mobility, and we have also assessed international research on the best options for promoting greater equity in our educational outcomes.

New Zealand's income mobility is about average, but educational mobility is low

Household income can vary significantly across short time periods

- There is a lifetime pattern for income. Median wages rise rapidly as people in their 20s and 30s become more experienced in the workforce, and then level off from about age 40. People willingly make trade-offs across time. For instance, many students with low incomes now expect that their higher education will result in higher incomes in the future.
- Research by the University of Otago (Carter, 2012) shows that there is significant income mobility over short periods of time. It should be noted that this work covers a period of economic expansion during the 2000s, so may overstate the actual level of mobility over the long term, though research in the United Kingdom suggests that even in bad economic times there is still significant mobility (Jenkins, 2011).
- While the mobility was both up and down, more people in the bottom two deciles moved than in the top two deciles. Forty-five percent of those in the bottom two deciles were still there after seven years, compared to 54% of the top two deciles (for the bottom decile, the proportion remaining after seven years was 24%, whereas 46% remained in the top decile).
- While there is significant mobility, there is also a strong pattern of persistence. Over half (53%) of all households were in the same or immediately adjacent decile after seven years.
- This level and pattern of mobility is similar to Australia and the United Kingdom and it is very similar if the analysis excludes people in age-groups that are likely to retire or enter and exit from education (Treasury, 2012).

Figure 3: Short-term income mobility in New Zealand, 2002-2009



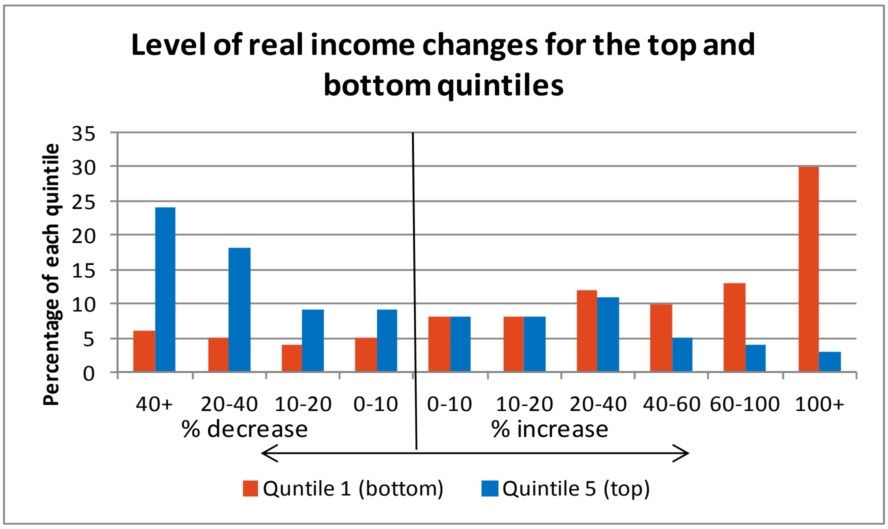
Note: The first diagram colour codes people into their income deciles in the first year. If there was no mobility then the graph would stay the same. On the other hand complete mobility (where everyone has the same chance of being in one of the income deciles regardless of where they started) would change the graph to vertical strips like the last diagram. The middle graph shows the actual level of mobility over the seven years of the study.

Source: Treasury, 2012 based on the research of Carter et al, 2012

The level of mobility has three key implications from a policy viewpoint:

- The proportion of people who persistently, year-on-year, have a low income is lower than the proportion who currently experience it. The University of Otago research found that 16% of those on low income in the first year persisted for five or more of the seven years covered by the study (Treasury 2012).
- The proportion of people who ever experience low income is much higher than the proportion that is currently experiencing it. The University of Otago research suggests that while 25% of the population has low income in any one year, 50% of the population will experience it at least once in a seven year period.
- Those in the bottom quintile in any particular year are likely to have income growth in the next few years and those at the top to have falling incomes. The graph shows that in many cases the relative increases for those at the bottom (in red) are very large, and the relative declines for those at the top (in blue) are smaller but still significant.

Figure 4: Short term income fluctuations for the top and bottom quintile

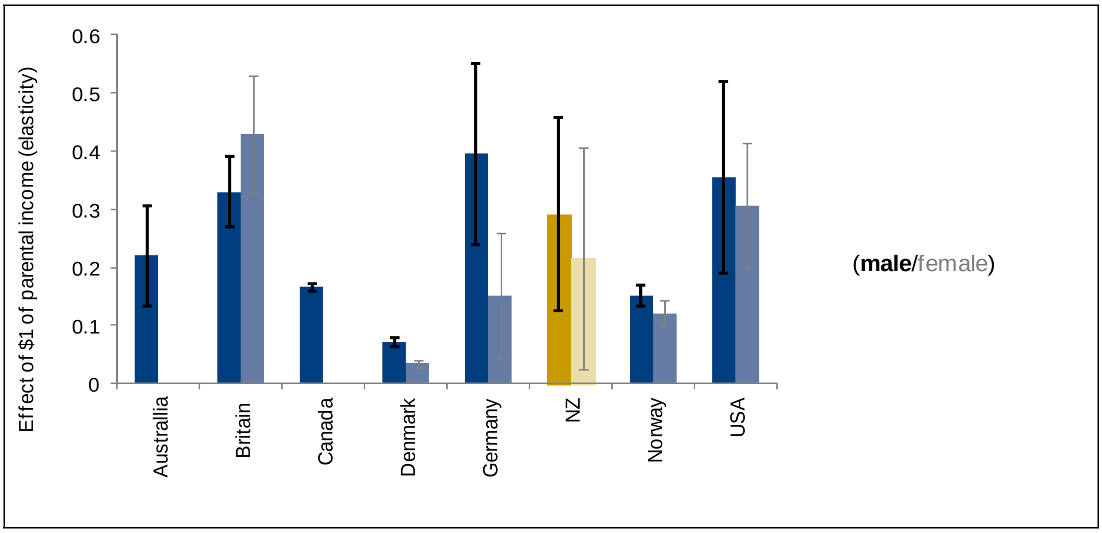


Source: Treasury 2012 based on Carter et al 2012

Across generations, New Zealand has about average mobility

Intergenerational mobility (the extent to which individuals' income tends to differ from their parents') in New Zealand is about average internationally. While the data contains a high level of uncertainty (shown by the black range lines) it suggests that New Zealand intergenerational mobility is lower than Canada and the Scandinavian countries but higher than Britain, Germany and the United States.

Figure 5: Estimates of the effect of $1 of parental income on children's earnings



Source: Treasury, 2010

International research suggests generally countries with high income inequality have relatively low intergenerational mobility, but this is not always the case. Recent research shows that New Zealand and Australia are both countries in which intergenerational mobility is higher than would be expected by the level of income inequality, suggesting that both countries have high levels of opportunity for all children (Corak, 2012). In most countries intergenerational mobility tends to be greatest in the top and bottom quintile of the distribution (OECD, 2008 p 213).

The main factors that research suggests significantly impact on intergenerational income mobility are wealth, parental employment**,** parental education and the structure of the household (particularly the number of sole parent households). This implies that reducing income disparities on its own may not necessarily increase intergenerational mobility (OECD 2008).

But New Zealand's education system does not push against social disadvantage as much as others

A child's educational achievement is driven by many factors beyond their own ability, including their parents (through their attitudes and the extent they provide learning opportunities and resources, such as reading at home and early childhood education), the community environment and the quality of their schools (Treasury 2012).

The link between what a child grows up to earn and their parents' income is largely because children mirror their parents' education level. The Christchurch Health and Development study has tried to disentangle which factors matter the most. It found that parents had the most impact, but that the persistent level of family income over childhood was also important for determining a child's final educational qualification, and so their adult income. This impact was not just at the lowest income levels but rather across the whole income distribution (Gibbs et al, 2012).

Since education is the main way for enhancing intergenerational mobility, we are concerned about the equity implications of the fact that New Zealand has the greatest percentage of the variance in school performance explained by a family's socioeconomic status in the OECD's Programme for International Student Assessment (PISA) tests at age 15. This has led the OECD to characterise our school system as high performing and low equity because, although overall performance is good, the system doesn't appear to lean against family background as much as other systems do.

New Zealand stands out both for how much of the variance in student performance seems to be linked to their parents' socioeconomic status (17%) and, even more importantly, for the level of the impact that it has on the PISA score difference (52 points). A one unit change in socioeconomic status score is responsible for lower performance equivalent to more than 5 terms at school. This pattern is not new; for many years New Zealand has had a disproportionately long tail of educational underachievement.

Figure 6: The relationship between socioeconomic status and reading scores in countries with high mean PISA performance

Country (in order of PISA mean reading score)	% of variance in student performance explained by SES	PISA score point difference associated with SES
Korea	11%	32
Finland	8%	31
Canada	9%	32
NZ	**17%**	**52**
Japan	9%	40
Australia	13%	46
OECD average	*14%*	*38*

Compared to other high performing countries and the OECD average, NZ has both:

- A higher % of the variance in NZ student's PISA performance is explained by students' SES.
- A bigger score point difference associated with student SES

39 pts (on average) = 1 school year
73 pts = 1 proficiency level on the PISA reading scale
100 pts = 1 std deviation

Source: Calculated from (OECD, 2010a).

To increase mobility, the Treasury's policy advice emphasises work, education and a well-designed safety net

Work is a key opportunity for adults

People who are in work are less likely to have low incomes. In 2011, 65% of households which had income-tested benefits were below 60% of the median income after housing costs. In contrast, only 9% of those with market incomes were below this threshold (Perry, 2012).

Work provides more than just an income. It is one of the key external factors that drive a person's subjective happiness, through providing a sense of meaning in people's lives primarily through the feeling of being needed and being able to contribute. This can be seen in the impact of becoming unemployed, which has as large an effect on subjective well-being as a bereavement or separation. The main contributors to this are the loss of a preset time structure to the day, shared experiences and contacts with people outside of the family (Helliwell, 2012).

Work also is one of the key avenues through which a person can access opportunities for personal improvement. It may do this formally through the employer providing training on the job, or informally through the development and transfer of skills, including inter-personal skills between workers.

The Treasury's view that work is a key opportunity has informed our advice on welfare reforms. In particular:

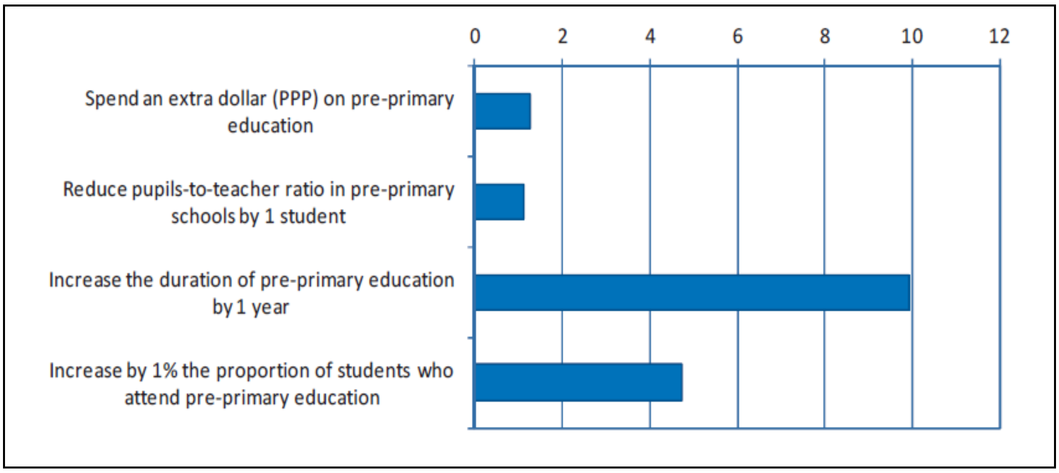
- we supported the change in the focus towards improving long-term outcomes by investing in those people who persist on benefits
- we raised the issue that the poor targeting of current expenditure provided weak work incentives, and suggested that this should be addressed
- we suggested that the government should clarify work requirements, and in some places strengthen them.

Education is the key opportunity for children

Some particular educational policies have been found to play a key role in explaining cross-country differences in intergenerational social mobility. In particular, research has shown (OECD, 2010a):

- Educational mobility depends more on *how* resources are spent than on *how much*. In particular, spending resources to raise the quality of teacher practice is likely to result in higher and more equitable schooling outcomes.
- High levels of participation in early childhood education by children with fewer resources at home promotes intergenerational social mobility. The OECD analysis of the PISA results suggests that increasing the length of time and the participation rate in early childhood education has a large impact on improving educational outcomes. In New Zealand, participation rates are lower for children from families with lower socioeconomic status.

Figure 7: Influence of pre-primary education policies on PISA results, 2009



Source: OECD (2012) Starting Strong III: A quality Toolbox for Early Childhood Education and Care.

- Highly socially mixed schools can enhance mobility. New Zealand's schools are already highly mixed on an international scale.
- Effective income and fees support for students at tertiary education increases social mobility, and New Zealand already scores well on this on an international scale.

The Treasury's view on the role of education and the key levers for improvement underpinned our advice on education. In particular:

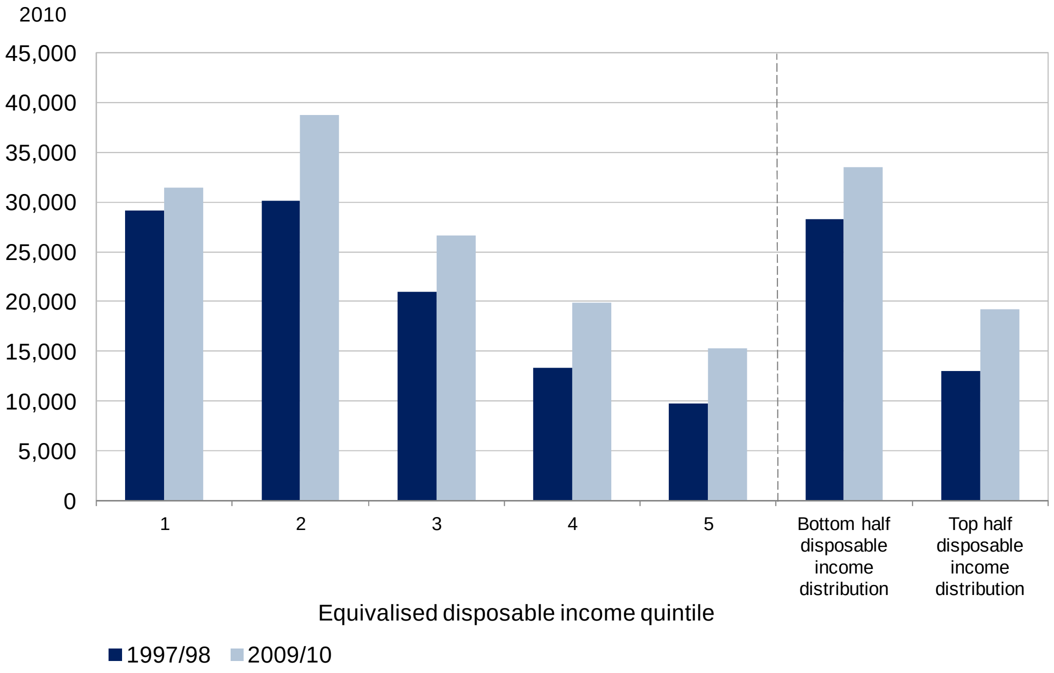
- We suggested that the focus for early childhood education should be to raise participation for children from lower socioeconomic backgrounds.
- We recommended that ensuring consistently high quality teaching standards should be a core focus for schooling policy. Our subsequent advice on lifting student achievement provided a more detailed explanation of the evidence behind this advice (Treasury, 2012).

The safety net needs to be carefully designed

The social welfare system has always acknowledged that there will be people for whom work and education are not appropriate goals, including the seriously ill and the severely disabled. A well-designed safety net should support these people without reducing the incentives on others to seek work or education. For this reason, the design of the criteria for accessing support, the social support services provided with it, and the way it interacts with work choices (such as the abatement rates when extra income is earned) are important.

Social welfare payments are only part of the total support the government provides. For many households, "in-kind" services (such as schools and hospitals) are a significant part of this support. In recent years, the level of total government support has risen for all households (primarily as a result of increased expenditure on education, health and superannuation). Because this increase was relatively untargeted, the overall effect was that social services provided to households in the top half of the income distribution rose almost 20 percent more than for those in the bottom half over the last decade.

Figure 8: The average cost of social services provided by income level, 1997/98 to 2009/10



Source: Treasury, Briefing for the Incoming Minister, 2011

In the Treasury's view, the focus of social welfare support should be those who are not able to take advantage of the options of work and education, and this has underpinned our advice in this area. In particular:

- We support the change in the focus of the welfare system towards improving long-term outcomes by investing in those people who are able to work and are most likely to receive a benefit long-term.
- We have worked with the Ministry of Social Development to establish the accountability arrangements and valuation of the benefit system which underpin this investment approach.
- In a tough fiscal environment, we have also worked hard to find ways to fund what will be a significant investment in the benefit system over the next five years.

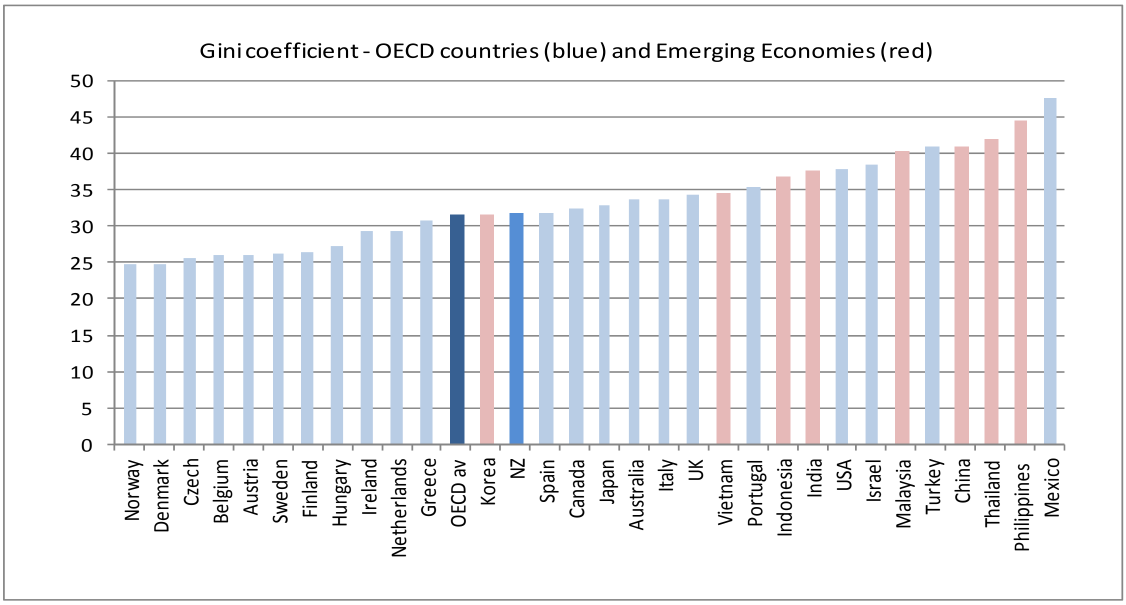
Some detail about New Zealand's income inequality

New Zealand's income inequality is about the OECD average

The latest available Gini coefficients show that New Zealand's income inequality is near the OECD average. Inequality is much lower in Scandinavian countries, but New Zealand's inequality is less than Australia's, and significantly lower than in the United Kingdom and the United States. While most countries experienced a rise in inequality over the late 1980s and early 1990s, New Zealand's increased more than most, so that we moved from having a high level of income equality compared to most countries in the 1970s to having about average income equality now.

As shown by Figure 1 above, the primary driver of increased inequality has been the rising inequality of market incomes. Taxes and benefits have muted but not offset the increased inequality in market incomes over the period from 1988 to 2010. Inequality is significantly lower once taxes and transfers are taken into account and reduces slightly further once the distribution of in-kind services (like education and health) and indirect taxes (such as GST) are taken into account (see Figure 1 above).

Figure 9: Gini coefficient of household disposable income



Note: Income after taxes and benefits. While there are more recent figures for New Zealand, we do not have equivalent figures for the other countries. Gini coefficients have been moving as different parts of the distribution feel the effects of the global financial crisis, so it is important that comparisons are all from the same time.

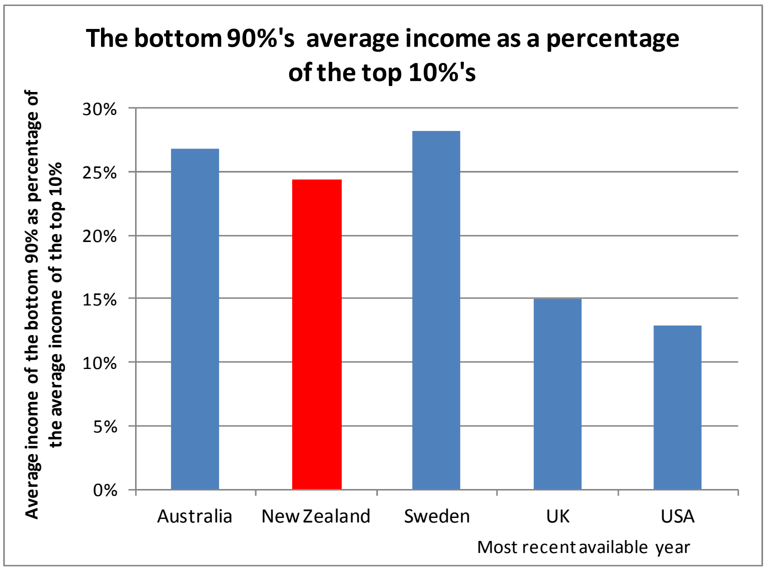
Source: Perry (2011) Household Income Indicators Report; OECD (2011) Divided We Stand

Being in the top 10% means different things in different countries

In New Zealand, Australia and Sweden, the disposable incomes of the top 10% are much lower relative to the bottom 90% than in either the United Kingdom or the United States. If you compare the average earnings in the top 10% with the average earnings of everyone in the bottom 90%, then in New Zealand it takes about four people in the bottom to earn as much as one in the top, while in the United States it takes almost 8 people and in the United Kingdom about 6½.

In the United States, very high incomes, particularly for chief executives, have been driven by the behaviour of certain sectors that we do not have in New Zealand, notably the global financial institutions, very large multi-national companies, and computer giants. Informal evidence of this difference can be found in some comparisons of the salary packages of chief executives of stock exchange listed companies. Various newspapers have estimated that in 2011 the average CEO salary of stock exchange listed companies in New Zealand was about $NZ1.5 million compared to $US9.6 million (about $NZ11.7 million at current exchange rates) for those in the Standard and Poor's 500 in the United States, and £4.8 million (about $NZ9.4 million) for those on the FTSE 100 in the United Kingdom (Herald, 2012; USA Today, 2012, Guardian, 2012). If these incomes are compared to the median household income for each country, then it is clear that New Zealand's ratio of 22 times the median income is in a different range from either the United States (192) or the United Kingdom (223).

Figure 10: The bottom 90%'s average income as a percentage of the top 10%'s



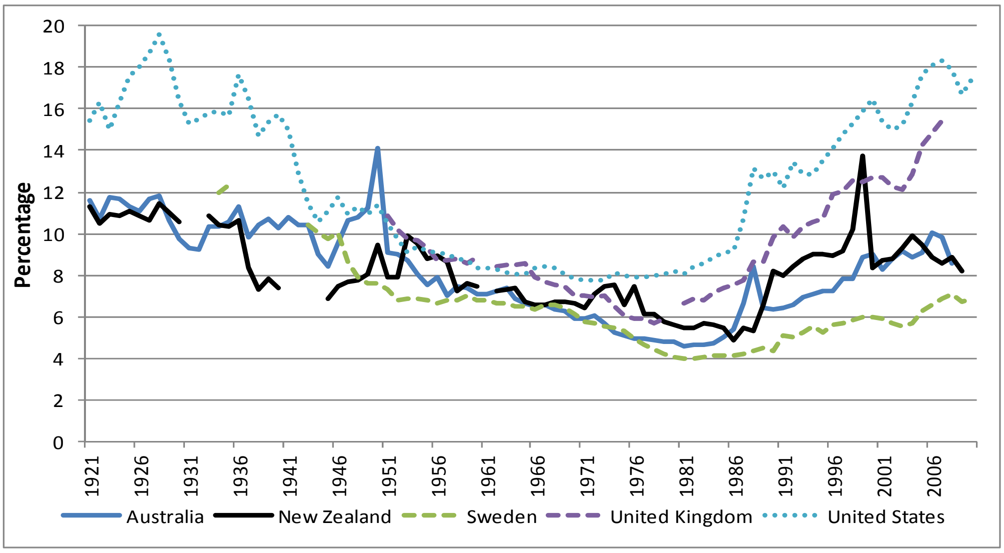
Calculated from Alvaredo et al, 2012 (UK 2007, Australia 2008, NZ 2009, Sweden and United States 2010). Individual income after taxes and benefits.

New Zealand's inequality trends mirrors those overseas

Between the mid-1980s and the mid-1990s income inequality, measured by the Gini coefficient, increased in New Zealand. Since the mid-1990s inequality has shown no significant trend. More recently, the global financial crisis led to significant fluctuations and it is too early to tell if these are showing any trend (Perry, 2012, figure D.17).

This pattern mirrors the experience of most OECD (and many non-OECD) countries. This pattern was for a long term decline in inequality from the 1920s, which reversed over the late 1980s and early 1990s. The recent rise has been quite different for different countries, so that whereas in the 1950s and 1960s the top 1% earned a similar proportion of income in all five countries, by 2000 each country was very different. In New Zealand the rise since the 1980s has been low compared to the United Kingdom or the United States, and it has taken us back to about the level of the early 1950s.

Figure 11: The top 1% share of disposable income in New Zealand and overseas



Source: Alvaredo, F., et al . (2010), The Top Incomes Database

Note: New Zealand did not collect this information during the Second World War. The spike in the late 1990s was caused by taxpayers bringing forward income prior to an increase in the marginal tax rate.

The similarity in the pattern of top incomes suggests that international factors were major drivers behind the changes. A recent summary of international research (Kierzenkowski and Koske, 2012) on the rise in inequality since the late 1980s identified the following leading causes:

- **Technological progress (particularly computers) affected income groups differently.** In particular it undermined the demand for medium-skilled labour, while increasing the demand for highly skilled people (eg, Kierzenkowski and Koske give the example that the demand for book-keepers fell but the demand for accountants rose). World-wide working hours have decreased most for mid-skill workers and least for high skill workers (OECD, 2011). This “hollowing out” of the middle meant the distribution became more focused on the two extremes.

- **Globalisation increased pressure for regulatory reforms and changes to labour markets.** The rapid trade and foreign direct investment integration of the past quarter century has benefited New Zealand as a trading nation, increasing our overseas earnings, and reducing the prices paid by families for imported goods. However, it also applied pressure for regulatory reforms (notably the lowering of trade barriers) and may have increased pressures on some labour market institutions (notably the minimum wage rate and the level of unionisation). Overseas it has been found that these trends increased the number of people in employment, but more of them got low-paid jobs.

- **Increased skill levels.** The rise in the number of skilled workers has, on the other hand, provided a sizeable offset as a higher proportion of workers are employed in higher earning jobs. The growth in skilled jobs, particularly in the service sector, also had a significant positive impact on employment growth.

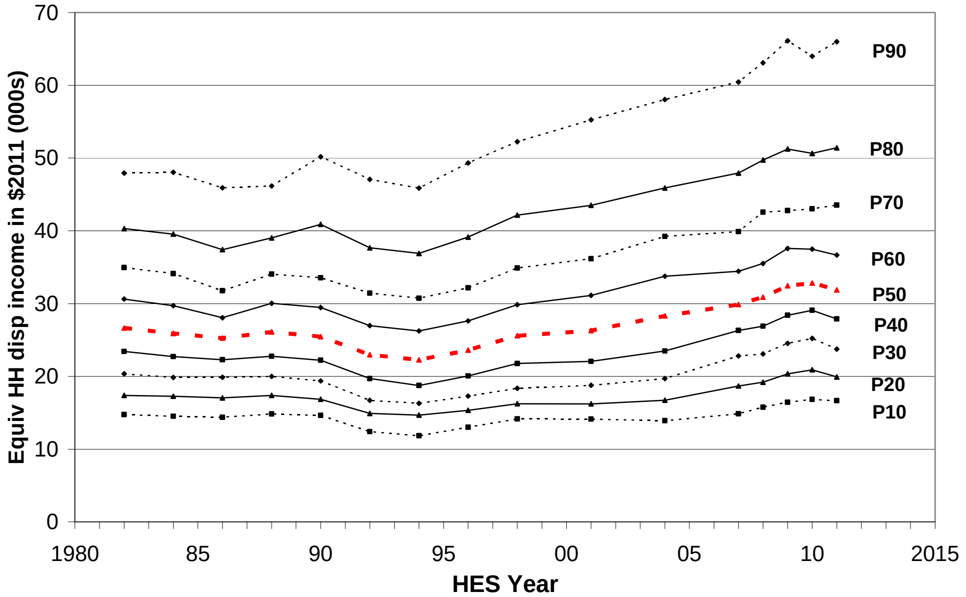
- Social trends have acted to increase the inequality of household incomes more than wage rates (OECD, 2011). Two of these are of particular importance:
- **Marriage patterns.** The proportion of people whose partner earns a similar income has increased over recent decades. In countries like New Zealand, where there is high female labour market participation particularly amongst highly-skilled women, this has increased the income of high income households relative to low income households (OECD, Divided we Stand, 2010).
- **Single parent households.** The growth of single parent households, particularly young sole parenthood, has been associated with persistent low incomes in most OECD countries. In New Zealand, research has shown that part of the sharp increase in inequality between the mid-1980s and mid-1990s was due to changes in the relative proportions of one and two parent families with children (Hyslop and Maré, 2001).

Real incomes increased for everyone, but more for high earners

While the average income of each decile group rose over the period as a whole, those at the top increased more than those at the bottom, increasing the dispersion. Incomes for the bottom 10% (or decile) of households were 13% higher real terms in 2011 than in 1982, and those for the top 10% were 38% higher (Perry, 2012 table D.2 before housing costs).

The growth in real household incomes in New Zealand is quite different to the pattern in the United States, which has had a prolonged period of static real disposable incomes for those in the middle.

Figure 12: Changing income levels for each decile of the distribution, 1982 to 2010



Note: Each decile is labelled with the percentage from the bottom of the distribution, so P10 is those between 0 and 10% of the income distribution and P90 those between 90 and 100%.
Source: Perry (2012) Household Income Indicators Report, Figure D.8. (Equalivised household income before housing costs)

Wealth is more unequally distributed than income

In every country, wealth is more unequally distributed than income. Recent research (Le et al, 2012) has found that in recent years the Gini coefficient for New Zealand's wealth was 73 compared to 33 for income. Internationally, wealth inequality has shown the same long term "U" shaped trend as income, with inequality increasing since the late 1980s.

The proportion of all wealth held by the top 10% is lower in New Zealand (52%) than in the United States (71%) or Sweden (58%). It is about the same as Canada, and higher than Finland (45%), the United Kingdom (45%) or Italy (42%) (Le et al, 2012).

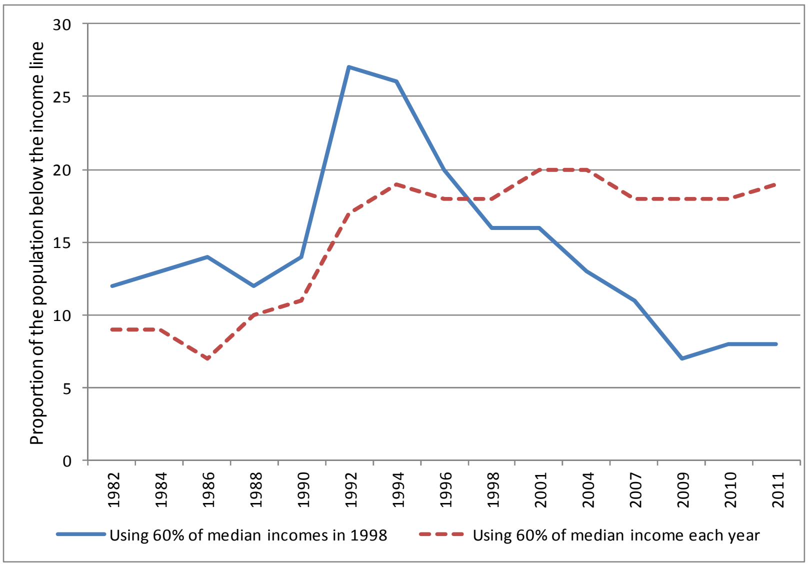
In New Zealand property assets represent 85% of all net wealth, which is similar to the United Kingdom, Germany and Finland, but higher than many countries and in particular the United States (62%). Wealth moderates the impact of low incomes and, in New Zealand, high home ownership rates have underpinned the living standards of people over the age of 65.

Regardless of how "low income" is measured, the proportion of people on low incomes has not risen in the last decade

The proportion of people below the low income threshold rose in the early 1990s, primarily due to changes in welfare benefits, high unemployment levels, and to the changing composition of households, especially the rise in sole parent families (Hyslop 2001). But it has not risen since, and in recent years the level has reduced slightly as incomes improved for those receiving Working for Families. The pattern since the mid-1990s then depends on how you define low income:

- If it is defined as a dollar amount of income (updated for inflation) then the percentage of people on low incomes has fallen from its peak in 1994.
- If it is defined as people below a certain point on the income distribution in each year (such as below 60% of the median income in each year) then the proportion has been steady since the mid-1990s.

Figure 13: The proportion of the population below a 60% threshold: Trends using constant dollar value and relative approaches



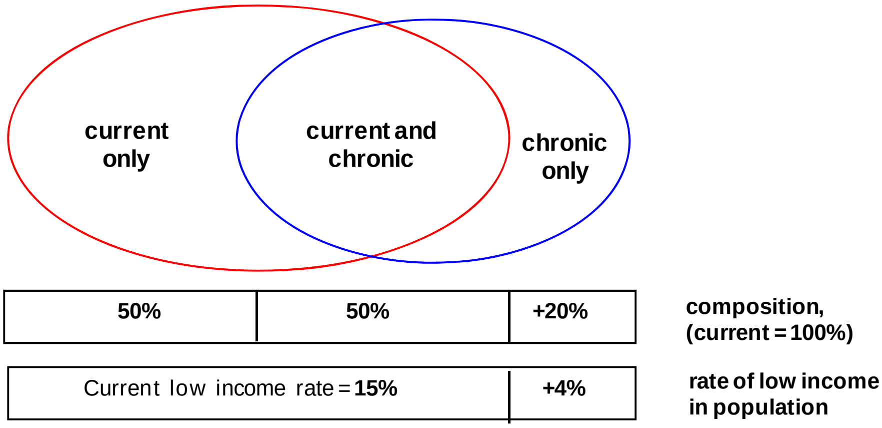
Source: Perry, 2012 table F.4. Equivalised household income after housing costs. The recent reports use both a 1997 and 2007 deflator for the constant value approach. For clarity, we use only 1997

Low income does not automatically lead to hardship

Hardship is when people have too few resources (such as income or savings) to be able to afford things that most in society think everyone should have (like adequate food, heating, beds for children, or shoes). The University of Otago study showed while hardship increases with the number of years in low income, even after seven years with low income only one in three families report three or more of their eight markers of deprivation (Carter et al, 2012). In recognising this, the Treasury does not seek to downplay the difficulties of living on low income.

Owning a home is one of the main reasons why many people on low incomes do not experience hardship, particularly retired people. The other major reason is that at any point in time only some of the people currently with a low income have a low income when it is averaged over seven years. In New Zealand the split is about 50:50 between those with chronic and current low incomes. On the other hand, there is a sizable group (about 20% of those in low income) who have chronically low incomes when their income is averaged over seven years, but will not have a low income in this particular year. A similar pattern is found in the United Kingdom and Australia.

Figure 14: The overlap between current low income and chronic low income



Source: Perry (2012) Figure S.5. Threshold of 50% of gross income

Because current low income is not a good guide to whether a person chronically has a low income or to whether they are in hardship, it is not a reliable guide for determining whether further intervention is needed, although this is the most common method of targeting support now.

Hardship is widely distributed across the population

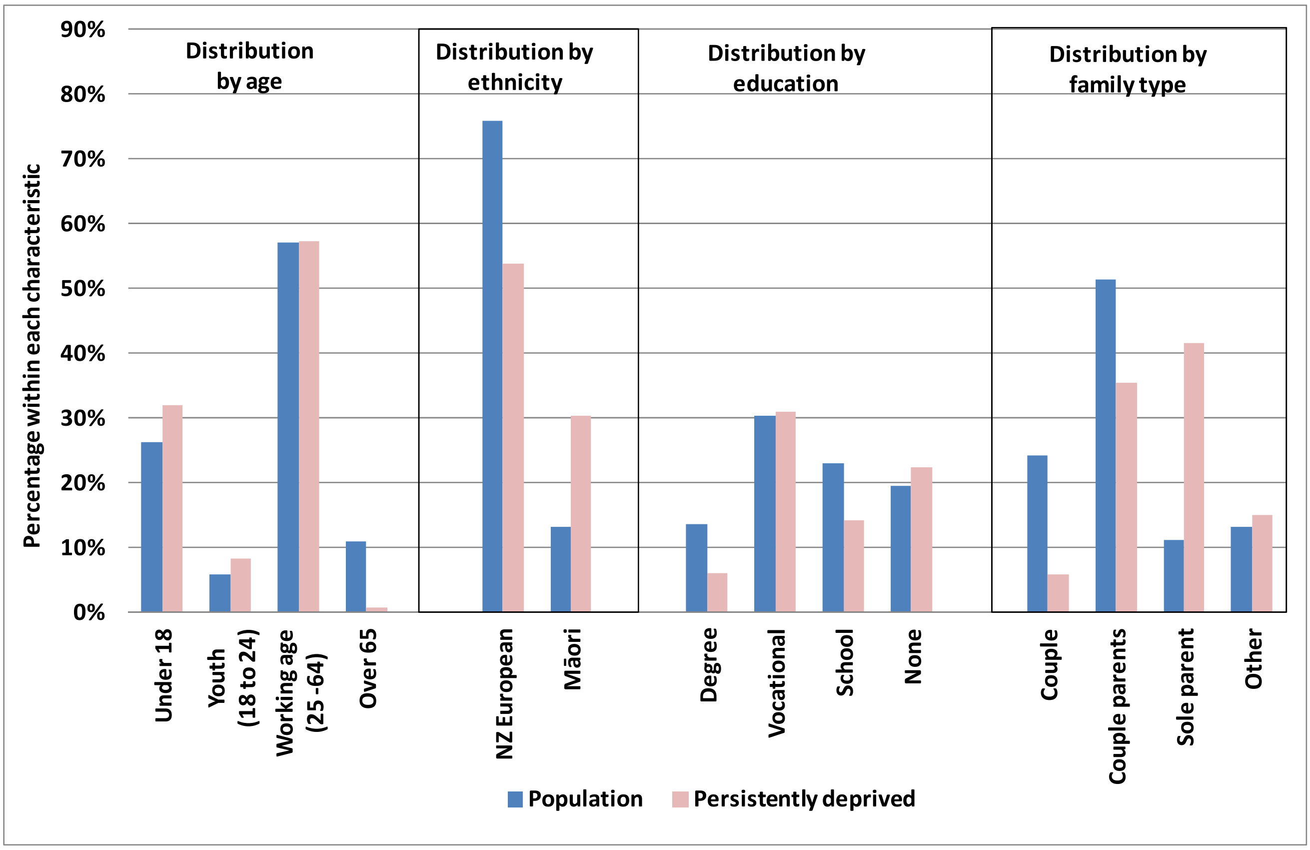
The red bars in Figure 15 show the distribution of the 6 percent of households which were in hardship. This shows that hardship is widely distributed across most parts of the population. The largest groups of people experiencing persistent deprivation are aged 25 to 64, New Zealand European, have trade level qualifications, and are sole parents. In many cases this is because they are the largest groups in society.

The blue bars in Figure 15 show the breakdown of the total population. Where these are higher than the red bars, that group has a lower than average chance of experiencing hardship, and where the blue bars are lower than the red one, that group has a greater risk than average of experiencing hardship. The relative risk is high for those under 18 years old and youths, Maori, those with low qualifications, and sole parents.

From a policy perspective, this graph suggests that designing a policy around a characteristic, whether it is age, ethnicity or family type, would mean missing many of the people who are in need of help.

This background note is not covering the solutions to dealing with hardship in the community. However these are people who often face multiple disadvantages covering health, housing, education and social integration. As a result, access to and the performance of publicly provided services is often critical for providing people in hardship with opportunities for change.

Figure 15: The characteristics of the population with persistent deprivation



Note: The blue bars are the distribution for the total population. The red bars are the distribution for the 6% of the population that experienced three or more of the eight potential indicators of deprivation in either two or three of the three years it was measured.

Source: Treasury 2012 based on Carter et al 2012

The impact of rising inequality

The current level of inequality is a complex interaction of historical legacies, the current structure of the economy, and current policy on income redistribution. Some inequality is generally seen as a just reward for skill, hard work, and inventiveness.

This means there is also no definable “right” level of inequality. Different people will have different views on the level of inequality that is acceptable, and there is no definitive guidance from economics, philosophy or other disciplines that one distribution is better than others. Treasury’s role is not to decide what the right distribution is, but rather to provide Ministers with the information they need to make an informed decision.

In recent years there has been interest in the impact of inequality on society and the economy, and whether higher inequality has significant negative impacts.

The impact on economic growth

A recent review of over 400 studies showed there is no simple relationship between levels of inequality and economic growth (De Dominicis et al, 2008). There are studies that do find a link, and others that do not.

Economic theory also provides no clear guidance, suggesting income inequality has both positive and negative impacts on economic growth.

- *On the positive side*, greater inequality may lead to higher savings rates (as the rich save more on average), provide a concentration of resources that may enable investment in new activities, and provide stronger work and risk-taking incentives.
- *On the negative side*, greater inequality may increase socio-political instability, or lead to political pressure for income redistribution which may impact on the incentives for people to work more or take on additional risk. It may also result in barriers that prevent the efficient use of resources (particularly if it affects the development of people's skills).

There are ways of achieving economic growth that improve social infrastructure and improve equity. These tend to be based on building long term skills and increased participation across society. The Treasury has focused on understanding this growth path for many years (eg, Treasury, 2001).

The impact on social outcomes

It seems reasonable to expect that redistributing from high to low earners would increase the overall well-being of the population. This is because those with little are likely to more highly value what a little extra money can buy more than those with more resources suffer from losing it. However, empirical evidence suggests this is true only up to the level of income needed to satisfy basic needs (Helliwell et al, 2012). More recent approaches (notably by Sen, 1999) have proposed that the focus should be more on the distribution of capabilities and opportunities that people have to achieve their life goals.

The issue of the social impact of the distribution of income was highlighted in, amongst other places, *The Spirit Level* (Wilkinson, 2009), *The Price of Inequality* (Stiglitz, 2012) and *Economics After the Crisis* (Turner, 2012). In general it is suggested that greater inequality increases social problems such as poorer health outcomes, community life, and more criminal offending. It is often argued that this is because of the increased level of stress and reduced social capital (such as trust in other people or institutions and social connectedness) that results from relative societal status (eg, Marmot et al, 2010).

On the other hand, subsequent research has found it more difficult to establish that increased income inequality causes poorer social outcomes, with some studies finding it did and others that it didn't. The most consistent findings have been that inequality has more impact when it undermines the level of social capital (eg, connectedness and the sense of belonging) and that there is a modest linkage between inequality and health outcomes, but even here it is unclear whether the increase in health inequalities causes or is caused by higher income inequalities (Rowlingson, 2011, Holler et al, 2012 p.10). It is also worth noting that New Zealand has a very high level of social capital (such as trust in people and institutions and friends that a person can call on when in trouble) on an international scale even though its level of income inequality is about the average (OECD, Better Life Index).

This area is still disputed in the academic literature and will no doubt continue to be for some time. At this point we think the evidence for a causal link between inequality *per se* and poor social outcomes is not strong, and consequently advise caution about assuming reducing inequality on its own would be an effective means of improving social outcomes.

The Treasury's judgement of the key policy focuses

The Treasury's role is to provide advice to the government, including advice on the important issue of inequality. In particular, we provide advice on the impact of taxes and benefits on the distribution of income, and the impact of long term trends, such as how the ageing population will affect the distribution of government spending between age-groups.

Our advice on equity is based on analysis of international and domestic trends and what we think is important for New Zealand's future. The key elements of this advice are outlined below.

- **Enhancing mobility should be an important focus for policy.** This means that policy should take a dynamic view of income inequality, and work to enhance the chance that people, particularly those experiencing hardship, can improve their living standards. This means focusing on work, education, and supportive social services as well as income protection. It also means focusing on policy settings that lean against mobility such as high effective marginal tax rates.

- **Governments should be cautious about assuming raising incomes alone will address social disadvantage.** The evidence is that poor social outcomes are caused by a complex array of issues, and raising incomes alone is unlikely to address all of these.

- **When considering distributional outcomes, attention should be on the total impact of the government's actions.** This means that the government should look across its tax, benefit and expenditure profile to see the holistic impact on the distribution of income, rather than just looking at the tax or benefit systems. Because in-kind services are also an important mechanism for reducing inequality, providing quality services is an important lever.

- **Governments should look at the impact across the whole of the living standards framework.** We strive to recommend policies that support higher living standards in a sustainable way. We advise avoiding policies that may superficially be attractive for reducing inequality, such as high marginal taxes, because of their impact on longer term economic growth. Instead we look for policies that are complementary in improving equity, economic growth, and other aspects of living standards.

Glossary:

The key words

Equity and Inequality: We are aware that these terms have different meanings, and that in the literature they can have some very precise meanings. However, in this non-technical note we have used them in the manner that they are used in general conversation. The Collins dictionary give the primary meaning as being:

> **Inequality:** the state or quality of being unequal; disparity
>
> **Equity:** the quality of being impartial or reasonable; fairness

Hardship, poverty and deprivation: We have again used these words interchangeably, using their meanings in everyday language (though we know that in the academic literature they can be technical meanings attached to them). We use them to indicate the state when people have too little income to be able to afford things that most in society think everyone should have. It is measured by asking people questions about whether they have adequate food, heating, beds for children, or shoes.

Technical words

Decile: A decile is created when the population is sorted from top to bottom according to their income and then split into ten equal groups . The top decile is the top 10% of income earners.

Gini Coefficient: An index that ranges between zero (if everyone is equal) and 100 (if one person has everything). It is the most common way to measure inequality internationally.

Income: The amount of money someone has to live on. There are different income measures and the main ones are:

Market income: How much someone earns before any taxes or benefits are paid.

Disposable income: How much someone gets in the hand after they have paid their income taxes and received any benefits and other transfers from the government.

Final income: How much someone has available to them once their income, all taxes including indirect taxes (like GST and excise tax), and all benefits, transfers and services provided by the government (like health and education) are taken into account.

Household income: The amount of income earned by the members of the household. It can be measured by market, disposable and final income.

Equivalised household income: When household income is adjusted for the number and ages of the people in the household. This is done to allow for the fact that costs are lower for different age-groups and are less when people live in groups.

Socioeconomic status: An individual's or family’s economic and social position in relation to others. There are various scales that are used to determine this, primarily based on some combination of income, education and occupation.

References

Alvaredo, F., Atkinson, A. B., and Piketty, T. (2012), *The Top Incomes Database* http://g-mond.parisschoolofeconomics.eu/topincomes/#Database:

Aziz, O., Gibbons, M, Ball, C and Gorman, E., (2012) "The Effect on Household Income of Government Taxation and Expenditure in 1988, 1998, 2007 and 2010" *Policy Quarterly,* 8(1) pp. 29-38.

Carter, K. and Gunasekara, F., (2012) "Dynamics of Income and Deprivation in New Zealand, 2002-2009: A descriptive analysis of the Survey of Family, Income and Employment" *Public Health Monograph Series,* (24) www.otago.ac.nz/wellington/otago032196.pdf

Corak, M. (2012) "Inequality from generation to generation: the United States in Comparison" http://milescorak.files.wordpress.com/2012/01/inequality-from-generation-to-generation-the-united-states-in-comparison-v3.pdf

de Dominicis L, Florax, R, and de Groot, H, (2008). "A Meta-Analysis on the Relationship Between Income Inequality and Economic Growth," *Scottish Journal of Political Economy*, vol. 55(5), pages 654-682

Devaux, M., and de Looper, M.,(2012) Income-related Inequalities in Health Care Utilisation in 19 OECD Countries, 2008-09, *OECD Health Working Paper No 58*

Easton, B., "Income Distribution" in B Silverstone, A. Bollard and R. Lattimore (eds), *A Study of Economic Reform: The Case of New Zealand*, 1996

Gibbs, SJ, Fergusson, DM, and Horwood, J (2012) "Childhood family income and life outcomes in adulthood: Findings from a 30-year longitudinal study in New Zealand", *Social Science & Medicine* doi:10.1016/j.socscimed.2012.02.028

Guardian, 2012, *Executive pay among FTSE firms keeps soaring, survey reports* http://www.guardian.co.uk/business/2012/jun/11/executive-pay-soars-survey-shows

Herald, 2012 CEO Pay Survey: Salaries stall for NZ's top bosses http://usatoday30.usatoday.com/money/workplace/story/2012-03-28/ceo-pay-executive-compensation/53839786/1

Helliwell, J., Layard, R., and Sachs, J. (eds) (2012) World Happiness Report, http://issuu.com/earthinstitute/docs/world-happiness-report?mode=window&backgroundColor=%23222222

Holler,P, Joumard, I Pisu, M and Bloch, (2012) "Less income inequality and More Growth – Are they compatible? Part 1. Mapping Income Inequality across the OECD, *OECD Economics Department Working Paper No. 924*

Hyslop, D and Maré, D, (2001) "Understanding Changes in the Distribution of Household Incomes in New Zealand between 1983-86 and 1995-98." *Treasury Working Paper no 21,* 2001. http://www.treasury.govt.nz/publications/research-policy/wp/2001/01-21/twp01-21.pdf

Imlach Gunasekara F, Carter KN, Liu I, Richardson K, Blakely T. (2012) The relationship between income and health using longitudinal data from New Zealand. *J Epidemiol Comm Health* 2012; 66: e12

International Monetary Fund (2012) "Seven Questions about Income Inequality" *IMF Research Bulletin,* 13(2) pp. 6-9 www.imf.org/External/Pubs/FT/irb/2012/02/index.pdf

Jenkins, Stephen P. (2011) *Changing fortunes: income mobility and poverty dynamics in Britain.* Oxford University Press, Oxford, UK.

Kierzenkowski, R., and Koske, I. (2012) Less Income Inequality and More Growth – Are they Compatible? Part 8: the Drivers of Labour Income Inequality – A Literature Review. *OECD Economics Department Working Paper* No. 931. http://www.oecd.org/eco/publicfinanceandfiscalpolicy/lessincomeinequalityandmoregrowth-aretheycompatible.htm#working_papers

Le, T., Gibson, J., and Stillman, S. (2012) "Wealth and saving in New Zealand: evidence from the longitudinal survey of family, income and employment" *New Zealand Economic Papers* 46(2) pp 93-118

Marmot, M (2010) *Fair Society, Healthy Lives: the Marmot Review. http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report*

OECD, Better Life Index, http://www.oecdbetterlifeindex.org/countries/new-zealand/

OECD (2010) *Going for Growth*, particularly Chapter 5.

OECD (2010a), *PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes* (Volume II)

OECD (2011) *Divided We Stand: Why Inequality Keeps Rising*, OECD Publishing.

and the accompanying New Zealand country note: www.oecd.org/els/social/inequality

Perry, B. (2012) *Household Income Indicators Report*

http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/monitoring/household-income-1982-2007/2012-hir-main-report.doc

Rowlinson, K (2011) *Does Inequality cause health and social problems?* Joseph Rowntree Foundation http://www.jrf.org.uk/publications/income-inequality-health-social-problems

Sen, A *Development as Freedom*, Oxford University Press, 1999

Sen, A *The Idea of Justice,* Harvard University Press, 2009

Stiglitz, JE *The Price of Inequality,* Allen Lane, 2012

Treasury (2001) *Towards an Inclusive Society,* http://www.treasury.govt.nz/publications/research-policy/wp/2001/01-15

Treasury (2010) *Income and Occupational Intergenerational Mobility in New Zealand*

http://www.treasury.govt.nz/publications/research-policy/wp/2010/10-06/twp10-06.pdf

Treasury (2011) *Briefing for the Incoming Minister of Finance: Increasing economic growth and resilience.* http://www.treasury.govt.nz/publications/briefings/2011

Treasury (2011a) Working Towards Higher Living Standards for New Zealanders, *New Zealand Treasury Paper*, 11/02 http://www.treasury.govt.nz/publications/research-policy/tp/higherlivingstandards/tp-hls-may11.pdf

Treasury (2012) *A descriptive analysis of income and deprivation in New Zealand* http://www.treasury.govt.nz/publications/informationreleases/income-deprivation/t2012-866.pdf

Treasury (2012a) *Treasury's Advice on Lifting Student Achievement in New Zealand: Evidence Brief* http://www.treasury.govt.nz/publications/media-speeches/speeches/economicleadership/sanz-evidence-mar12.pdf

Treasury (2012b) *Improving the Living Standards of New Zealanders: Moving from a Framework to Implementation* http://www.treasury.govt.nz/publications/media-speeches/speeches/livingstandards/sp-livingstandards-paper.pdf

Turner, A, *Economics After the Crisis, Objectives and Means* MIT Press, 2012

USA Today, 2012 CEO pay rises again in 2011, while workers struggle to find work http://usatoday30.usatoday.com/money/workplace/story/2012-03-28/ceo-pay-executive-compensation/53839786/1

Wilkinson, R.P and Pickett K, *The Spirit Level: Why More Equal Societies Almost Always Do Better*. London, Allen Lane, 5 March, 2009