

## **THE TREASURY'S LIVING STANDARDS FRAMEWORK**

February 2018

The Treasury has released new material on its Living Standards Framework, in particular a Treasury Paper and related discussion papers that describe the different components and dimensions of intergenerational wellbeing in the Living Standards Framework.

The Treasury continues to make the historical material in this document available to support researchers interested in the development of the Framework since 2012.

Please refer to the current Living Standards Framework material listed at <http://www.treasury.govt.nz/abouttreasury/higherlivingstandards>

Office of the Chief Economic Adviser  
The Treasury



# Increasing Equity Background Paper

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Treasury's Living Standards Framework Papers

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# Executive Summary

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**Purpose of this paper.** The Treasury's vision is to achieve higher living standards for New Zealanders, through five key aspects on the Living Standards Framework; economic growth, managing risks, social cohesion, sustainability for the future and increasing equity. This paper focuses on the 'Increasing Equity' domain – specifically what it means and why it is important, how do we look to achieve this and where we are at in New Zealand today. This paper provides background information to the analysts guide to aid understanding of the context and current situation in New Zealand.

**Achieving higher living standards is the Treasury's main objective.** As the lead policy advisor to the Government on economic, financial and regulatory policy, the Treasury understands that achieving higher living standards goes beyond traditional economic indicators of income and GDP. It includes a broad range factors in a framework centred on capital stocks and flows that should be collectively considered when forming policy advice. It also includes assessing the distributional impacts of policy interventions across the different dimensions of well-being.

**Defining equity is difficult.** It is a normative concept, and has a number of different interpretations and ways of being applied. Equity can focus on equality of opportunity or equality of outcomes. This paper presents some of the key concepts, definitions and measures around equity that can feed into thinking around policy advice.

**The Capabilities Approach has become a key focus** for how we look to achieve higher living standards in New Zealand. One of the core commitments of Amartya Sen's capabilities approach is that it focuses attention on what people are able to do and to be, and so 'capabilities' refer to the freedom and opportunities for individuals to be treated fairly and have the opportunity to live the lives that they have reason to value.

**New Zealand has a past of seeking to achieve equity across society.** Looking across our recent history, it is evident that the concepts of fairness and justice have long been present. Specific areas such as the Treaty of Waitangi and subsequent tribunals, gender equality, human rights and the social welfare system have all had significant impacts that have shaped New Zealand culture and defined levels of what we believe are acceptable standards of living.

**There are a broad range of outcomes by which to measure equity.** While we include specific areas of income such as inequality, mobility, poverty and deprivation, this paper also goes beyond income to include other outcomes like wealth, education, employment and health. While we acknowledge that income does have significant impact on an individual's ability to participate in society, it is noted that there are other outcomes (more than discussed within this paper) that can affect the living standards and well-being of New Zealanders.

**This background paper is a starting point.** Defining equity and establishing acceptable levels of equity is a difficult task. The main purpose of this paper is to be a starting point for analysts and researchers to initiate discussion and debate, to put forward some ideas and present evidence on some key outcomes in New Zealand.

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# Increasing Equity

## 1 Purpose of this paper

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The Treasury's vision is to achieve higher living standards for New Zealanders, through five key aspects on the Living Standards Framework; economic growth, managing risks, social cohesion, sustainability for the future and increasing equity. The focus of this paper is to discuss the 'Increasing Equity' domain – specifically what it means and why it is important, how do we look to achieve this and where we are at in New Zealand today. This paper provides background information to the analysts guide to aid understanding of the context and current situation in New Zealand.

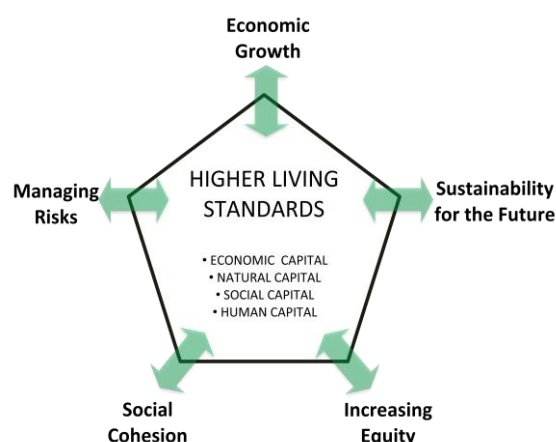
As a normative concept, equity can mean different things in different contexts to different people. We acknowledge that this is a question that many people have grappled with for many years. There are a range of well-established principles of equity, some egalitarian and some not egalitarian, these have different implications for policy and people differ over how these are applied in different contexts. The Treasury's role is to provide the government of the day with economic and social policy advice across a wide array of issues where it is important to consider the distributional effects and impacts on equity of opportunities and outcomes alongside the other dimensions of our Living Standards Framework.

The first part of this paper starts by outlining some of the influences that shape the Treasury's approach to thinking about living standards and equity. Amartya Sen's Capabilities approach in political philosophy provides us with a framework that helps to broaden our approach to economic policy. This approach embodies an ethical theory which includes certain principles of justice. Over the years, New Zealanders have demonstrated an attachment to ideas of fairness and equality, which is reflected in both contemporary polls and historical literature. Successive New Zealand governments have responded to this with policy that, at a broad level, makes choices about how these values should be reflected.

The second part of this note changes tack and provides a set of measures that are a snapshot of the sort of information we draw on when formulating policy advice. The evidence we consider spans a wide range of indicators, which looks at both measures of income and wealth inequality, but also other important facts about income poverty, material hardship, and education and health inequities. Keeping track of how these outcomes travel and change over time shapes our approach to diagnosing where public policy can have an impact.

There is a balancing act between focussing on an opportunities approach to increasing equity versus an outcomes approach. Equity of opportunities involves making sure everyone simply has the options available to them to be able to participate in society and the economy. In contrast, equity of outcomes is more focussed on the end results. However, these two concepts are inherently linked. Where possible we look to formulate policy that takes into account the impact of policy on both opportunities and outcomes. The role of this paper is not to decide and say what equity means for New Zealand society. It is intended to be a guide to introducing thought around these issues, and give guidance to where further material can be found.

## 2 The Treasury's Living Standards Framework



Central to the Treasury's Living Standards Framework are the four capitals; Financial/Physical, Natural, Social and Human. When we talk from an increasing equity viewpoint, access to these four capitals is critical in order to provide opportunities and build capabilities for the future. Therefore the main policy challenge becomes the ability to maintain viable levels of all the capitals in a world that is striving for higher living standards.

This paper focuses mainly on the economic (income and wealth), physical (housing) and human (education and health) capitals.

There are five core domains of the Living Standards Framework, which can be viewed separately, but are also inherently linked. We see that:

- a strong component of the equity discussion centres around income, which is a central component to economic growth
- any increase in equity needs to be sustainable for future generations
- social cohesion, social infrastructure and community involvement are important for promoting inclusiveness and equitable outcomes
- risk management is critical to ensuring that we reduce/monitor barriers to access and opportunities which would otherwise result in less equitable outcomes

It is important to understand that while each of the five dimensions on the framework is important in its own right, they interact - either strengthening each other or coming into tension and resulting in trade-offs. Therefore the Treasury's overall advice strives to identify options that strengthen all dimensions of living standards across a broad set of policies. For instance, there are ways of achieving economic growth that also improve social cohesion and improve equity.



### 3 Concepts of equity

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There are a range of well-established principles of equity, some egalitarian (people are treated as equals) in nature and some non-egalitarian. People differ over which principles ought to be embraced, and, how they could be applied in different contexts. There is no right or wrong principle and these should be applied on a case by case basis, being clear what the goals and assumptions are. Three of the principles of equity are (Jones 2009):

- Equal life chances – equity of outcomes – there should be no difference in outcome based on factors for which people cannot be held reasonably responsible – egalitarian;
- Equal concern for people's needs – equity of opportunities – some goods/services are matters of necessity and should be distributed proportional to people's need and nothing else – egalitarian;
- Meritocracy – positions in society and rewards should be distributed to reflect differences in effort and ability, based on fair competition – non-egalitarian.

As discussed equity can mean different things in different contexts, and to different people. For example it can be taken to imply:

- the equitable distribution of benefits and burdens or rights and duties;
- a meaning of fairness and social justice;
- the idea of giving people what they deserve with some kind of reward for effort;
- protecting the most vulnerable members in society;
- directing resources to where they will produce the most "good", however that is measured;
- procedural fairness, or being even-handed.

The Oxford Dictionary provides the following definitions:

*Equity: the quality of **being fair** and impartial 'equity of treatment'*<sup>1</sup>

This can be contrasted with:

*Equality: the state of **being equal**, especially in status, rights and opportunities*<sup>2</sup>

It is important to emphasize that equity is distinct from equality. Equity requires everyone to have the opportunity to access the same resources. Equality requires everyone to have the same resources. Equity is about understanding that everyone in society needs to be given an equal chance of succeeding in life; a lack of equity is often visible through inequality in outcomes. Inequities generally arise when certain population groups are unfairly deprived of basic resources that are available to other groups. Whether a disparity is 'unfair' or 'unjust' depends on the context. In order to measure or increase equity, we look at distributions in outcomes and subsequently how to reduce disparity

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<sup>1</sup> <http://www.oxforddictionaries.com/definition/english/equity>

<sup>2</sup> <http://www.oxforddictionaries.com/definition/english/equality>



between groups; this is often evident as inequality or differences between groups in the population. The World Health Organisation (WHO) defines equity as “the absence of avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically” (2015). This does not necessarily mean equality of all outcomes across all people.

For children, equity has been defined by UNICEF as all children have an opportunity to survive, develop, and reach their full potential, without discrimination, bias, or favouritism. The aim of equity-focused policies is not to eliminate all differences so that everyone has the same level of income, health, and education. Instead, it is about eliminating what is unfair and avoidable in circumstances that deprive people of their ability and opportunity to succeed in life (UNICEF, 2010).

### 3.1 Historical debate

There has been a long history of debate surrounding the definition and principles of equity and what really matters. Some of the major historical viewpoints are summarised as follows (Treasury 2011).

One of the most well-known and influential welfare-based approaches to the measurement of living standards is utilitarianism, provided as early as the 18<sup>th</sup> century by Jeremy Bentham. In his approach, Bentham held that public policy should seek to provide “the greatest happiness of the greatest number”. The most significant limitation to this approach is due to the focus on sum of total happiness, regardless of how this is individually distributed.

Social contract theorists like John Locke and Jean Jacques Rousseau put political equality front and centre in their discussion of what justified legitimate government. More recently in this tradition, John Rawls proposed that an acceptable distribution of wealth in a society would be one in which a person would be happy to be born as any member of that society. This would not be a society of perfect equality, but rather one which ensured the maximum life opportunities for individuals in the worst positions.

In recent decades, the capability approach (discussed in more detail below) has emerged as a theoretical framework for thinking about concepts such as wellbeing, development and justice. The approach was pioneered by economist-philosopher Amartya Sen, though aspects of it can be traced back to, among others, Aristotle, Adam Smith, and Karl Marx. The capability approach argues that freedom to achieve wellbeing is to be understood in terms of people’s capabilities, that is, their real opportunities to do and be what they have reason to value. Sen listed five capabilities central to the theory. This approach has been developed and extended by a number of scholars, including Martha Nussbaum, who added additional capabilities. Overall, this approach emphasises the importance of ensuring that people have the opportunity necessary to participate in society and live a fulfilling life.

More recently, international organisations like the Organisation for Economic Cooperation and Development, the International Monetary Fund, the World Bank and the United Nations and acclaimed economists like Joseph Stiglitz, have all produced work on inequality, including empirical analysis of the impact of different levels of inequality on broader economic and social goods, such as education, health and economic performance.

The Stiglitz-Sen-Fitoussi Report into economic performance and social progress (2009) discussed in-depth, going beyond GDP and looking at alternative measurements for the

well-being of people. They noted that “what really matters are the capabilities of people, that is, the extent of their opportunity set and of their freedom to choose among this set, the life they value.”<sup>3</sup>

## 3.2 The Capabilities approach

An important influence on the Treasury’s direction in recent years has been the capabilities approach which was developed by Nobel Laureate Amartya Sen. The capabilities approach is a broad normative framework that can guide the evaluation of individual well-being and social arrangements, as well as the design of public policy to alleviate social ills.

Capability refers to the *freedom* to enjoy various functionings. In particular, capability is defined as ‘the various combinations of functionings (beings and doings) that the person can achieve. Capability is, thus, a set of vectors of functionings, reflecting the person’s freedom to lead one type of life or another . . . to choose from possible livings’ (Sen, 1992, p40). Put differently, capabilities are, ‘the substantive freedoms [a person] enjoys to lead the kind of life he or she has reason to value’ (Sen, 1999, p87).

The core commitment of the capabilities approach is that it focuses attention on what people are able to do and to be, and so ‘capabilities’ refer to the freedom for individuals to enjoy lives that they have reason to value. Sen argues that it is important to pay attention to the interaction between opportunities, resources, and the extent to which individuals are able to turn those into substantive freedoms for themselves to choose lives they value. This contrasts with other normative approaches which emphasise a neutral conception of individual utility and well-being (sometimes called ‘welfarist’ approaches), or focus on the distribution of resources (sometimes called ‘resource-based’ approaches).

Stiglitz, Sen and Fitoussi (2009) emphasised that economic development is not the end itself, but rather the means to other ends. Sen regards the overarching goal of development as the maximisation of people’s opportunities and capabilities; development which leads to freedom, the kind of freedom that allows people to lead the kind of life they have reason to value. Therefore freedom becomes the primary goal of development, as well as being the principal means of development. Development is the process of expanding human freedom. It means the removal of major sources of lack of freedoms such as poverty, all types of discrimination and inequalities, neglect of public facilities, lack of economic opportunities, social exclusion and state policies that limit freedom.

The Treasury’s advice emphasises that living standards are enhanced if everyone has the opportunity to participate in society and the economy. This is less about establishing a ‘right’ level of income, education, health or any other key variable and more about providing individuals 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 makes a dynamic understanding of how policies impact on people, regions, subgroups and the population as a whole important. In particular, we focus on:

- reducing the obstacles 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

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<sup>3</sup> Stiglitz, J, Sen, A & Fitoussi, J. (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress. Available from <http://www.stiglitz-sen-fitoussi.fr/en/index.htm>

- extending the opportunities and choices available to people, and
- increasing the capabilities and incentives on people to make the most of the chances available to them.

The Treasury's role is to provide advice on raising living standards, including advice on the impact of economic trends and policy changes on equity. For example, the Treasury provides advice on the structure of the tax and benefit system, which has an important impact on the distribution of income across society. Likewise, the Treasury provides advice on long term trends, such as an ageing population, which raises equity concerns because of the impact on the distribution of government spending between age-groups. It is the Treasury's role to highlight the impact of policy changes and trends on equity for the government to assist them in making well informed decisions. It is not the Treasury's role however to tell society what they should value.

This diagram illustrates the links that are useful to consider when evaluating the impact of policy changes and trends on equity. If a policy increases opportunities and builds capability for participation in society, then this is a policy that increases equity. Similarly, if a policy ensures incentives for participation and removes obstacles that stand in the way, it increases the chance for people to live a life they choose to value.



### 3.3 Equity in New Zealand

Equity and fairness are an integral part of New Zealand society and values and have been throughout our history. New Zealand was one of a number of representative nations involved in drafting the Universal Declaration of Human Rights, which was adopted by the General Assembly of the United Nations on 10 December 1948. The first article of this declaration is that “Everyone is born free and equal in dignity and rights”.

The principle of fairness, everyone getting a “fair go”, is deeply ingrained in New Zealand society. In his work “Fairness and Freedom” (2012), David Hackett Fischer compares the paths of the United States and New Zealand societies, to see why they are quite different given similar beginnings. The United States strongly believes in and has pursued the values of liberty and freedom, whereas New Zealand society has evolved to place much heavier focus on fairness and natural justice. It is argued that although these two countries are similar in many ways the fact that they have diverted along different paths of fairness and freedom over time may be due to differences in early settler society. It is evident when examining the New Zealand legal system that fairness is central to our way of thinking and defining how we treat people. These ideas have been captured over time in many different pieces of legislation that will be covered in the next sections.

There have been many defining moments such as the signing of the Treaty of Waitangi and its subsequent legislation/amendments, the historic and world-leading women's right to vote, along with the adoption of many of the treaties and conventions set out by the United Nations on human rights. These have all set a high standard of equity for which New Zealand is well regarded. Along with our social welfare system, these are important to understand when discussing equity in a New Zealand setting. The 1972 New Zealand Royal Commission on Social Security made recommendations related to benefits levels being set at a level that allows people to participate and belong in society.

### **3.3.1 The Treaty**

The Treaty of Waitangi (The Treaty) was signed in 1840, as an agreement between Māori and the British Crown. It contains three Articles, of which the third is of particular interest in regards to equity – 'In consideration thereof Her Majesty the Queen of England extends to the Natives of New Zealand Her royal protection and imparts to them all the Rights and Privileges of British Subjects.' This agreement was perhaps the first recognised attempt to ensure all of New Zealand's people would be treated in the same manner, regardless of race.

The Treaty was intended to be a way forward for creating a more peaceful and prosperous relationship within the country, particularly due to the growing numbers of settlers arriving in New Zealand and the rising need for land purchases. However it became apparent over time, that due to translation disparities within the two language versions, that there were quite different interpretations regarding the Articles as outlined within the Treaty (State Services Commission 2005 a, b). In particular, Articles 1 and 2 are believed to have been construed quite differently when it came to land sales and ownership. Coupled with the actions of land confiscation, poor consultation and the ignoring of Māori customs relating to land ownership amongst other problems, the results were inequitable outcomes, distrust and tensions that continued until rising protests and calls for fairness and equity came to the forefront of New Zealand's attentions in the 1960's and 1970's. Māori have also sought to resolve how *kawanatanga* (Article 1: governorship) and *tino rangatiratanga* (Article 2: chieftainship; absolute sovereignty) can successfully coexist.

The Waitangi tribunal was established in 1975, as a way of investigating grievances. Previous commissions (1921, 1927) had been in place prior to the setup of the tribunal, however many of the outcomes took many years to be resolved and were inadequate in terms of the consultation as well as monetary settlement. Likewise, the Waitangi tribunal was also initially hindered in its ability to resolve issues; it could only make recommendations and investigate issues that occurred from 1975 onwards. It was not until 1985 that an amendment made it possible to investigate claims dating back to 1840 when the Treaty was signed. This was further followed by the establishment of the Treaty of Waitangi Policy Unit in 1988 (now the Office of Treaty Settlements). The main role of this unit, as a part of the Ministry of Justice, is to assist in the resolution of Māori claims relating to land, forest, fisheries and other resources through negotiations and litigation. Many Māori iwi (tribes) have since benefited from the transfer of such assets with more claims still in the process of settlement. It is acknowledged that there is a need for fairness for everyone as well as being aware of what the country as a whole can afford to pay, so this does have some constraints on settlements.

### **3.3.2 Gender**

New Zealand has been world leading in gender equity, beginning with being the first country to give women the right to vote in 1893. Within a political focus, we have the women's right to vote (1893), right to be an MP (1919) with the first woman to actually win a seat occurring in 1933 and the first female cabinet minister (1949). Other legislative achievements have included the Equal Pay Act of 1972, parental leave as of 1987 and paid parental leave as of 2002. The Ministry of Women's Affairs was established in 1985, focussed on achieving better results for women through three priority areas; greater economic independence, more women in leadership and increased safety from violence. However, disparities in the returns from education and rates of pay still exist.

### **3.3.3 Human rights**

New Zealand also has numerous legislative measures that address the specific protection of children in society. The New Zealand Child Welfare Act (1925), the Children, Young Persons and Their Families Act (1989) and the UN Convention on the Rights of the Child (UNCROC) which was ratified by New Zealand in 1993 are just some of the ways New Zealand seeks to ensure equitable outcomes for children. It is important to note that ratifying treaties does not guarantee good outcomes.

Over the past three decades, child poverty has risen from a rarely mentioned issue through to a major concern in New Zealand. So how do we define what poverty is? The Expert Advisory Group on Child Poverty (2012) definition is "children living in poverty are those who experience deprivation of the material resources and income that is required for them to develop and thrive, leaving such children unable to enjoy their rights, achieve their full potential and participate as equal members of New Zealand society". There is no single measure of child poverty in New Zealand, so a range of measures are used.

Further to the Treaty, New Zealand adopted the UN Declaration on the Rights of Indigenous Peoples as of April 2010, after previously voting against it in 2007. This was further affirmation of the "Government's commitment to build and maintain constructive relationships with Māori to achieve better results for Māori, which will benefit New Zealand as a whole" (Power, 2010).

### **3.3.4 Welfare**

The Social Security system was instituted in New Zealand in 1938, with the Social Security Act, ultimately as a response to the Great Depression and the ongoing repercussions; issues associated with high unemployment, work camps and long queues at soup kitchens meant many were simply unable to look after themselves through no fault of their own. The Social Security Act introduced a new concept to the country - namely, that every citizen had a right to a reasonable standard of living and that it was a community responsibility to ensure that its members were safeguarded against the economic ills from which they could not protect themselves.

Prior to 1938, pensions/benefits were only available to the elderly, invalids, the blind, widows and miners. The Act also served as the introduction of a Social Security Department, primarily to administer monetary benefits.



The first major amendment to the Social Security Act of 1938 occurred in 1964, which served to reflect the growing changes in family structures, work force participants and benefits required. The major principles of the Act are as follows:

- Work in paid employment offers the best opportunity for people to achieve social and economic well-being
- The priority for people of working age should be to find and retain work
- People for whom work may not be an appropriate outcome should be assisted to prepare for work in the future and development employment-focused skills
- People for whom work is not appropriate should be supported

New Zealand's welfare system is currently undergoing reform as it seeks to lower the total number of beneficiaries, and help support those who can work back into the workforce. Youth are one particular area of focus, particularly those "at risk of falling into the welfare dependency trap". This is targeted through the provision of educational opportunities, better money management skills and the chance to contribute to society through work. It has been particularly successful, with many coming off their benefits and moving into either work or fulltime education.

### **3.3.5 What do New Zealanders think?**

According to the International Social Survey Program (ISSP) on social inequality conducted in 2009, most New Zealanders believe income differences in our country are too large and should be reduced by a progressive tax system that reduces the tax burden on low income and middle income earners and increases it on high income earners (Gendall & Murray 2010). Lower income earners are seen as underpaid in New Zealand and higher income earners overpaid. However, there is a strong belief that competence, effort and responsibility should be reflected in how much people earn, and that the keys to getting ahead in New Zealand are hard work, ambition and a good education. Therefore there is no definable 'right' level of inequality, and it should be kept in mind that some degree of income inequality is a characteristic of dynamic market economies. 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.

There is an implicit assumption made by researchers who connect attitudes and levels of inequality that respondents are aware of the actual level of inequality. Responses are also dependent on the wording of the questions and the context in which they are asked. A recent paper has looked at trends in the responses to questions and attitudes on inequality and redistribution in the ISSP 1996 and 2006 surveys and the World Values Surveys 1998, 2004 and 2011 (Morrison 2015). There was a lack of consensus on whether incomes should be more equal or less equal in both surveys over time. The results show a reduction in the preference of redistribution from the mid to late 1990s to the mid 2000s, which corresponds with macro level changes and low unemployment rates, then a slight shift towards attitudes of more redistribution in 2011. The results in New Zealand were different from most other international countries in the surveys, with greater heterogeneity of opinion indicating that New Zealand is unique but also that New Zealanders may not be aware of the actual levels of inequality (Morrison 2015).

In a poll, conducted before the 2014 general election by Roy Morgan (May 2014), 966 New Zealand men and women were asked about what they thought were the most important issues facing New Zealand (and the world) today; 41% indicated some kind of economic issue to be the most important problem. Broken down further, almost a fifth of New Zealanders (18%) say poverty, the gap between rich and poor or the imbalance of wealth is “the most important problem facing New Zealand”.

Another survey report released in early 2014 entitled ‘Inequality in New Zealand’ asked 1000 New Zealanders their thoughts and perceptions of inequality in New Zealand (UMR 2014). Some of the findings were as follows:

- 71% of those surveyed believe the gap between rich and poor in New Zealand is widening
- 78% believe the effects of this widening have been bad
- But given a choice, 54% of New Zealanders still prefer a New Zealand where individual efforts are fully rewarded and where big differences in wealth can occur

## 4 Measuring equity

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Given the issues with definitions and measurement of equity, measures of inequality can help us answer some of the questions we pose when thinking about different facets of equity. Do we live in a society where people have opportunities to work hard and be rewarded for that effort? Are the most vulnerable members of our society protected? Inequality measures don't give us all the answers, but they help us understand the factual context we are working within.

When measuring equity, it is important to:

- identify distributional impacts of policies across a number of different measures;
- think beyond income and consider other factors like wealth, education and health;
- think beyond static measures and consider the dynamic impacts over time;
- use relative and absolute measures of inequality, poverty and material deprivation;
- consider the final income that households receive, which includes in-kind services such as health and education; and
- consider barriers that might limit the equity in key areas (such as access to the law, to health institutions, or educational opportunities).

### 4.1 Outcomes

The main purpose of this section is to present information on different outcomes and what is happening in New Zealand. It is a starting point for discussions on where inequities may currently lie, and what things need to be considered when formulating policy around these issues. The following presents some key indicators and outcomes that we look at when measuring inequities and inequalities. It is by no means an exhaustive list. We have



chosen income, wealth, health, education and employment as the outcomes that are considered to be the most important, while acknowledging there are also a number of other underlying themes. These include ethnicity, housing, gender and regional elements, which will feature throughout the following discussion.

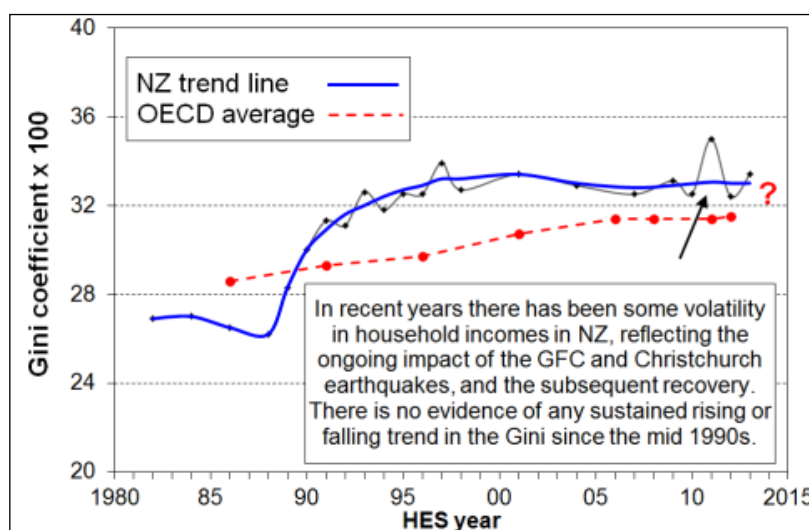
### 4.1.1 Income inequality

It should be noted that there is no single objective measure when discussing income inequality (De Maio, 2007; Easton, 2013; Creedy, 2014). The Gini coefficient is widely used and recognised internationally, but this in itself does not make it the best nor only measure to use.

#### Gini

The Gini coefficient is widely used to measure inequality. It varies between zero for complete equality and 100 when one person has everything. In contrast to the use of percentile ratios and share ratios, the Gini coefficient instead takes the incomes of all individuals into account by summarising the differences in income between each person with every other person in the population. Between the mid-1980s and the mid-1990s income inequality, measured by the Gini coefficient, increased in New Zealand (Figure 1). Since the mid-1990s inequality has shown no significant trend. More recently, the global financial crisis led to fluctuations but it is too early to tell if these are showing any trend (Perry, 2014, p.4). Most OECD (and many non-OECD) countries have experienced a rise in inequality but unlike New Zealand for most the rise has been spread across the whole of the 1990s and 2000s (OECD Income Distribution and Poverty Database 2014).

**Figure 1 – Comparison of OECD and New Zealand trend in income inequality**



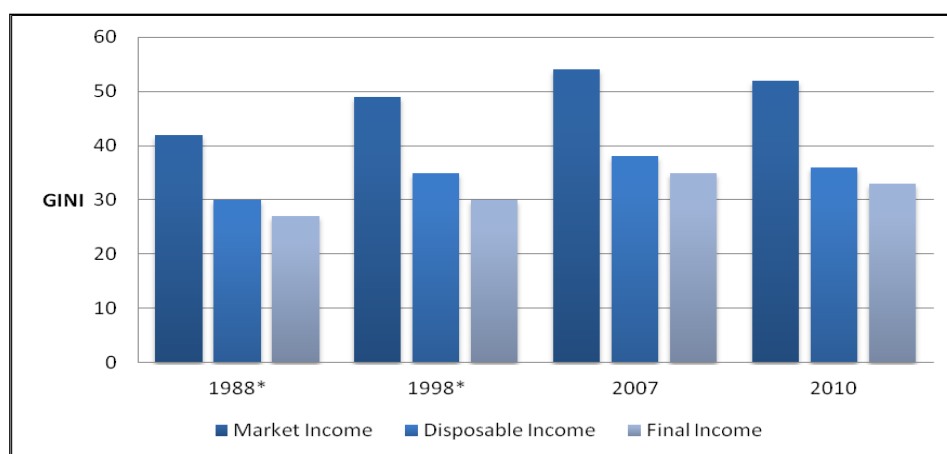
Source: Perry, 2014 (pg. 17): equivalised disposable household income

The latest available Gini coefficients show that New Zealand's income inequality is above the OECD average (Figure 1). 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 above average income equality now.

More recently New Zealand has had a decline in the level in income inequality between 2007 and 2011. During this time of the Global Financial Crisis and recessionary period, New Zealand was one of only six OECD developed economies in which both income inequality and disposable income inequality was flat or slightly improved.

It should be noted that any comparisons of income inequality over time and between countries, will be influenced by the measure of income that is used (see discussion below), the unit of analysis (individual or household), the equivalence scale and the specific measure of inequality, and there are value based judgements used in the choice of these (Creedy, 2013).

**Figure 2 – Gini of income inequality using alternative measures of income**



Source: Aziz et al, 2012

The level of income inequality is dependent on what measure of income is examined. *Market income* is income from wages and salaries, investments, self-employment, and from other forms of taxable income earned by private means. *Disposable income* is market income plus cash benefits, housing subsidies and pensions, but less income tax payments. *Final income* is disposable income plus the cost of subsidised or free health and education services, but less indirect tax payments (Harding, Lloyd and Warren, 2006, 178). However, it should be noted that this data does not take into account other third tier benefits such as TAS (temporary assistance support) which are particularly targeted at vulnerable populations. A recent study investigated inequality of expenditure and consumption data and found different trends from inequality in market and disposable income (Ball and Creedy, 2015). The authors found increasing inequality in expenditure from 1984 until the mid-1990s, followed by a decline.

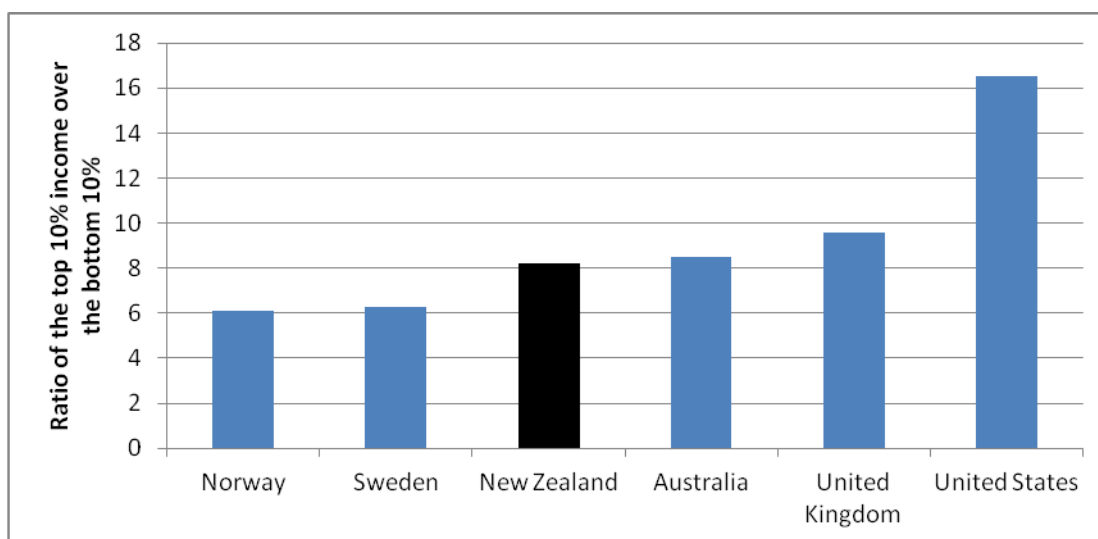
As shown by Figure 2 above, one of the drivers of increased inequality in disposable income has been the rising inequality of market incomes. Taxes and benefits muted but did not offset the increased inequality in market incomes over the period from 1988 to 2010. This is shown through inequality being significantly lower once taxes and transfers are taken into account. This is reduced further once the distribution of in-kind services (like education and health) and indirect taxes (such as GST) are taken into account. 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 government spending on the social services included in this study than they paid in taxes (Aziz et al, 2012).

## Percentile ratios

Percentile ratios are used to give an indication of how far apart two points are on the income distribution. This is typically done with 80:20 and 90:10 ratios, which compare the ratios of household income at the top of the percentile of the higher and lower groupings; these have tended to reflect a similar trend over time to the Gini coefficient.

The 90:10 ratio (Figure 3) shows that the income of people in the top 10% income share of the population is eight times higher than that in the bottom 10% of the population. This ratio is lower in New Zealand than the OECD average, but this does depend on the measure of income used.

**Figure 3 – The ratio of the top 90<sup>th</sup> percentile income over the bottom 10<sup>th</sup> percentile**



From Alvaredo et al, 2013 (UK 2009; Australia, NZ, Sweden and United States 2010): individual disposable income.

In New Zealand, Australia and Sweden, the disposable incomes of the top 10% are 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 10%, then in New Zealand it takes about 8.6 people in the bottom to earn as much as one in the top, while in the United States it takes almost 16 people and in the United Kingdom about 10 (Perry, 2014) .

A more recent alternative that is increasingly being used to measure inequality on an international scale is the Palma ratio (Perry, 2014). This is the ratio of the top decile share to the share of the lower four decile shares. In New Zealand the income share of those in the middle, deciles 5 to 9, has been stable at about 55% from 1990 to 2014.

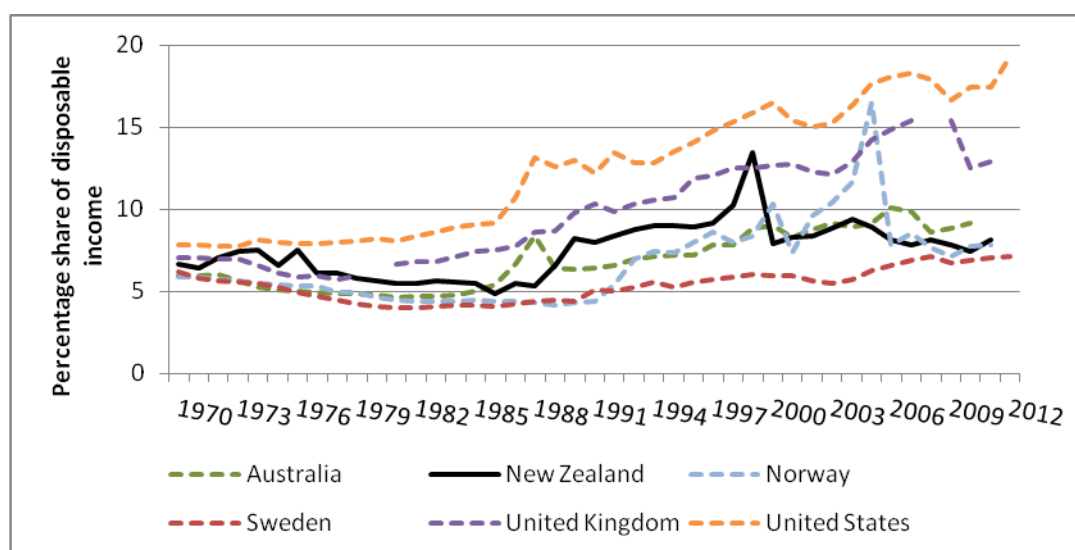
## Top income shares

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 information and communication technology giants. Informal evidence of this difference can be found in some comparisons of the salary packages of chief executives of stock exchange listed companies. The average salary of New Zealand's top bosses in 2013, was \$1.4 million, roughly 25 times the country's average salary of around \$55,000 (NZ Herald 2014). The pay gap is even wider in many other nations, including the United States, where the

average CEO of a Fortune 500 firm receives more than US\$12 million a year - 350 times as much as the average American worker, according to the Washington Post.

There was a pattern for a long term decline in the share of the top 1% of incomes from the 1930s, which reversed over the late 1980s and early 1990s (Easton 2015; Bertram 2015; Alvaredo et al, 2015). Figure 4 shows that the recent rise in top incomes has been quite different for different countries, where the top 1% earned a similar proportion of income in all six countries in the 1970s, but 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. The spike in the year 2000 in New Zealand corresponds to a change in the tax structure (Easton 2015).

**Figure 4 – The top 1% share of disposable income in New Zealand and overseas**



Source: Alvaredo, F., et al. (2015), The Top Incomes Database 15/01/2015

## Impacts on Income Inequality trends

The similarity in the pattern of top incomes suggests that international factors were major drivers behind the changes. 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, 2011).

**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).

A summary of international research (Kierzenkowski and Koske, 2012) argues that the rise in inequality since the late 1980s can be identified through the following macro-level 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 2012 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 income 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, in order to reap these benefits trade barriers had to be lowered and this 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 (partly due to increased globalisation, as well as increased skill levels), particularly in the service sector, also had a significant positive impact on employment growth.

### **Impacts of Income Inequality Trends**

It has been argued that there is a strong relationship between levels of redistribution, income inequality and economic growth (Ostry et al, 2014). However, the empirical evidence linking inequality and growth is inconclusive. There is not a simple answer to this question as it is difficult to disentangle the drivers of New Zealand economic performance. A meta-analysis (De Dominicis et al, 2008) which looked at over 400 studies found that there is no simple relationship and that there were well designed studies that both did and did not show a linkage. The drivers of income inequality and economic growth are determined by many factors, including factors outside of policy influence. Economic theory suggests 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 be reflected in barriers that prevent the efficient use of resources (e.g. by adversely affecting the development of low socioeconomic people’s skills). It may also 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.

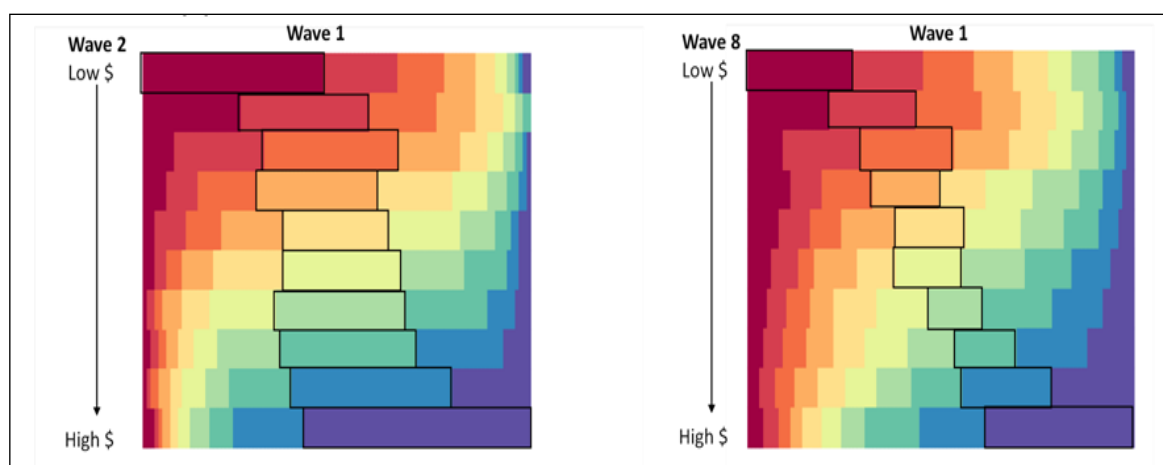
The issue of the social impact of the distribution of income was highlighted in, amongst other places, *The Spirit Level* (Wilkinson and Pickett, 2009), *The Price of Inequality* (Stiglitz, 2012) and *Economics After the Crisis* (Turner, 2012). In general it is suggested that greater inequality increases 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 differences in societal status (Wilkinson and Pickett, 2009; Marmot et al, 2010).

#### 4.1.2 Income mobility

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. Using longitudinal data (Figure 5) there is substantial change in real incomes between years (from 2002 to 2010; Carter et al 2014). The largest increases in income could be seen in respondents who started out in the lowest income groups and stability or declines in incomes were found in those who were in the highest income group at baseline.

**Figure 5 – Transitions in the relative position of income short-term mobility over two years (2002-2003), and over eight years (2002-2010)**



\*The different colours in the plot are used to identify which origin (wave 1: 2002) income group a person belongs to, using annual equivalised disposable household income. The destination (wave 2 or 8: 2003 or 2010) income decile group (in ascending order) is shown on the y-axis. The colours denote the decile group of income in the origin year, where red corresponds to the lowest income decile group and blue the highest, by the latter wave (destination) income decile group. The black boxes represent stability in income decile over time.

Recent research shows that there is significant income mobility over short periods of time (Carter and Imlach Gunasekara 2012, Carter et al 2014, Jenkins 2011). Over 60 percent of the population changed income decile groups over two years (2002 to 2003: Carter et al 2014). The movements in income groups were more likely to be of a short distance (to adjacent income groups) rather than long distance. Over 70 percent of the population stay in the same or move to an adjacent income group in the next year. The patterns of mobility were greater over the eight year period (2002 to 2010) with only 20 percent of the population staying in the same income decile group and 50 percent of the population stay in the same or move to an adjacent income group (Carter 2014). This level and pattern of mobility is similar to Australia and the United Kingdom. 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).

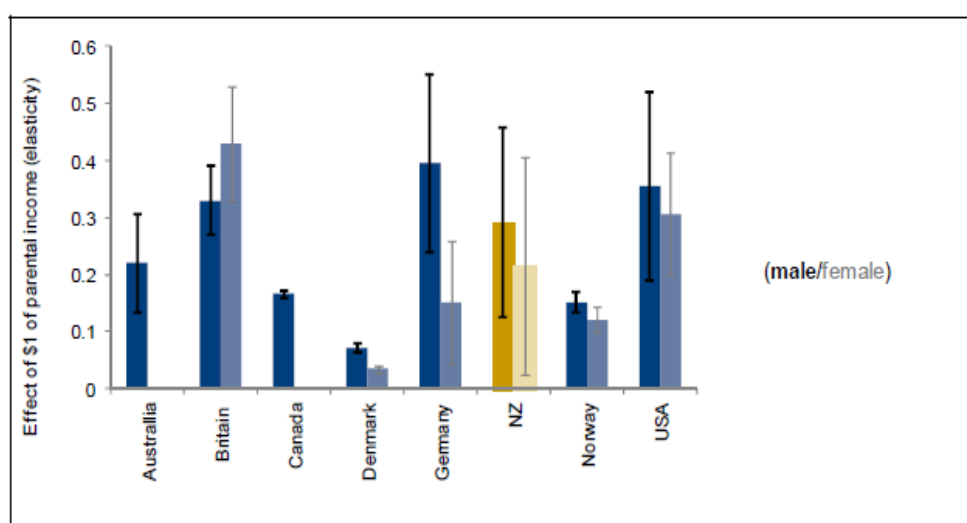


Taking into account mobility in income over eight years the measure income inequality (Gini) is reduced by 15%, from 0.35 (Wave 1 – 2002/03) to 0.29 (average income waves 1 to 8).

## Intergenerational mobility

Intergenerational mobility examines the relationship between the circumstances of parents and the circumstances of their children as adults. In New Zealand it was found that the childhood income of people's parents explains a modest proportion of the variance in their adult income (Gibbons, 2010). The results suggest that some of the effect of parents' income on the income of their children occurs because children from better-off families tend to spend longer in the education system, which is supported by international research (Corak 2012).

**Figure 6 – Estimates of the effect of \$1 of parental income on children's earnings**



Source: Gibbons, 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).



### 4.1.3 Income poverty

#### Definitions

*Poverty must be seen as the deprivation of basic capabilities rather than merely the lowness of incomes. – Amartya Sen (1999)*

Poverty encompasses income poverty and hardship or material deprivation. It typically refers to households and individuals who have a day-to-day standard of living or access to resources that fall below a minimum acceptable standard. In this section we will be focusing on income poverty, with hardship to follow on.

It is important to note that income poverty is different from income inequality: it is about “not enough” relative to a benchmark rather simply “less than” or the distribution of income in the population. When discussing income poverty it is also important to note the measurement; that is whether we are speaking in absolute or relative terms.

**Absolute poverty** refers to a set standard which does not change over time. An income-related example would be living on less than \$1.25 per day as used in the Sustainable Development Goals or an income poverty *fixed line* set at a particular point in time.

**Relative poverty** refers to a standard which is defined in terms of the society in which an individual lives and which therefore differs between countries and over time. An income-related example would be living on less than 60% of median NZ income.<sup>4</sup> Note relative measures use the contemporary median.

When discussing poverty measures, usually disposable household income is used (including income from wages and salary, benefits and transfers after taxes are taken off) and the following terms are used to establish levels and points of reference:

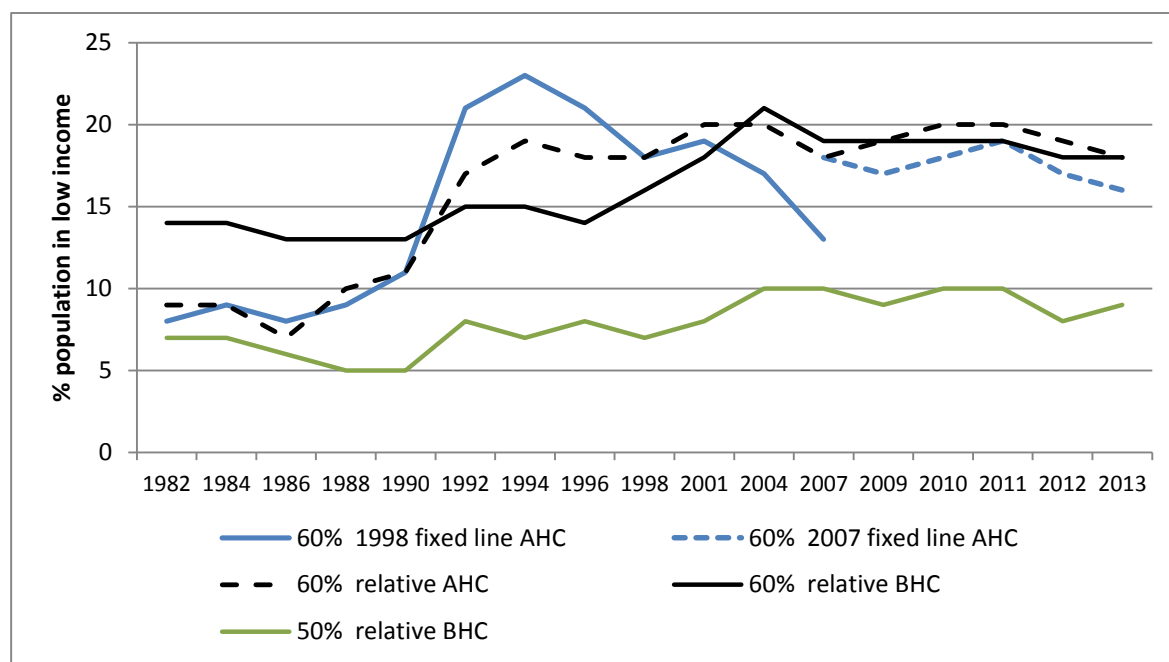
- **BHC** – income before housing costs.
- **AHC** – income after housing costs (including mortgage outgoings, rent, rates, etc). The AHC poverty thresholds are based on the corresponding BHC measure with 25% deducted to allow for housing costs.
- **Moving line approach** - the poverty line relative to the current median income, which will change from survey to survey which means that the poverty line effectively “moves”.
- **Fixed line approach** - poverty threshold set in a reference year (i.e. 1998) and held constant for the following years.
- **Poverty threshold** – cut points using BHC or AHC, such as 40%, 50% or 60% of the median income, where 40% and 50% represent deeper levels of poverty.

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<sup>4</sup> <http://www.poverty.org.uk/summary/social%20exclusion.shtml>

## Trends in Income Poverty over time

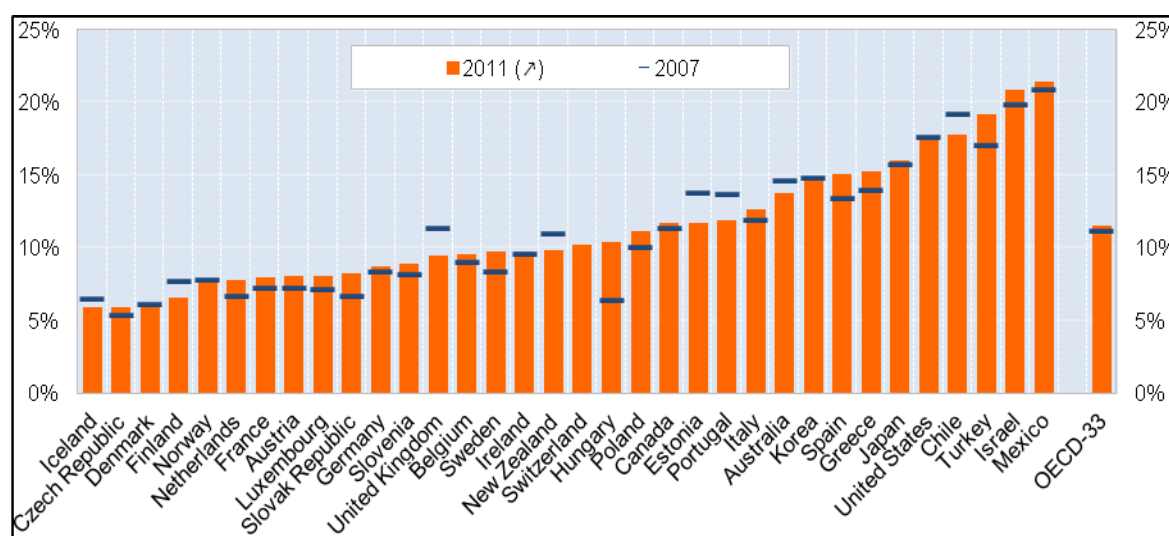
**Figure 7 – Percentage of the population below selected thresholds of incomes**



Source: Perry, 2014. Equivalised household disposable income before and after housing costs.

In New Zealand there is no single official measure for poverty in New Zealand. Figure 7 presents three different measures of relative income poverty (Perry 2014). Measuring income poverty after housing costs are removed may be a better measure of disposable income available to households. Using the 60% of median AHC fixed line measure the population poverty rate rose strongly over the late 1980s, early 1990s and dropped from 1994 onwards (1998 reference year). In general there has been an increase in poverty rates over the past 30 years, with some periods of stability. The pattern over time is not the same for the 50% and 60% median measures with more stability in the measure deeper of poverty (50% median income).

**Figure 8 – Relative income poverty in OECD countries**



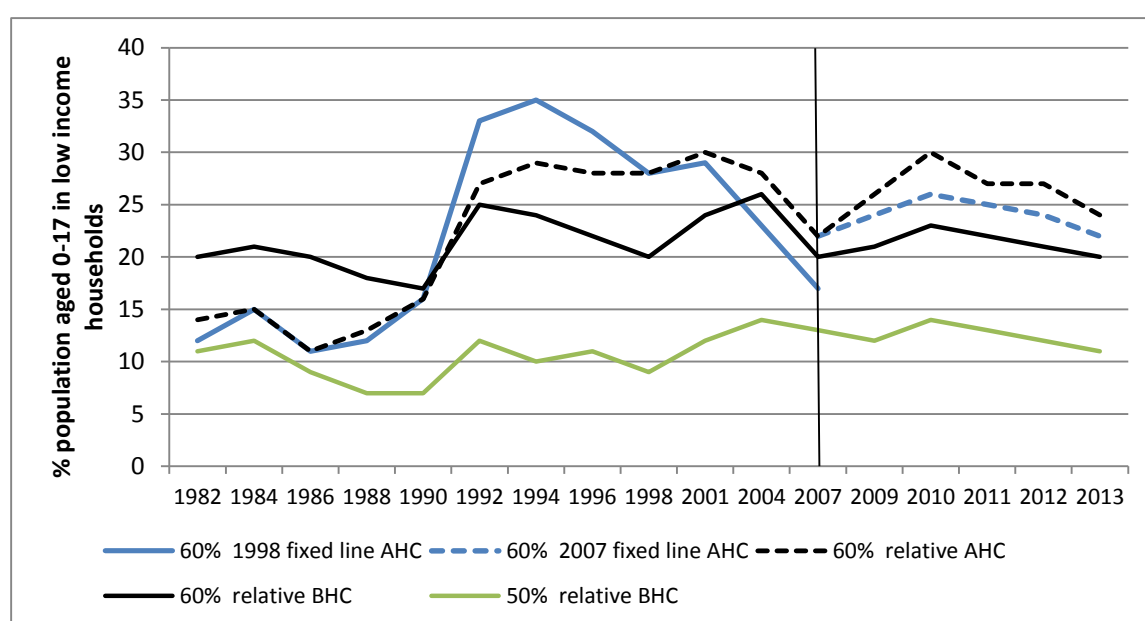
Source: OECD 2014, Income Distribution Database (via [www.oecd.org/social/income-distribution-database.htm](http://www.oecd.org/social/income-distribution-database.htm)). Equivalised household disposable income before housing costs

Relative poverty (60% median income) in New Zealand (Figure 8) has fallen from 11.0% in 2007, to 9.8% in 2011 (OECD, 2014). This is below the OECD average of 11.5%. New Zealand is one of the few countries to see a reduction in poverty during this time.

## Child Poverty

Poverty rates in children follow the same trends as the general population but are generally higher. When looking at the number of children in poverty there has been a decrease in both the BHC and AHC 60% of median income since 2001. There was an increase during the period of the GFC, however these are now back to the pre-GFC rates. When using deeper measure of poverty, 40% of median income, there has been a small but steady increase in the number of children in poverty over this period (Perry 2014).

**Figure 9 – Percentage of children in low income households in New Zealand**



Source: Perry, 2014. Equivalised household disposable income before (BHC) and after (AHC) housing costs.

There are a number of characteristics that are associated with children in poverty (Perry, 2014).

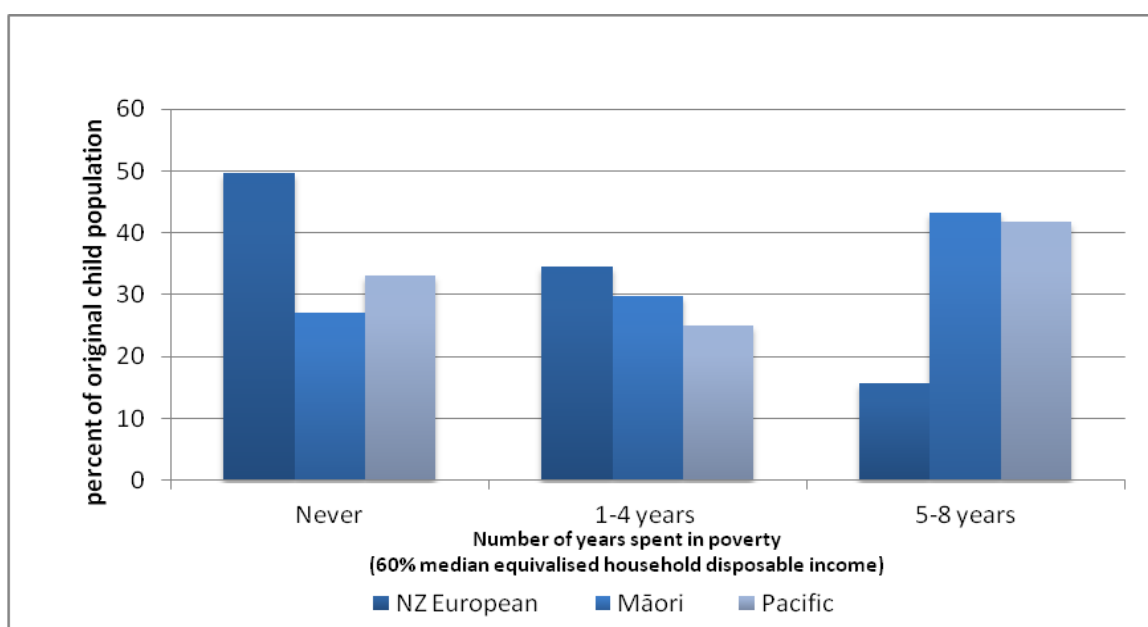
- Children living in sole-parent households experience significantly higher poverty rates than those in two-parent households and other family households (60%, 14% and 16% respectively in 2013).
- Children in households with three or more children generally have poverty rates considerably higher than those with only one or two children (30% and 20% respectively, 2007-2012).
- In 2001 and 2004, around one in two poor children came from households where at least one adult was in full-time employment or was self-employed. On average from 2009 to 2013 this proportion had dropped to around two in five (41% in 2013).
- From 2007 to 2012, children in workless households generally had poverty rates around six to seven times higher than for households where at least one adult was in full-time work.

## Persistent and Chronic Poverty

As discussed earlier, there is a lot of mobility in income between years and people and families can cycle in and out of poverty over a period of time. About half of the population will be in income poverty at least once over a period of seven to eight years, indicating that current poverty rates underestimate the population experiencing poverty over a period of time (Perry 2014; Carter et al, 2012). Figure 10 shows that children of Māori and Pacific ethnicity are more likely to spend more years in poverty.

The defining feature of 'chronic poverty' is its extended duration of time living in poverty (Hulme et al, 2001). Poverty can endure for years, and is often passed down through generations. For New Zealand, the chronic poverty rate (having a low average income over a period of time) is typically around 70% of the current poverty rate for the whole population, which is a little higher for children and Māori (~80%) (Perry 2014).

**Figure 10 – Percentage of children experiencing poverty over eight years 2002-2010**



Source: Carter 2014

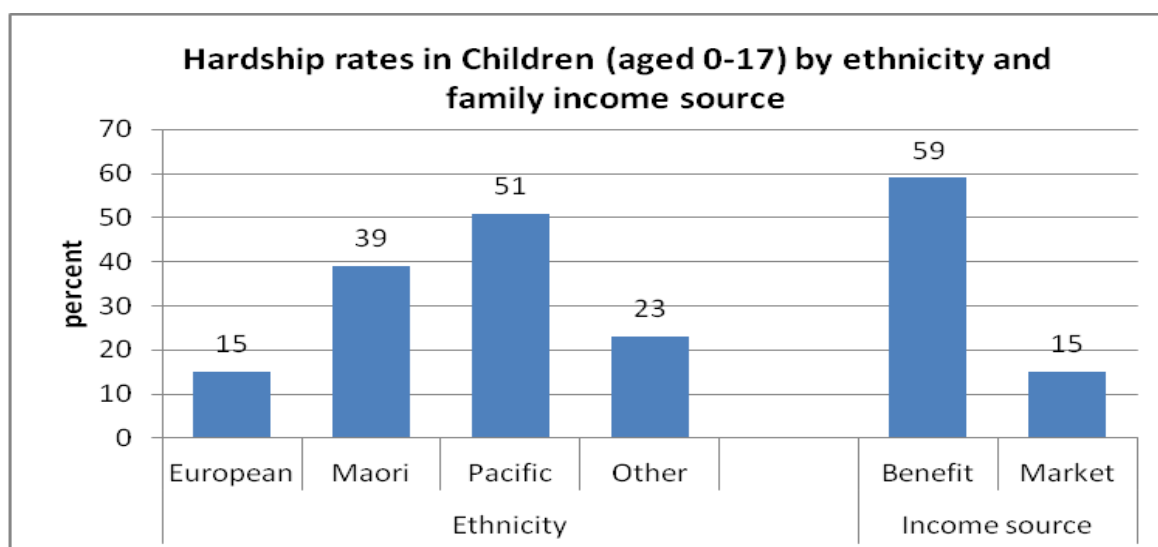
### 4.1.4 Material hardship

#### Definition

Hardship is typically described as 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). A state of hardship (unacceptably low material wellbeing) is characterised by having many enforced lacks of essentials and few or no freedoms, such as being able to go on school trips or overseas holidays (Perry 2014). Material hardship and deprivation are also strongly associated with poor quality housing and crowding, which can adversely affect and create ongoing health problems for the family, most particularly in children.

Material hardship is more prevalent in Pasifika and Māori children (Figure 11), as well as those whose family's main source of income comes from benefits (Perry 2014; Ministry of Social Development 2008).

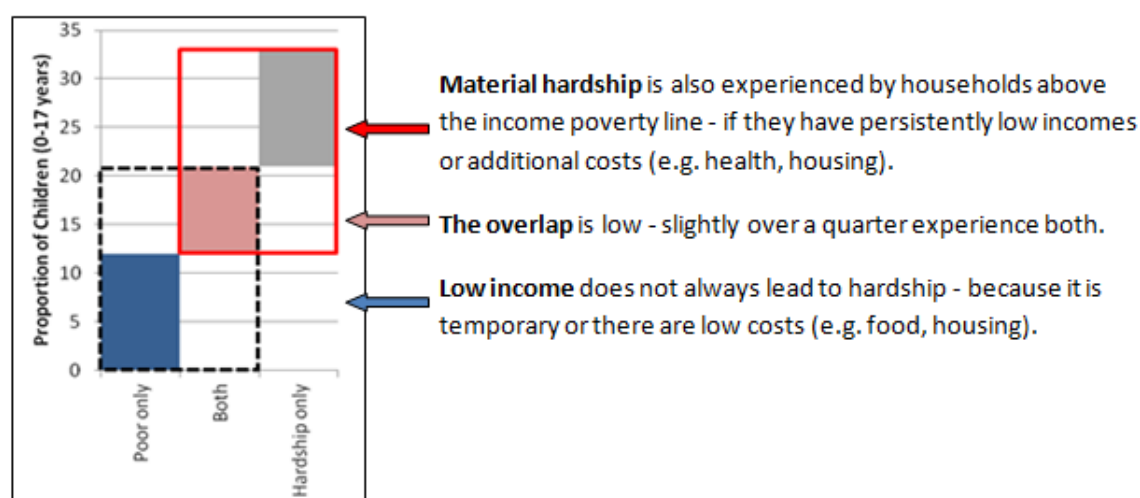
**Figure 11 – Rates of material hardship for children**



Source: Ministry of Social Development 2008 Living Standards Survey

There is a strong correlation between income poverty and material hardship and deprivation. It is much higher in families with children than those of retirement age who are more likely to have asset wealth. However, the relationship is not direct. There are people who are in hardship who are not technically income poor (Figure 12). This may be due to the fact that their income is on the cusp of the poverty cut-off or high levels of outgoings to income. There are also people who are income poor but not in material hardship. This may be households with high asset wealth, low outgoings or receive assistance from other sources such as family members (Quigley and Watts 2015). There are higher rates of households reporting not having enough income to cover their basic needs in households in hardship compared to income poverty only (Perry 2014).

**Figure 12 – Different children experience material hardship to those who experience low income**



Source data: Perry 2014

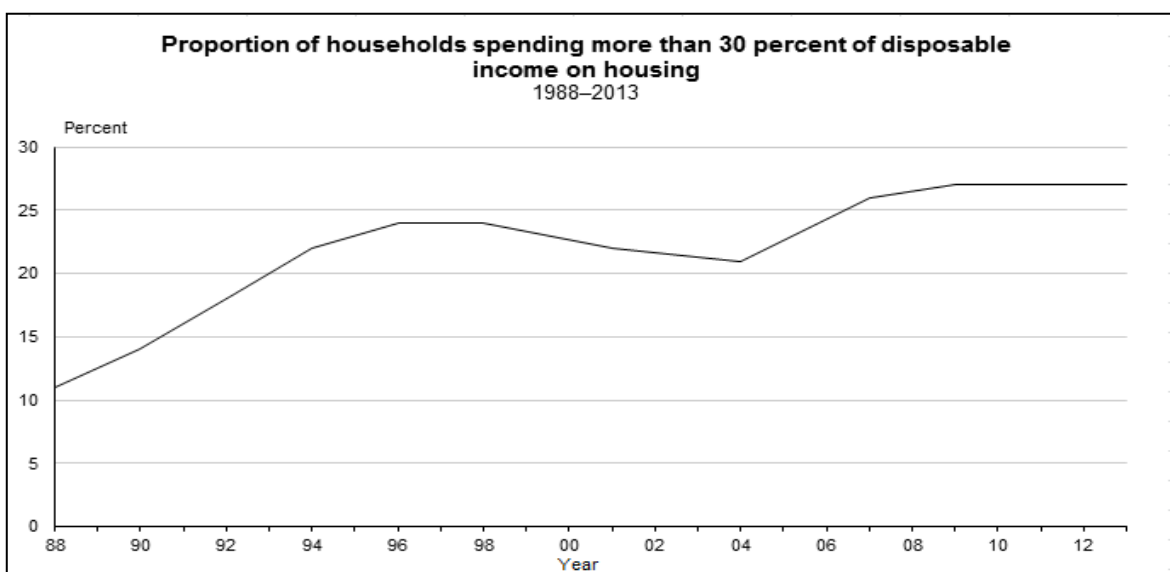
## Housing

Material hardship, deprivation and income poverty can lead to other poor outcomes, such as poor quality housing and household crowding. Housing is “a fundamental determinant of well-being, central to health, family and social cohesion” (Productivity Commission, 2012). In turn, poor quality housing has also been shown to have flow on affects to health and education, particularly for those high risk and vulnerable members of society. Children are particularly vulnerable.

A large proportion of New Zealand homes are under-insulated, damp and cold. Cold and damp homes with mould can cause ill health, such as cough or asthma. New Zealand-based research has shown that improving housing quality improved self-rated health and self-reported wheezing, and reduced days off school and work, visits to general practitioners, and hospital admissions for respiratory conditions. For children with asthma, it significantly reduced their symptoms, days off school and healthcare visits (Howden-Chapman et al 2008, Howden-Chapman et al 2009). There have been a number of government initiatives over the years that have provided free or subsidised insulation to families in need.

Housing affordability is an important contributor to well-being; higher housing costs relative to income are often associated with severe financial difficulty and can mean that households do not have enough to meet their basic needs (Statistics New Zealand, 2013). After paying for housing low-income households can be left with insufficient income to meet other basic needs such as food, clothing, and medical care (Perry, 2014). The proportion of disposable income spent on housing increased substantially during the early 1990's (Figure 13), with a brief decline through 1998 - 2004. This continued to increase during the GFC and has remained steady since. Overall, New Zealand has one of the highest percentages of expenditure of disposable income on housing in the OECD. The proportion of income spent on housing is much higher in low income households, with over one in four households (27%), over 40% in the bottom income quintile, had high housing costs (>30% of OTI: outgoing to income ratio) in 2013 (Perry 2014).

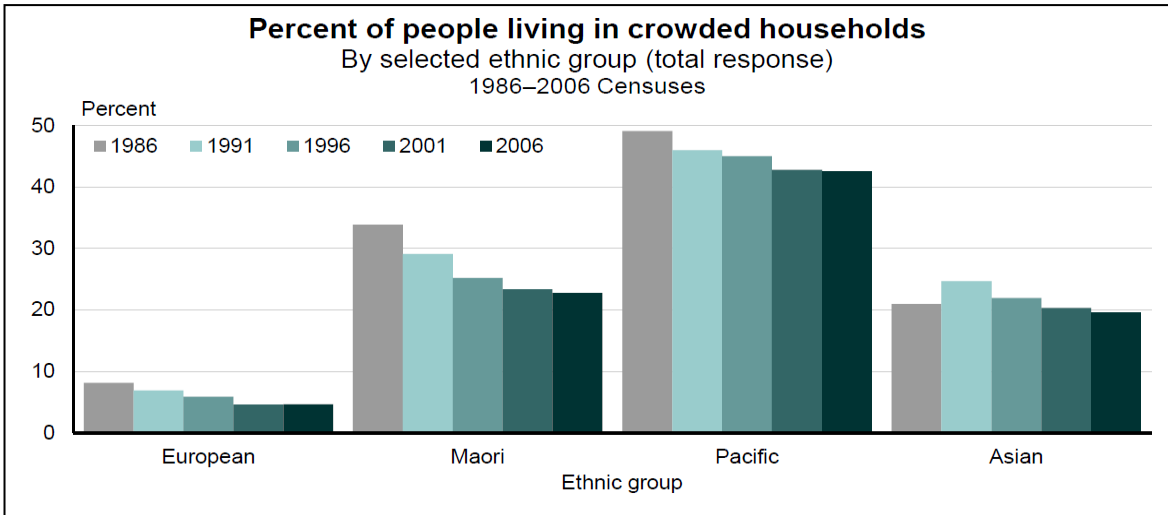
**Figure 13 – Household spending on housing**



Source: Statistics New Zealand. Published by the Ministry of Social Development

Household crowding is measured by the deficit of one or more bedrooms. It is a common issue amongst Māori and Pasifika families, with consistently higher levels than European families (Figure 14). Household crowding is estimated to cause 5% of hospital admissions (for Māori the estimated contribution rises to 17%, and for Pasifika this also rises to 25%) (Baker et al, 2013).

**Figure 14 – People living in crowded households**

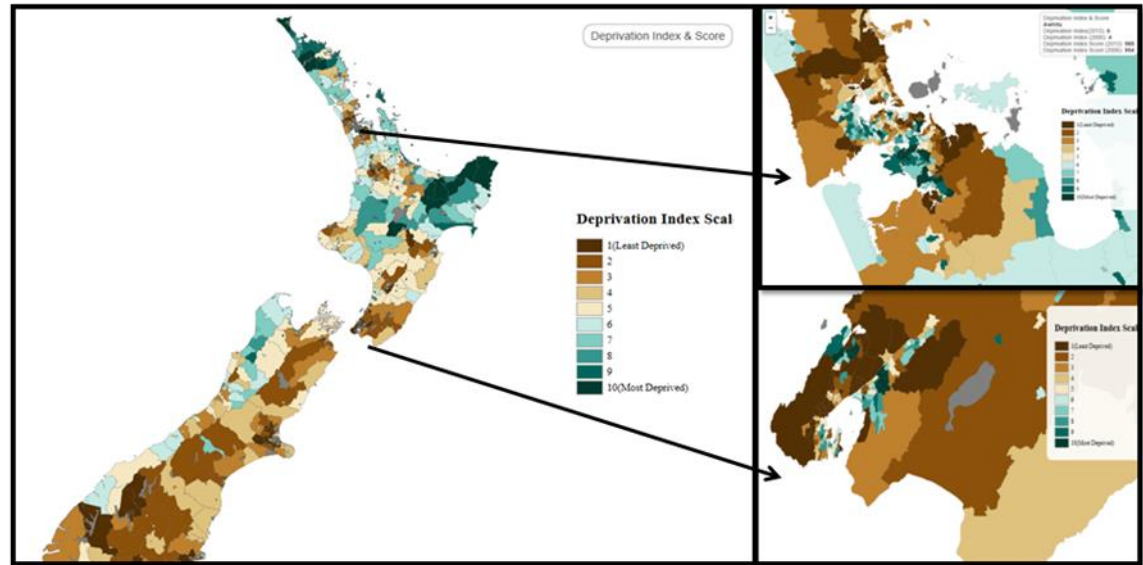


Source: Statistics New Zealand

**Regional Aspects**

There is regional variation in area deprivation in NZ, with this variation occurring within small area units or neighbourhoods (Crampton et al 2014). There is concentration of Māori and Pasifika in living in the most deprived areas; according to the 2006 census, Auckland over 70% of Pasifika live in the most deprived areas (50% in Māori). Area deprivation is strongly correlated with health, education and access to services, with worse outcomes for people living in highly deprived areas.

**Figure 15 – New Zealand area deprivation**



Source: NZ Herald May 13, 2014



#### 4.1.5 Wealth

There is a difference between income and wealth which should be noted; income refers to money received on a regular basis, either through work or investments, whereas wealth is an accumulated measure of all assets owned by a person which may generate income. A person could earn a high regular income, but large debts could make it that he or she actually has a negative wealth. Likewise, a retired person could be earning no (market) income, but have substantial wealth that has been accumulated over the years on which they now live. Having already discussed income, we now focus on wealth and some of the impacts that can result from the rising inequalities.

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 70 compared to 33 for income. There are also disparities in the distribution of wealth by ethnicity and age, with high levels of negative net worth in the younger ages and Māori and Pasifika ethnic groups (Cheung 2007).

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.

In his work, "Capital and the 21<sup>st</sup> Century" (2013), Thomas Piketty discusses inequality in wealth in great detail with regards to capital and labour, establishing general laws in an effort to diagnose and predict the dynamics of inequality. In particular his argument centres round the dangers that will happen if the return of capital ( $r$ ) exceeds the growth in output ( $g$ ), and the effect this will have on society. As capital begins to dominate, those whom control and inherit it will have more economic power, potentially leading to the emergence of a new plutocracy. However, Piketty says this isn't inevitable as he encourages the need for progressive taxation on wealth and incomes, thereby narrowing the gap between  $r$  and  $g$ . This taxation would need to be on a global scale to be effective, or there would need to be a move to stop capital and wealth crossing borders to find tax havens or other measures of avoidance.

There are a number of critics of Piketty's work. Acemoglu and Robinson (2014) suggest Piketty's focus on capital and labour is misguided, and that other factors such as institutional factors and technology as shaped by institutions are the true causes of inequality. McCloskey (2014) points out Piketty's disregard for human capital and its value, as well as how much better off society is through the highly productive economy that is created. A recent book *The Piketty Phenomenon – A New Zealand Perspective* (2014) brings together a number of NZ economist's thoughts on Piketty's work and looks at the relevance of Piketty's work in a New Zealand context and discusses some of the solutions proposed for dealing with rising wealth inequality.

It is important to remember that New Zealand is not the United States where much of Piketty's work maintains its focus. While wealth inequality in the US is at record levels, an annual report released by Credit Suisse (Global Wealth Report, 2014) suggests that

inequality in wealth in New Zealand has been fairly stable over the past decade, and has decreased overall for the period 2000-2014 (Table 1).

**Table 1 – Trends in wealth share of the top decile by country, 2000-2014**

Country	Share of top decile (%)			Change in share of top decile		
	2000	2007	2014	2000-2007	2007-2014	2000-2014
China	48.6	56.1	64.0	rapid rise	rapid rise	rapid rise
United Kingdom	51.5	52.0	54.1	flat	rise	rise
Australia	51.1	50.7	51.1	flat	flat	flat
United States	74.6	74.8	74.6	flat	flat	flat
Switzerland	73.4	72.0	71.9	slight fall	flat	slight fall
Denmark	68.9	62.6	67.5	rapid fall	rapid rise	slight fall
Germany	63.9	61.7	61.7	fall	flat	slight fall
Japan	51.0	49.4	48.5	fall	slight fall	slight fall
Canada	61.5	58.0	57.0	fall	slight fall	fall
New Zealand	62.3	61.2	57.0	slight fall	rapid fall	fall

Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook, 2014

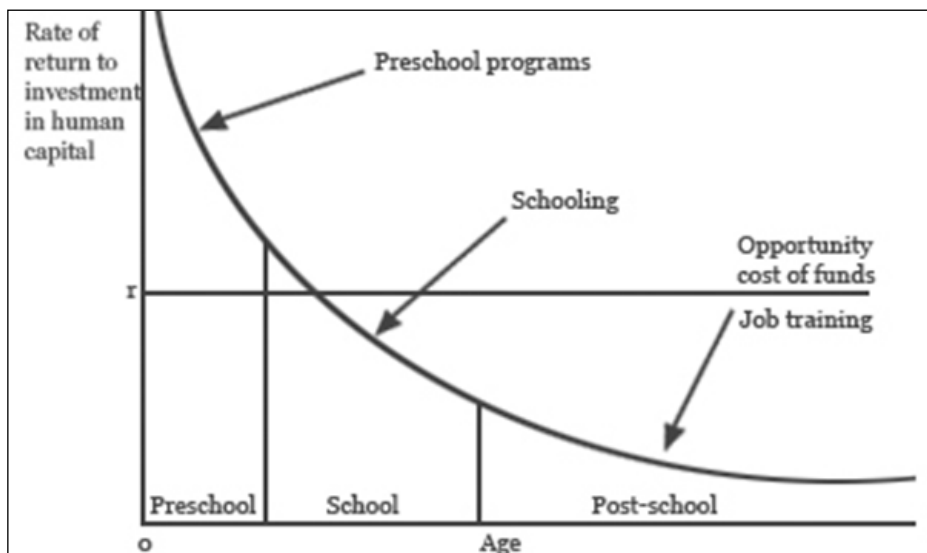
#### 4.1.6 Education

##### Defining equity in education

According to the OECD (2008), there are two main dimensions when looking at equity within an educational perspective; fairness and inclusion. Fairness states that neither your personal or social circumstances should be an obstacle to achieving your potential through education, while inclusion is about ensuring a basic minimum standard of education for all. The OECD also defines equity in education as “providing all students, regardless of gender, family background or socio-economic status, with similar opportunities to benefit from education” (OECD, 2013). In New Zealand educational equity is the belief that the social and economic circumstances that a child is born into should not play a role in determining their educational outcomes (vertical equity). This can be achieved through equal opportunity to access facilities, teachers etc—and that expenditures were the same per student, regardless of ethnic or socio-economic background. However, this may not necessarily achieve educational equity as more resources may need to go to children who need them more.

Economist James Heckman (2008) has emphasised the importance of investing early in a child’s life, from birth, to get the greatest economic returns to human capital (Figure 16). He argues that education is of major concern to society because many major economic and social problems such as crime, teenage pregnancy, dropping out of high school, and adverse health conditions are linked to low levels of skill and ability in society.

**Figure 16 – Rates of return to investment in human capital**



Source: Heckman, 2008

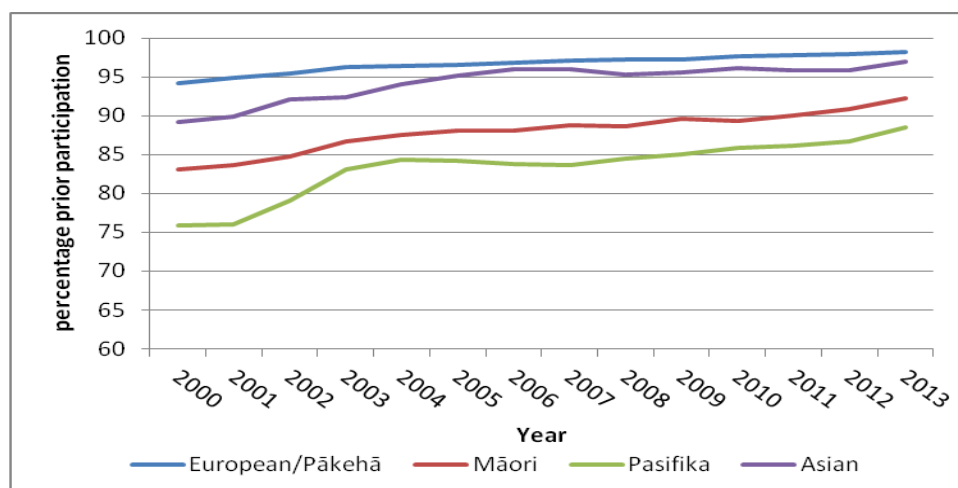
Education also has strong ties with other outcome areas such as housing and health. Poor housing conditions and poor health can have adverse effects on the ability of children to learn. Individuals with higher levels of education tend to have higher incomes, a lower risk of unemployment, and do better on a range of health and other outcomes.

## Early childhood education

Child development in the early years is shown to have a large impact on later achievement, and the return on investment in human capital is greater the earlier the investment happens (Figure 16; Heckman 2008). Schools that have higher rates of students who had attended early childhood education (ECE) for more than one year tend to show better average performance on mathematics and reading scores (OECD, 2014).

It is argued that ECE can have large equity impacts, because the returns on ECE spending for low-SES (socio-economic status) students are higher than for high-SES students. The trend in ECE participation rates in New Zealand have increased with currently over 95% of children having participated in ECE at some level before attending school (Education Counts, 2014). Also the gaps in ECE participation between ethnic groups have narrowed significantly over the past decade. However, gaps still remain with over 90% of Māori participating in ECE, on average, and 89% of Pasifika children (Figure 17). There are also large regional disparities (Northland, South Auckland) as well as by school decile, which are likely to be related to the socioeconomic structure of the populations.

**Figure 17 – Trends in ECE participation prior to primary school by ethnicity**



Source: Education Counts.

School readiness is defined as a child who is ready for school who has the basic minimum skills and knowledge in a variety of domains that will enable that child to be successful in school (UNICEF, 2012). This is a product of the interaction between the child and the range of environmental and cultural experiences, particularly through schools and families, which maximize the development outcomes for children. This has been shown to be powerful for improving equity in access to education and in learning outcomes, especially for marginalized children. Research has also shown that school readiness is also linked to such other outcomes across the life course such as learning, school completion, later skill development and success both academically and in a non-academic sense (UNICEF, 2012).

## School

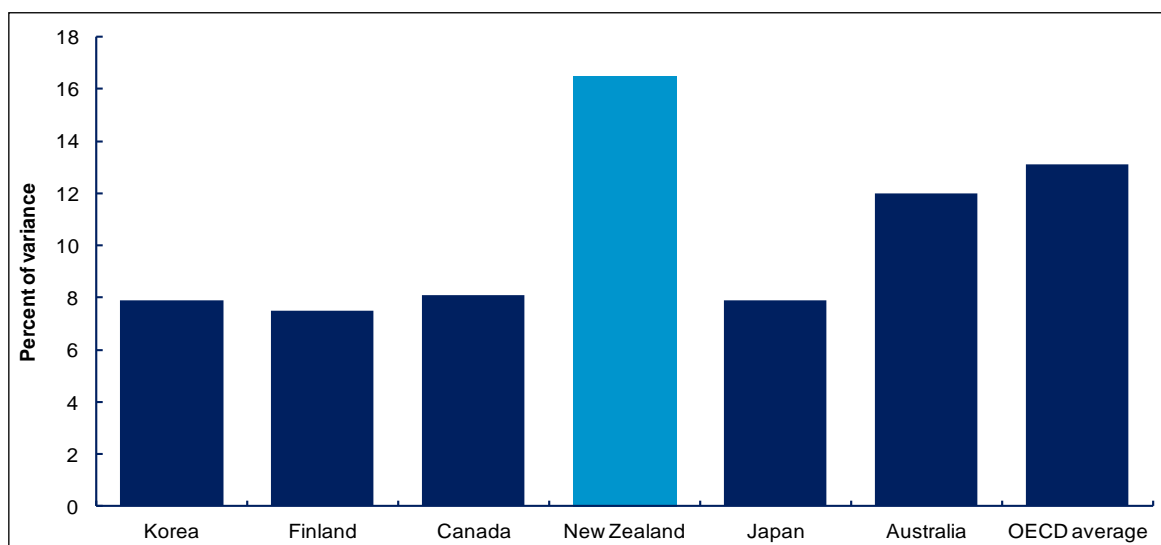
New Zealand's education system can be classified as high performing, but it scores poorly in terms of equity. It is amongst the group of countries whose students on average perform better than the OECD average; and yet by multiple measures this success does not permeate to all New Zealand students. In terms of the gap in performance between the highest-performing and lowest-performing students, New Zealand ranked worst of all OECD countries in the 2012 Programme for International Student Assessment (PISA) study (OECD, 2013). In addition, educational outcomes between ethnic groups vary significantly, with Māori and Pasifika students under-performing against the average in national assessment.

The average New Zealand PISA results are among the OECD's highest, but the dispersion of performance is also high, indicating a sizable group of underachievers. Those in disadvantaged groups tend to have poor scholastic outcomes. These initial educational handicaps show up in higher drop-out rates and youth joblessness, greatly limiting these youths' future life chances (OECD 2013 NZ report). PISA shows that socioeconomic status<sup>5</sup> exerts a strong influence on student achievement in New Zealand; it explains a high proportion of variance in student performance; and, furthermore, there is a large difference in PISA score associated with a change in socioeconomic status

<sup>5</sup> The PISA index of economic, social and cultural status takes into account factors from parents' occupational status to the number of books and artworks in their home.

(Figure 18). New Zealand performs worse than the OECD average on two measures of equity both between and within schools.

**Figure 18 – Variance in student reading explained by socio-economic status**

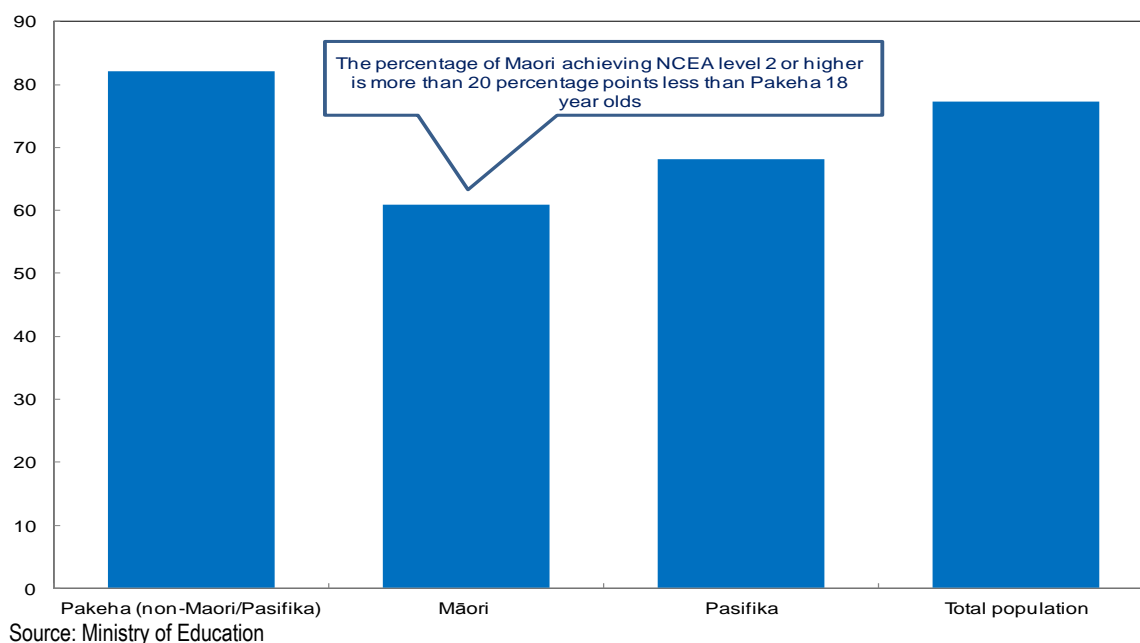


Source: PISA 2012 results volume II OECD

In New Zealand, the average mathematics score for low socioeconomic status students was substantially below both the New Zealand and OECD averages for all students (May et al, 2013). In addition, although New Zealand PISA scores declined across-the-board since PISA 2003, the decline was greater for those students from low socioeconomic backgrounds as well as for Māori and Pasifika students. New Zealand also a lower proportion (5%) of resilient students, i.e. those who “overcome difficult socio-economic circumstances and succeed in school” compared to other countries (15%) (OECD, 2013). It may be that New Zealand has a more heterogeneous student population at each school, with more variation in student performance and socioeconomic status within schools compared to other countries.

To the extent that equity is a goal of compulsory schooling, the proportion of New Zealanders achieving a baseline of NCEA Level 2 is one measure of New Zealand's progress in achieving educational equity. The Ministry of Education's current target (Better Public Services, target 5) is to have 85% of 18-year-olds achieving NCEA level 2 or an equivalent qualification by 2017. There has been a seven percentage point increase from 2009 to 2013 (Education Counts 2014). On average less than 80% of 18 year olds had a minimum NCEA Level 2 and that there are stark ethnic disparities in achievement rates. Māori were more than 20 percentage points less likely than Pakeha to leave school with an NCEA level 2 qualification or above.

**Figure 19 – Percentage of 18 year olds with NCEA Level 2 or higher**



## Tertiary

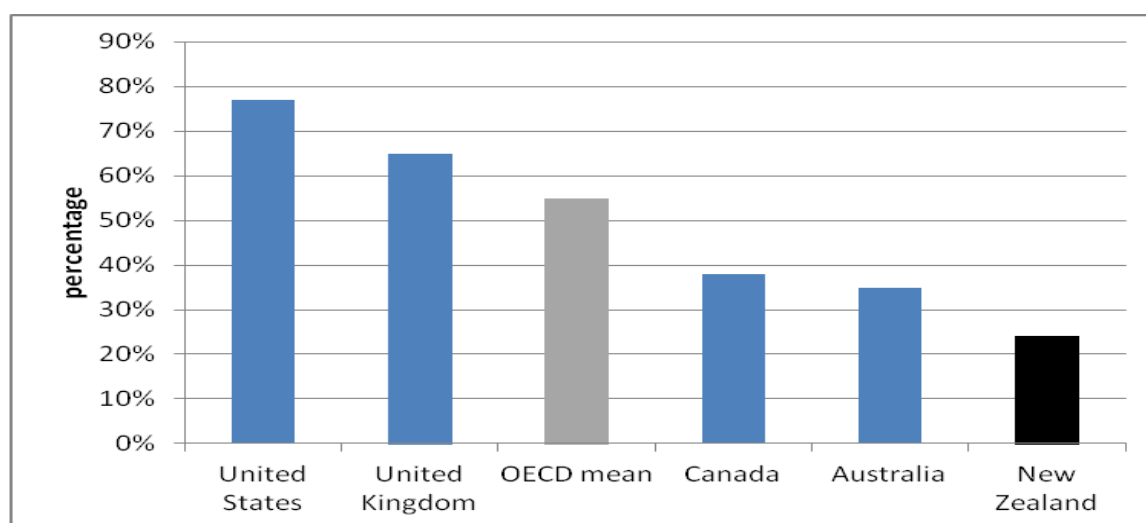
New Zealand is a highly educated nation. Tertiary attainment rates among the adult working-age population are fifth highest in the OECD, just after the United States, and have increased through time, as successive cohorts participate at higher rates. However, this progression has been slower than in the OECD on average, as the tertiary attainment gap between the youngest (aged 25-34) and second youngest cohorts (aged 35-44) for women is only about half as large as in the average OECD country (OECD 2013).

In 2011, New Zealanders with a tertiary type-A qualification (equivalent to bachelor's degree or higher) earned on average, 29% more than those with only upper secondary or post-secondary non-tertiary qualifications. In 2011, the average median hourly wage for those with tertiary degrees was \$27.81, approximately 1.6 times higher than those with high school qualifications only. The median hourly earnings for Māori and Pasifika aged 25 to 34 with tertiary qualifications were lower than for Europeans in the same age group.

There are differences between male and female participation and earnings in the labour market post-study (Mahoney 2011). Even after controlling for participation in the labour market, men earn more than women after their tertiary education. However, women have a better return to tertiary education than men when measured by earnings premium over the national median earnings by gender but this may be in part due to the low overall baseline wages of women compared to men.

Recent New Zealand data (Figure 20) has shown that average earnings were 24% higher for New Zealand 25 to 64 year olds in paid employment with a tertiary qualification in comparison to those whose highest qualification level was upper secondary or post-secondary non-tertiary. This difference in average earnings is lower than the average for OECD countries (55%) (Education Counts, 2013).

**Figure 20 – Earnings premium for attaining a tertiary qualification compared with upper secondary and post-secondary non-tertiary education, ages 25-64 (2010)**



Source: Education Counts, 2013

#### 4.1.7 Employment

##### Defining equity in employment

Work is one of the key avenues through which a person can access opportunities for personal improvement and the development of human capital. This can be achieved formally through the employer providing training on the job, or informally through the development and transfer of skills, including inter-personal skills between workers. 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.

The impact of being unemployed can have a large effect on subjective well-being and mental health, similar to experiencing 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 the family (Helliwell, 2014).

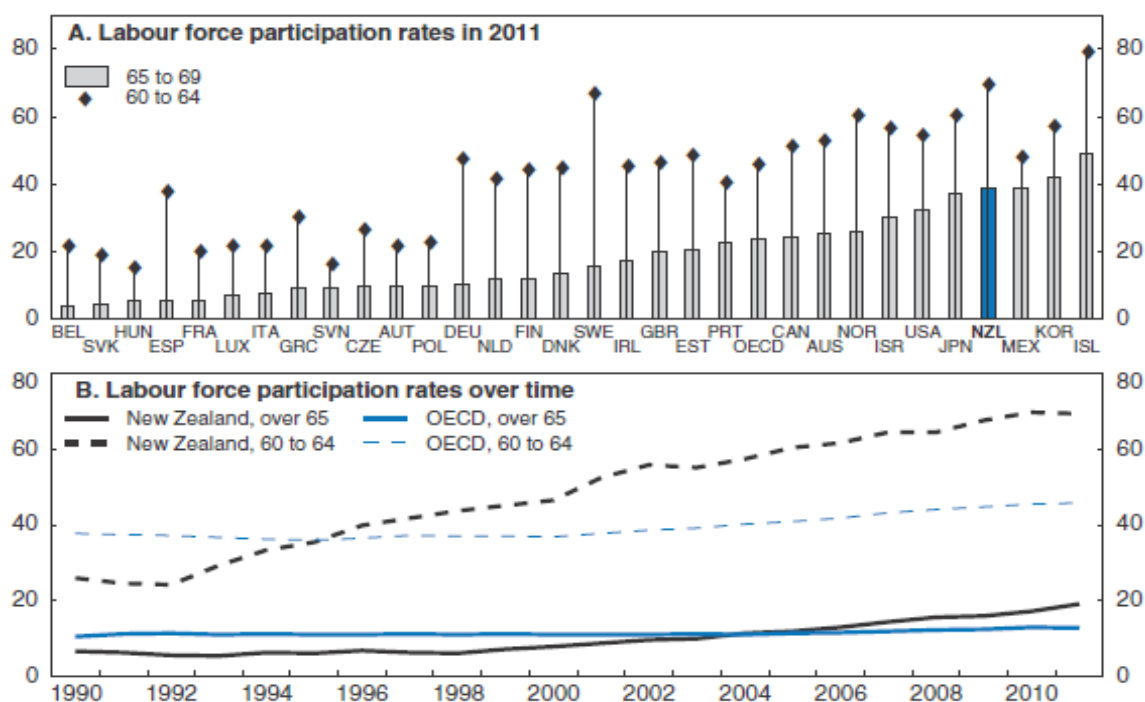
##### Labour force participation

Since 2000, New Zealand has consistently maintained a labour force participation rate above the OECD average, with the most recent data from 2015 at 69.6% for New Zealand (Statistics New Zealand 2015). The unemployment rate for New Zealand (around 6%) has also remained significantly lower than the OECD average throughout this period.

Labour force participation rates for seniors (Figure 21) has also been steadily increasing since 1990 for over 65's, which is slightly higher than the OECD average. There has been a much sharper increase for the 60-64 age group which is now substantially higher than the OECD average. During this period there has also been an extension of life expectancy of 4-5 years which has likely had some impact on this increase. Other notable changes that are likely to have influenced this change include an increase in the age of public-pension eligibility (from 60 to 65 years, between 1992 and 2001) and the introduction of alternate superannuation schemes and increased educational qualifications (OECD, 2013).



**Figure 21 – OECD Labour Force participation rates of older workers**

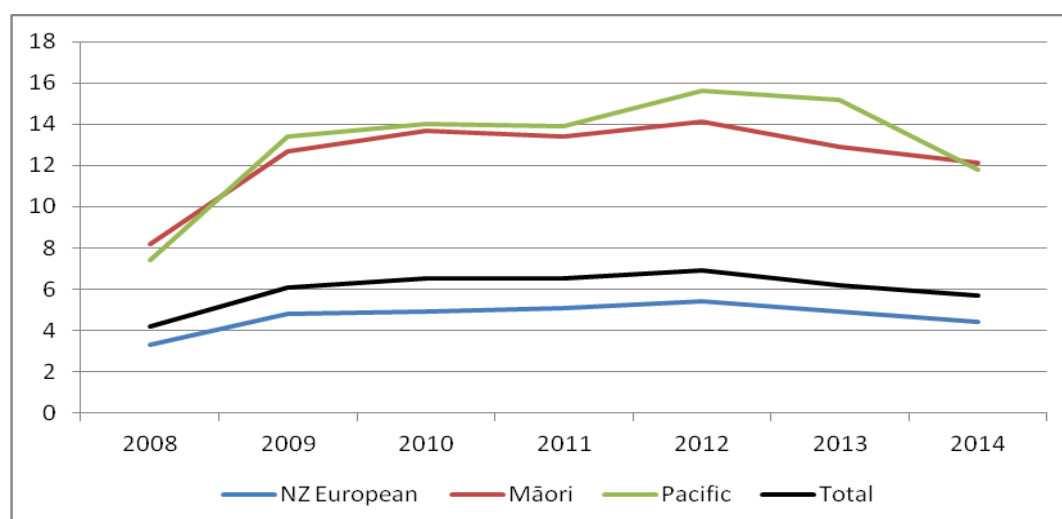


Source: OECD, 2013

## Unemployment

There were large increases in the rate of unemployment in youth and working age Māori and Pasifika populations during the Global Financial Crisis (2008-2009); since this time they have not returned to pre-2008 levels (Statistics New Zealand, 2012).

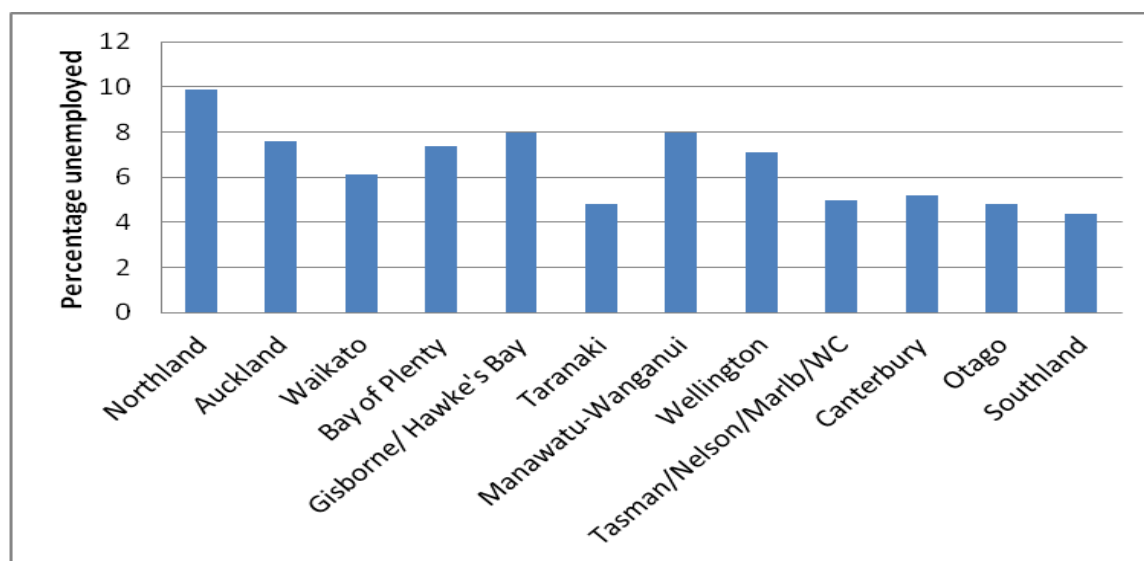
**Figure 22 – New Zealand percentage unemployment by ethnicity**



Source: Statistics New Zealand, 2015. Social Indicators.

Unemployment rates in New Zealand also vary by region (Figure 23), with the highest rates occurring in Northland and Gisborne/Hawke's Bay. This corresponds with Figure 15 (above), showing these areas also to be experiencing some of the highest levels of deprivation by area in New Zealand.

**Figure 23 – New Zealand unemployment rate by region**

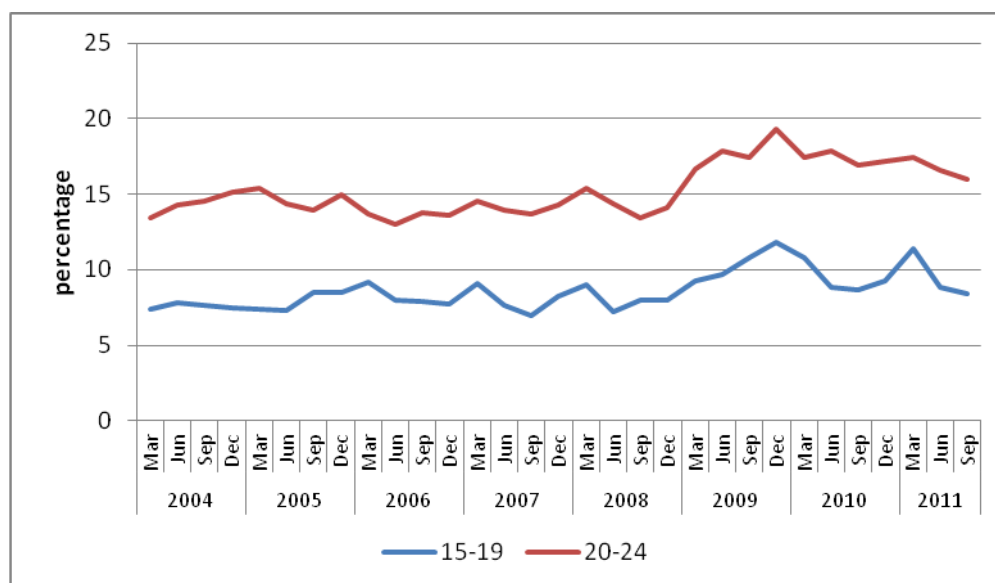


Source: HLFS, Statistics New Zealand; Ministry of Social Development 2013

### **Not in Employment, Education or Training (NEET)**

NEET refers to the number of youth that are not engaged in education, employment or training, and youth who are not engaged in one of these activities are more at risk of poor labour market outcomes (Statistics New Zealand, 2011; Ministry of Business, Innovation and Employment, 2013). About a third of NEETs are not in the labour force but caregiving, a third are unemployed and the remaining third are not in the labour force and not caregiving (Statistics New Zealand, 2011). NEET rates are higher in youth aged 20 to 24 years (Figure 24). There are a number of characteristics associated with the likelihood of becoming a NEET in the long-term, such as living in the most deprived neighbourhoods, living in a rental property and living with a single or a non-working parent. Māori and Pasifika youth were also more likely to experience a long-term spell of NEET than New Zealand Europeans. Moreover, leaving school without completing any qualifications or with a NCEA level 1 equivalent qualification only and becoming a parent between the ages of 16 and 18 were also strongly associated with substantially higher likelihood of being a long-term NEET (Samoilenko and Carter, 2015). Youth who experienced a long term spell of NEET are less likely (than non-NEETs) to be employed, are more likely to be inactive and/or receiving a benefit after two to four years.

**Figure 24 – New Zealand youth NEET rate**



Source: Household Labour Force Survey, Statistics New Zealand

#### 4.1.8 Health

##### Defining equity in health

“The term inequity has a moral and ethical dimension. It refers to differences which are unnecessary and avoidable but, in addition, are also considered unfair and unjust. So, in order to describe a certain situation as inequitable, the cause has to be examined and judged to be unfair in the context of what is going on in the rest of society” - (Whitehead, 2000).

There are four types of health inequities (Whitehead, 1992):

- Health damaging behaviour where the choice of lifestyles is severely limited
- Exposure to unhealthy, stressful living and working conditions
- Inadequate access to essential health and other public services
- Natural selection of health-related social mobility, involving the tendency for sick people to move down the social scale.

Health inequities are *avoidable* inequalities in health between groups of people within countries and between countries. These inequities arise from inequalities within and between societies. Social and economic conditions and their effects on people’s lives determine their risk of illness and the actions taken to prevent them becoming ill or treat illness when it occurs. The health system of a nation is important and has a significant impact on the lives of its citizens; without access to affordable healthcare, long-term persistent health problems can reduce well-being, life satisfaction and result in negative impacts economic and social participation (Holt, 2010).

## Social determinants of health

'Health and wellbeing are influenced by many factors including past and present behaviour, healthcare provision and "wider determinants", including social, cultural and environmental factors' (Wanless, 2004).

The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries (CSDH, 2008). Whether measured by self-reported health, the burden of diabetes, mental illness and other chronic conditions, or life expectancy, there is a consistent gradient in which people with higher income, more education, living in better housing and more advantaged socio-economic conditions have better health than those lower down the scale.

## New Zealand health facts

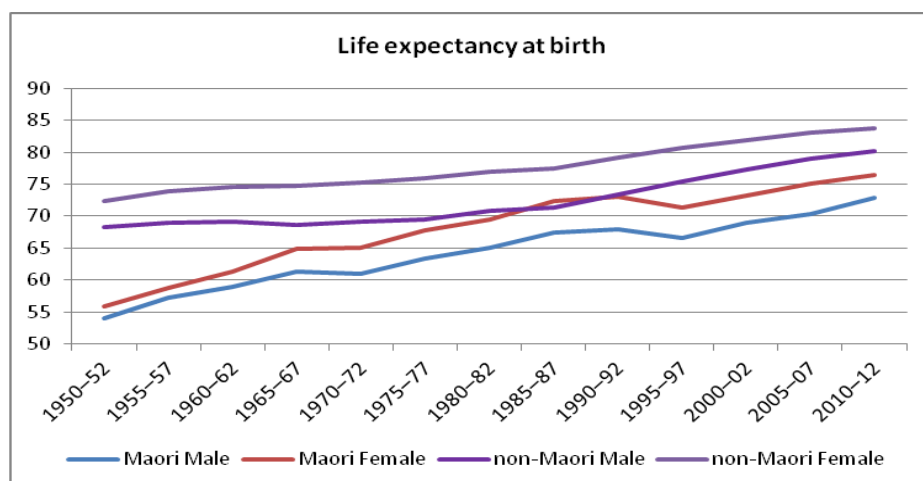
- Self-rated health – New Zealanders tend to rate their health highly, with over 90% report being in good health or better. This is much higher than most other OECD countries (OECD, 2013).
- Obesity - High rates of overweight/obesity in children and/or adults compared to other OECD countries (3<sup>rd</sup> highest ~34% Children, 28% adults).
- Smoking - New Zealand has lower rates of smoking with large declines over time when compared to other OECD countries. However there are large disparities between ethnic and socioeconomic groups, with persistently high rates in Māori women.
- Suicide - New Zealand has one of the highest youth suicide rates in the developed world.
- Diabetes - Diabetes shortens lives, as well as generates health problems. It is a risk factor for later health conditions such as stroke and heart disease. In New Zealand the trends has been increasing, with particularly high prevalence in Māori and Pasifika populations, which may in part be related to obesity rates.
- Mental Health - The rates of diagnosed mental illness have been rising over time.

## Life expectancy and mortality

Life expectancy is higher in New Zealand than for the OECD on average, and ethnic differences, between Māori and non-Māori increased from 1981 to 1991 and then stabilised, but the gap still remains at 9 years (Figure 25). There are also disparities in life expectancy between the low and high income groups. However, these disparities between income groups are greater in Māori compared to non-Māori. These trends in life expectancy are related to changes in mortality rates over time (Figure 26; Blakely, et al 2008).

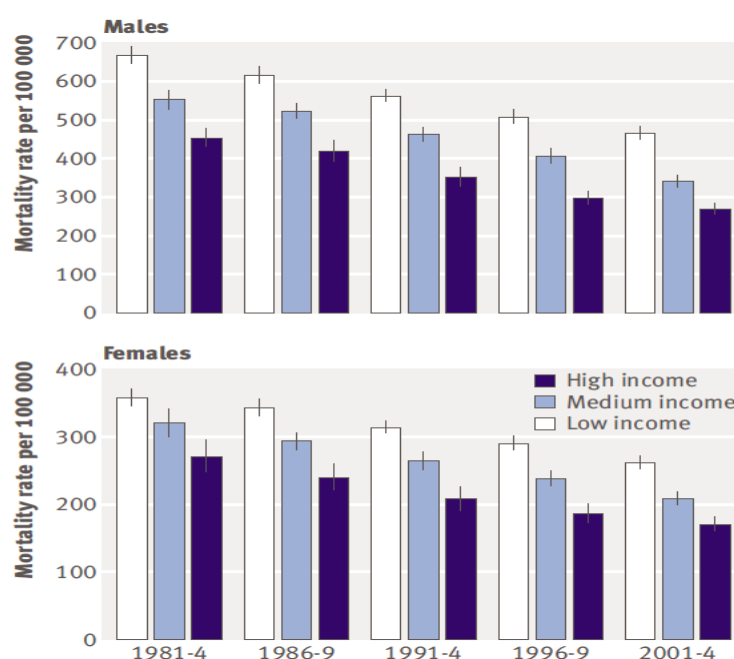
Māori have much higher rates of avoidable mortality (death younger than 75 years old that could have been avoided through population-based interventions or through preventive and curative interventions) and amenable mortality (deaths from conditions that are amenable to health care) rates than non-Māori (Ministry of Health, 2010).

**Figure 25 – Trends in life expectancy at birth**



Source: Statistics New Zealand, 2014

**Figure 26 – All cause mortality rates (per 100,000) by three income groups by period for all ages (1-74 years) combined**

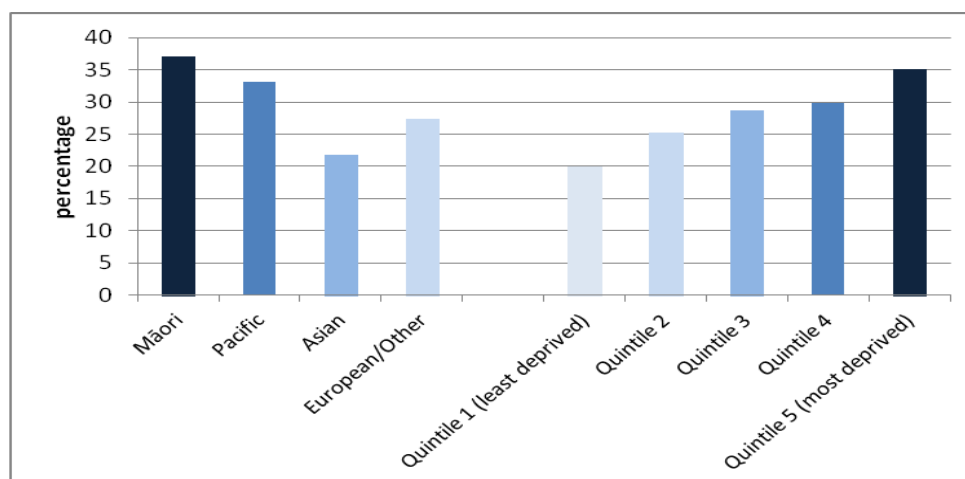


Source: Blakely (2008); New Zealand Census-Mortality Study

## Access to healthcare

Access to healthcare is a good indicator of whether the health system is working for certain populations. One in four adults and one in five children had unmet health needs in the previous 12 months, due to a number of factors such as cost or not having transport in which to get to an appointment (Ministry of Health 2014). This unmet need is more strongly felt in the more deprived areas and by Māori and Pasifika populations (Figure 27). There is also a strong positive association between living in a highly deprived neighbourhood and not being able to pay for a prescription. However, there are low rates of unmet need for GP visits and after-hours services due to cost among children aged less than 6 years.

**Figure 27 – Unmet need for primary health care in the past 12 months in adults**



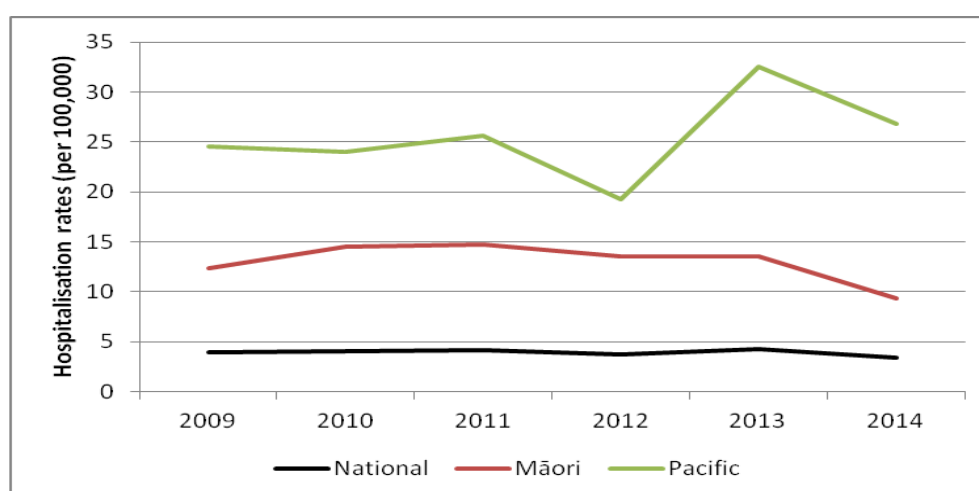
Source: Ministry of Health, NZ Health Survey 2013/14

Ambulatory sensitive hospitalisation rates are defined as hospital admissions that are considered to be potentially avoidable through prior interventions, namely primary health care such as GP visits. This varies across both ethnic and socioeconomic groups with much higher rates in Māori and Pasifika populations (Ministry of Health, 2010). The trends rates have declined for most groups, but have been stable for Pasifika.

## Children

Children growing up in low income households face multiple health risks. There is well documented evidence on the association of childhood poverty and deprivation with health outcomes across the life-course (Expert Advisory Group on Solutions to Child Poverty, 2012). Some of the negative health outcomes statistically associated with childhood poverty include: low birth weight; infant mortality and Sudden Unexpected Death in Infancy; poorer mental health and cognitive development; and higher rates of hospital admissions for infectious and respiratory diseases, such as skin infections and rheumatic fever (Simpson et al 2014). These diseases also more often affect Māori and Pasifika children (Figure 28) and children living in highly deprived areas and are strongly related to housing conditions and overcrowding.

**Figure 28 – Hospitalisation for first episode of rheumatic fever, rate per 100,000**



Source: Ministry of Health, National Minimum Dataset

## 5 Conclusion

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One of the Treasury's key objectives is working towards higher living standards for all New Zealanders. The Living Standards Framework provides a structure for thinking about how policy impacts the living standards and well-being of New Zealanders across the four capitals and five core domains. Increasing equity should play a substantial role in providing guidance when thinking of how we can apply the entire Living Standards Framework to forming policy advice.

There are many approaches that can be taken when thinking about equity and how it can be applied to policy advice, perhaps too many to be covered in one paper alone. It is not the intention of this paper to answer all of the questions and debate surrounding equity. Instead, we seek to present a range of viewpoints and outcomes that go into the Treasury's thinking, as a way of encouraging discussion around a sensitive subject which has proven to be difficult to define. This paper provides more detail of what could be used to measure equity, equality of outcome or opportunities in New Zealand but is by no means an exhaustive list.

International and national discussions around equity and inequality are constantly evolving over time. This background paper provides the reader with point in time information, but provides links to key documents and websites that provide more up-to-date information.



## 6 References

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- Alvaredo, Facundo, Atkinson, Anthony B., Piketty, Thomas and Saez, Emmanuel (2015) The World Top Incomes Database, <http://topincomes.gmond.parisschoolofeconomics.eu/>, Accessed 15/01/2015.
- Atkinson, Anthony B. and Leigh, Andrew (2007). The Distribution of Top Incomes in New Zealand; in Atkinson, A. B. and Piketty, T. (editors) Top Incomes over the Twentieth Century. A Contrast Between Continental European and English-Speaking Countries, Oxford University Press.
- Atkinson, J., Salmond, C., Crampton, P. (2014) NZDep2013 Index of Deprivation. Department of Public Health, University of Otago, Wellington. <http://www.otago.ac.nz/wellington/departments/publichealth/research/hirp/otago020194.html>
- 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.
- Ball, C., and Creedy, J. (2105) Inequality in New Zealand 1983/84 to 2013/14. Treasury Working Paper 15/06. <http://www.treasury.govt.nz/publications/research-policy/wp/2015/15-06/twp15-06.pdf>
- Baker, M., McDonald, A., Zhang, J., Howden-Chapman., P. (2013) Infectious Diseases Attributable to Household Crowding in New Zealand: A Systematic Review and Burden of Disease Estimate. He Kainga Oranga/Housing and Health Research Programme, University of Otago. <http://www.healthyhousing.org.nz/publications/>
- Bennett, P. (2013, April 23). Welfare reforms working for young people. Available from <http://www.beehive.govt.nz/release/welfare-reforms-working-young-people>
- Bertram, G. (2014) ‘Has Capital in the Twenty-first Century changed anything?’, in The Piketty Phenomenon: New Zealand perspectives, Wellington: Bridget Williams Books
- Bertram, G. (2015) A New Zealand Perspective on Thomas Piketty’s Capital in the Twenty-first Century. *Policy Quarterly*, 11(1): 39-46.
- Blakely, T, Simmers, D, Sharpe, N (2011) Inequities in health and the Marmot symposia: time for a stocktake. New Zealand Medical Journal, Vol 124 No 1338; ISSN 1175 8716 URL: <http://www.nzma.org.nz/journal/124-1338/4754/>
- Blakely, T, Tobias, M and Atkinson, J (2008) Inequalities in mortality during and after restructuring of the New Zealand economy: repeated cohort studies. *British Medical Journal* 336(7640): 371–375; doi:10.1136/bmj.39455.596181.25
- Carter K, Blakely T, Soeberg M (2010) Trends in survival and life expectancy by ethnicity, income and smoking in New Zealand: 1980s to 2000s. New Zealand Medical Journal Vol 123 No 1320; ISSN 1175 8716 URL: <http://www.nzma.org.nz/journal/123-1320/4263/>

- Carter, K. and Imlach 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](http://www.otago.ac.nz/wellington/otago032196.pdf)
- Carter, K., Mok, P., Le, T. (2014) Income Mobility in New Zealand: A Descriptive Analysis. Treasury Working Paper 14/15. <http://www.treasury.govt.nz/publications/research-policy/wp/2014/14-15>
- Chapman, R., Howden-Chapman, P., Viggers, H., O'Dea, D., Kennedy, M. (2009). Retrofitting houses with insulation: a cost–benefit analysis of a randomised community trial, *Journal of epidemiology and community health*, 63 (4), 271-277. Stable URL: <http://www.jstor.org/stable/20720939>.
- Chapple, S, Hogan, S, Milne, B, Poulton, R, Ramrakha, S. (2015) Wealth Inequality Among New Zealand's Generation X. *Policy Quarterly* 11(1): 73-38.
- Cheung, J. (2007) Wealth disparities in New Zealand. Statistics New Zealand: Wellington.
- Corak, M. (2012) "Inequality from generation to generation: the United States in Comparison" <http://milesorak.files.wordpress.com/2012/01/inequality-from-generation-to-generation-the-united-states-in-comparison-v3.pdf>
- Corak, Miles (2013) Income Inequality, Equality of Opportunity, and Intergenerational Mobility. *Journal of Economic Perspectives*, Volume 27, Number 3, August 2013, 79-102.
- Credit Suisse (Oct, 2014). Global Wealth Report 2014. Available from <https://www.credit-suisse.com/upload/news-live/000000022801.pdf>
- Creedy, J. (2013). *Alternative Distributions for Inequality and Poverty Comparisons*. New Zealand Treasury Working Paper 13/11.
- Commission on the Social Determinants of Health (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health. Geneva: World Health Organization.
- 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
- De Maio, FG. (2007) Income inequality measures. *Journal of Epidemiology & Community Health*. 61(10): 849–852. doi: 10.1136/jech.2006.052969
- Easton, B. (2013) Economic inequality in New Zealand: A users guide. *The New Zealand Journal of Sociology* , Vol 28, Issue 3, 2013, pages 9-66.
- Easton, B. (2014, October 28). Does Piketty matter? Available from <http://pundit.co.nz/content/does-piketty-matter>
- Easton, B. (2015) Distribution of Pre-Tax Top Personal Incomes. *Policy Quarterly*, 11(1): 47-51.
- Easton, B. (2015) Top After Tax Incomes. *Policy Quarterly*, 11(1): 52-55.

- Education Counts (2013). *Impacts of education on income*. Retrieved from <http://www.educationcounts.govt.nz/indicators/main/education-and-learning-outcomes/1919>
- Education Counts (2014). Participation in early childhood education. Retrieved from <http://www.educationcounts.govt.nz/indicators/main/student-engagement-participation/1923>
- Education Counts (2014). 18-year-olds with a minimum of NCEA Level 2 or equivalent. Retrieved from <http://www.educationcounts.govt.nz/indicators/main/education-and-learning-outcomes/114325>
- Expert Advisory Group on Solutions to Child Poverty (2012). *Solutions to Child Poverty in New Zealand*. Available from [http://www.occ.org.nz/publications/reports/SearchForm?Search=solutions+to+child+poverty&action\\_results](http://www.occ.org.nz/publications/reports/SearchForm?Search=solutions+to+child+poverty&action_results)
- Expert Advisory Group on Solutions to Child Poverty. (2012). Working Paper no 2: Lifecourse Effects on Child Poverty. Wellington: Office of the Children's Commissioner <http://www.occ.org.nz/publications/expert-advisory-group/?category=12>
- Fletcher, M & Dwyer, M. (2008). A fair go for all children – actions to address child poverty in New Zealand. Available from [www.occ.org.nz/assets/Uploads/.../Poverty/A-fair-go-for-all-children.pdf](http://www.occ.org.nz/assets/Uploads/.../Poverty/A-fair-go-for-all-children.pdf)
- Gendall, P, & Murray, N. (2010) Social inequality in New Zealand. International Social Survey Programme. Department of Communication, Journalism & Marketing, Massey University, Palmerston North.
- Gibbons, M. (2010) *Income and Occupational Intergenerational Mobility in New Zealand*. New Zealand Treasury Working Paper 10/06. <http://www.treasury.govt.nz/publications/research-policy/wp/2010/10-06/twp10-06.pdf>
- Hackett Fischer, D. (2012). *Fairness and Freedom: a history of two open societies*. New York: Oxford University Press.
- Harding, A., R. Lloyd and N. Warren (2006) 'The Distribution of Taxes and Government Benefits in Australia', in D.B. Papadimitriou (ed.), *The Distributional Effects of Government Spending and Taxation*, Basingstoke: MacMillan.
- Heckman, James J. (2008). Schools, Skills and Synapses. *Economic Inquiry*, 46(3): 289-324
- Helliwell J.F. & Huang, H. (2014). New Measures Of The Costs Of Unemployment: Evidence From The Subjective Well-Being Of 3.3 Million Americans. *Economic Inquiry*, Western Economic Association International, vol. 52(4): 1485-1502.
- Howden-Chapman, P., Pierse, N., Nicholls, S., et al (2008) Effects of improved home heating on asthma in community dwelling children: randomised controlled trial. *British Medical Journal*, 2008: 337:a1411. <http://www.bmj.com/content/337/bmj.a1411>.
- Hulme, Moore and Shepherd, (2001). Chronic poverty: meanings and analytical frameworks. Available from [www.odi.org/resources/docs/5102.pdf](http://www.odi.org/resources/docs/5102.pdf)

- Jones, H. (2009). *Equity in Development – why it is important and how to achieve it*. Working Paper 311. Overseas Development Institute. Available from [www.odi.org/resources/docs/4577.pdf](http://www.odi.org/resources/docs/4577.pdf)
- 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](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, 93-118, DOI: 10.1080/00779954.2011.641935
- Mahoney, P. (2011). *What do women and men earn after their tertiary education?* Wellington: Ministry of Education.
- 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>
- Ministry of Business, Innovation and Employment. (2013) NEET spells of young people in New Zealand. Ministry of Business, Innovation and Employment. <http://www.dol.govt.nz/publication-view.asp?ID=458>
- Ministry of Health. (2010). *Saving Lives: Amenable Mortality in New Zealand, 1996–2006*. Wellington: Ministry of Health.
- Ministry of Health. 2010. *Tatau Kahukura: Māori Health Chart Book 2010, 2nd Edition*. Wellington: Ministry of Health.
- Ministry of Health. (2014) *Annual Update of Key Results 2013/14: New Zealand Health Survey*. Wellington: Ministry of Health.
- Morrison, P. (2015) 'Who cares about income inequality?', *Policy Quarterly*, 11 (1): 56-62
- New Zealand Parliament. (2010). Power, Simon: Ministerial Statements — UN Declaration on the Rights of Indigenous Peoples—Government Support. Retrieved from [http://www.parliament.nz/en-nz/pb/debates/debates/speeches/49HansS\\_20100420\\_00000077/power-simon-ministerial-statements-%e2%80%94un-declaration-on](http://www.parliament.nz/en-nz/pb/debates/debates/speeches/49HansS_20100420_00000077/power-simon-ministerial-statements-%e2%80%94un-declaration-on)
- NZ Herald. (2014, May 13). *Where are New Zealand's most deprived areas?* Retrieved from [http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11254032](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11254032)
- NZ Herald, (2014, October 3) CEO earnings: See what NZ's top execs earn. [http://www.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=11335939](http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11335939)
- NZ Herald (2014, December 6). *Battle to close the pay gap*. Available from [http://m.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=11369631](http://m.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11369631)
- NZ History. *Social Security Act passed - 14 September 1938*. Available from <http://www.nzhistory.net.nz/from-the-cradle-to-the-grave-parliament-passes-the-social-security-act>

- NZ History. Treaty of Waitangi. Available from  
<http://www.nzhistory.net.nz/politics/treaty/read-the-treaty/english-text>
- New Zealand Human Rights Commission (2010). New Zealand Census of Women's Participation 2010. Available from [www.hrc.co.nz/wp-content/uploads/2012/11/web-census.pdf](http://www.hrc.co.nz/wp-content/uploads/2012/11/web-census.pdf)
- OECD (2011) *Divided We Stand: Why Inequality Keeps Rising*, OECD Publishing.
- OECD (2013) OECD Economic Surveys: New Zealand 2013, OECD Publishing.  
[http://dx.doi.org/10.1787/eco\\_surveys-nzl-2013-en](http://dx.doi.org/10.1787/eco_surveys-nzl-2013-en)
- OECD (2013) Health at a Glance 2013: OECD Indicators, OECD Publishing.  
[http://dx.doi.org/10.1787/health\\_glance-2013-en](http://dx.doi.org/10.1787/health_glance-2013-en)
- OECD (2014) *OECD Income Distribution and Poverty Database* Accessed Dec 2014,  
<http://stats.oecd.org/Index.aspx?DataSetCode=IDD>
- OECD (2014) *OECD INCOME INEQUALITY UPDATE Rising inequality: youth and poor fall further behind*, Accessed Dec 2014.
- Ostry, Jonathan D., Berg, Andrew, and Tsangarides, Charalambos G. (2014) Redistribution, Inequality, and Growth. IMF Staff Discussion Note SDN/14/02.
- Perry, B. (2009). *Non-income measures of material wellbeing and hardship: first results from the 2008 New Zealand Living Standards Survey, with international comparisons*. Ministry of Social Development, Wellington.
- Perry, B. (2014) *Household Incomes in New Zealand. Trends in indicators of inequality and hardship 1982 to 2013*. Wellington: Ministry of Social Development.
- Piketty, T. (2013). *Capital in the Twenty-First Century*. London, England: The Belknap Press of Harvard University Press
- Power, S. (2010) Ministerial Statements — UN Declaration on the Rights of Indigenous Peoples—Government Support. Accessed 28 January 2015.  
[http://www.parliament.nz/en-nz/pb/debates/debates/49HansD\\_20100420\\_00000071/ministerial-statements-%E2%80%94-un-declaration-on-the-rights-of](http://www.parliament.nz/en-nz/pb/debates/debates/49HansD_20100420_00000071/ministerial-statements-%E2%80%94-un-declaration-on-the-rights-of)
- Radio New Zealand National (2014, October 22). The Piketty Phenomenon. Available  
<http://www.radionz.co.nz/national/programmes/ninetoonoon/audio/20154344/the-piketty-phenomenon>
- Report of the Royal Commission of Inquiry (1972) *Social Security in New Zealand*, Government Printer, Wellington.
- Roy Morgan (2014). New Zealand views on problems facing New Zealand. New Zealand Electorate Profiles. Accessed 3 September 2014.  
<http://www.roymorgan.com/findings/5612-state-of-the-nation-nz-issues-may-2014-201405300318>
- Samoilenko, A and Carter, K (2015). Economic Outcomes of Youth not in Education, Employment or Training (NEET). Treasury Working Paper WP15/01.

- Sen, A (1999) *Development as Freedom*, Oxford University Press.
- Sen, A (2009) *The Idea of Justice*, Harvard University Press.
- Simpson J, Oben G, Wicken A, Adams J, Reddington A, Duncanson M. (2014) Child Poverty Monitor 2014 Technical Report. NZ Child & Youth Epidemiology Service, University of Otago, Dunedin.
- State Services Commission (2005). The Story of the Treaty Part One. Available from [www.nzhistory.net.nz/files/documents/The\\_Story\\_Part\\_1.pdf](http://www.nzhistory.net.nz/files/documents/The_Story_Part_1.pdf)
- State Services Commission (2005). The Story of the Treaty Part Two. Available from [www.nzhistory.net.nz/files/documents/The\\_Story\\_Part\\_2.pdf](http://www.nzhistory.net.nz/files/documents/The_Story_Part_2.pdf)
- Statistics New Zealand (2011). *Introducing the youth not in employment, education, or training indicator*. Wellington: Statistics New Zealand
- Statistics New Zealand (2012) The New Zealand labour market during recession. [http://www.stats.govt.nz/browse\\_for\\_stats/income-and-work/employment\\_and\\_unemployment/nz-labour-market-during-recession.aspx](http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/nz-labour-market-during-recession.aspx)
- Statistics New Zealand (2015). Labour market statistics: march 2015 quarter. [http://www.stats.govt.nz/browse\\_for\\_stats/income-and-work/employment\\_and\\_unemployment/LabourMarketStatistics\\_HOTPMar15qtr/Commentary.aspx](http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/LabourMarketStatistics_HOTPMar15qtr/Commentary.aspx)
- Statistics New Zealand (2015). NZ Social Indicators. Wellington: Statistics New Zealand. Accessed 20 February 2015. [http://www.stats.govt.nz/browse\\_for\\_stats/snapshots-of-nz/nz-social-indicators/Home.aspx](http://www.stats.govt.nz/browse_for_stats/snapshots-of-nz/nz-social-indicators/Home.aspx)
- Stiglitz, JE (2012) *The Price of Inequality*, Allen Lane.
- Stiglitz, J. E., Sen, A. K., and Fitoussi, J. -P. (2009). *Report by the Commission on the Measurement of Economic Performance and Social Progress*, [http://www.stiglitz-sen-fitoussi.fr/documents/rapport\\_anglais.pdf](http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf)
- Quigley and Watts (2015). Perceptions of income adequacy by low income families. Social Policy Evaluation and Research Unit: Wellington.
- Treasury (2011) Working Towards Higher Living Standards for New Zealanders, *New Zealand Treasury Paper*, 11/02 <http://www.treasury.govt.nz/publications/researchpolicy/tp/higherlivingstandards/tp-hls-may11.pdf>
- Turner, A, *Economics After the Crisis, Objectives and Means* MIT Press, 2012
- UMR Research (2014, January). Annual Review Mood of the Nation January 2014. Available from <http://umr.co.nz/updates/mood-nation-2014>
- UMR Research (2014). Inequality in New Zealand 2013. Accessed on 17 December 2014. <http://umr.co.nz/updates/inequality-new-zealand-2013>
- UNICEF (2010). *Re-focusing on Equity: Questions and answers*. Available from <http://isites.harvard.edu/fs/docs/icb.topic1281590.files/Questions%20and%20Answers%20on%20Equity.docx>



- UNICEF (2012). School Readiness: a conceptual framework. United Children's Fund: NY.
- Wanless, D. (2004). Securing good health for the whole population. Final Report. London: HM Treasury.
- Whitehead M. (1992) The concepts and principles of equity and health. *International Journal of Health Services*;22:429 - 45.
- Whitehead, M. (2000) The Concepts and Principles of Equity and Health. Copenhagen: World Health Organization.
- Wilkinson, R.P and Pickett K, (2009) *The Spirit Level: Why More Equal Societies Almost Always Do Better*. London: Allen Lane.
- World Health Organization (2015) Health Systems: Equity.  
<http://www.who.int/healthsystems/topics/equity/en/>. Accessed 28 January 2015