

## **Measuring Changes in Family Wellbeing in New Zealand 1981 to 2006**

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### **Abstract**

Since the mid-1980s, New Zealand has experienced extensive economic, social and political reforms. The economic impact of these changes has been closely monitored and much commented upon. However, the social impacts of the reforms on different categories of families and households are less well understood. This article presents data from a project designed to monitor how the reforms have impacted upon these categories, via indicators of wellbeing constructed from census data. All of this reveals variable impacts by category, with single-parent family households faring worst over the 1981–2006 period.

### **Introduction**

The period from the early 1980s until the late 1990s in New Zealand was marked by extensive economic reforms, the outcomes of which have been much analysed and debated. The reforms also had considerable social impacts, most obviously rising levels of unemployment and inequality. Apart from the usual measures of unemployment and the use of poverty measures to assess the impact of these changes, the ability of researchers to monitor the social consequences of these reforms was limited. In the early 2000s, a series of measures were put in place to monitor social impacts, but the ability to similarly assess the earlier reforms remained limited (for example see Crothers, 2000; Big Cities Quality of Life, 2001–; Ministry of Social Development, 2001–; Roper, 2011).

COMPASS Research Centre at The University of Auckland undertook from 2002 to 2007 a project to develop measures to monitor more so the social impact of the reforms, and looking at how different types of families and households were affected. Measures of wellbeing were constructed using Statistics New Zealand (SNZ) census data for the 1981–2006 period. This article details the project, outlining the construction of indicators of wellbeing at the levels of the family and the household, and examining the results, updating

an article published in *Social Indicators Research* (Cotterell, et al., 2008a), which only covered the censuses up to 2001.

### **The reforms in New Zealand, 1981–2006**

New Zealand underwent a series of far-reaching economic, political and social reforms in the post-1984 period as a result of the election of the Fourth Labour Government in 1984. After taking office, Labour moved to deregulate and privatise large sectors of the economy, removed subsidies and tax exemptions in many areas, lowered overall rates of personal tax, allowed the New Zealand dollar to float, restructured some government departments along commercial lines, subsequently selling some, and prioritised inflation control as a primary policy objective (Dalziel and Lattimore, 2004). The economic reform process continued through the 1980s and was deepened with the election of the National Government in late 1990. Once in government, National moved to deregulate the labour market and reduce welfare spending by cutting payment levels for many beneficiaries and by increasing the use of means testing. These policies were partially reversed by the subsequent Labour-led coalition (1999–2008) but then the general policy direction reverted once again under the National-led coalition (2008–present), although this was hampered by the *Global Financial Crisis*.

### **Monitoring the impact of the reforms**

The immediate and long-term impacts of the earlier of these reforms on the economy have been much discussed and monitored (for example see Dalziel, 2002; Roper, 2005). The data needed to conduct these discussions are available from the well-established and generally agreed upon methodological approaches to collecting such data and their presentation in such formats as the System of National Accounts.

Data on the social impact of these reforms, especially in the late 1980s, but also through to the late 1990s, were less comprehensive. Measurement of the social impacts of reforms tended to focus largely upon rising levels of unemployment and economic inequality (for example see Stephens and Waldegrave, 2001; Waldegrave, et al., 2003; Perry, 2013; Statistics New Zealand, 1999).

Early in the 2000s, measures were introduced to overcome this inability to adequately monitor the social impacts of reforms. These measures revolved

around the development of sets of social indicators for the measurement of changes in the level of wellbeing for different groups and regions of the country. The two primary resources were the Ministry of Social Development's Social Report and the local government Big Cities Quality of Life project (see Cotterell and Crothers, 2011).

The Social Report, compiled by the Ministry of Social Development, is an annual report first published in 2001, with the latest available report published in 2011. It contains some 40–45 indicators grouped under ten domains – see [www.socialreport.msd.govt.nz](http://www.socialreport.msd.govt.nz). The Big Cities Quality of Life project contains information on a wide range of quality of life indicators in New Zealand's largest cities, with the first report having been published in 2001, and the most recent (partial) report in 2012 – see [www.bigcities.govt.nz](http://www.bigcities.govt.nz). It organises the data into 11 domains and there are 56 key indicators, along with an extensive range of lower level indicators.

These publications have two limitations. First is the extent of historical information provided. While for some indicators data are available back as far as 1986, in many cases the periods covered are more recent, rendering them inadequate for conducting an analysis of the earlier period of extensive reform. Second, for many of the indicators referred to are individual outcomes, and analysis of change for families and households is generally not conducted.

The indicators derived from the Family Whānau and Wellbeing project (FWWP) run by COMPASS were intended to fill this gap. FWWP was part of a five-year research programme supported by the Social Science funding pool of the then Foundation for Research, Science and Technology (FRST), which has ended up as part of the Ministry of Business, Innovation and Employment (MBIE). The project was extended so as to allow inclusion of figures from the 2006 Census, but the article that this one updates was written before those were available.

One of the goals of FWWP was to develop ways to use census data to examine and monitor the social and economic determinants of family and whānau wellbeing, and how these had changed over the period since 1981. More recently, 1976 Census unit record data have become available, and it is hoped that these might be added to the study in due course, as well as, of course, data from the 2013 Census.

The remainder of this research note examines the data used that were used to compile indicators to track these determinants, assesses the advantages

and disadvantages of the indicators, and presents the results of them for a set of household categories.

### **Measuring wellbeing using census data**

The data used to construct the wellbeing indicators were sourced from the formerly five-yearly New Zealand Census of Population and Dwellings conducted by SNZ. The census collects data on a range of individual and household variables including income, household and family structure, employment, housing, education and health. The use of census data to both construct indicators of family wellbeing and monitor changes over time has advantages and disadvantages (Errington, et al., 2008).

The primary advantage of using census data is that this allows for an assessment of continuity and change in societal patterns over a long segment of time – 25 years in this case. Second, information obtained from the census covers (almost) all members of the population, and therefore allows us to examine the wellbeing of all New Zealanders, and provides information on small population groupings, including at family and household levels. Third, while the census does not collect information on the subjective elements of wellbeing, many of the core outcomes (good jobs, adequate income, education and health) identified as promoting wellbeing are based on objective living conditions, data on which are captured (with the limitations outlined below) in the census.

Thus, in many instances, a strong link exists between objective and subjective measures of wellbeing, and although the census provides little direct information on the subjective intangible aspects, it can provide some indirect insights into these.

The disadvantages associated with using census data to measure changes in family and household wellbeing are linked to the limited range and depth of information collected, the frequency of collection for some questions, and the ways in which family types are defined and measured. The selection of indicators was constrained by the census data available. The wellbeing of a family or household may be influenced by other factors (e.g. the perceived quality of family relationships) for which no information is available. This lack of information also results in some of the constructed indicators rather being indirect measures of a particular attribute. For example, the only indicator for health examines changes in proportions of households with at least one person

receiving health-related benefits, rather than being an actual measure of the physical health of a household.

Lack of data availability may constrain time series analysis. Some census questions relevant to wellbeing are no longer asked, e.g. housing insulation, while others are included irregularly, e.g. smoking. This means that we cannot monitor changes in some domains as frequently as we wish.

A lack of in-depth information limits the ability to interpret change in some indicators. For example, because income data are in bands rather than discrete amounts, indicator construction requires some estimation – in this case band medians were made available, but this greatly diminishes variability and thus the ability to detect changes.

The census definition of family only incorporates members living within the same household. Census wellbeing measures may be particularly poor indicators for families whose members do not all reside within the one household. Particularly affected are parents who usually share custody of their children and children who live across two households. The ability to monitor the wellbeing of extended families is also constrained by this household-based definition of family.

After a comprehensive process of checking census data consistency over time, a set of indicators measuring family wellbeing was constructed and reported on (Milligan, et al., 2006), with 12 indicators under 5 domains in the original set. Table 1 below presents a streamlined set of indicators that will be reported on in the remainder of this research note. Note that for consistency with earlier outputs from FWWP, except for ‘median equivalised income’, the indicators are all presented negatively, so that high values always mean less wellbeing.

### **Household categories**

Four household categories are included and compared in this research note. These are different from the five family types used in the article herein updated (Cotterell, et al., 2008). The updated categorisation follows the lead of subgroup analysis reports produced in the intervening years (Sua’ali’i-Sauni, et al., 2008; Kiro, et al., 2010), changing to a simpler focus on households.

Statistics New Zealand notes that:

A ‘family nucleus’ is a couple, with or without children, or one parent and their child(ren) usually resident in the same dwelling. The children do not have partners or children of their own living in the same household. People who usually live in a particular dwelling, and

are members of a family nucleus in that dwelling, but who are absent on census night, are included, as long as they are reported as being absent by the reference person on the dwelling form.<sup>1</sup>

**Table 1: Wellbeing indicators examined in this research note**

Domain	Indicator	Definition
<b>Income</b>	Median equivalised income	Median equivalised real household income. For the purposes of this report, median equivalised real income is median gross income adjusted for household composition using the Revised Jensen Scale (Jensen 1988) and expressed in 1999 dollars using the March quarter CPI (base 1999) for the relevant year (Statistics New Zealand 2005)
	Low income	The percentage of households where the equivalised gross income is less than 60% of the overall median equivalised gross household income
<b>Education</b>	Any educational attainment	The percentage of households where no adult has any educational qualifications
	Post-secondary educational attainment	The percentage of households where no adult has any post-secondary educational qualification
<b>Work</b>	Parental employment	The percentage of households where no adult is in formal paid employment
	Long working hours	The percentage of households where at least one adult works more than 48 hours per week
<b>Housing</b>	Home ownership	The percentage of households that are not owner-occupied
	Rental affordability	The percentage of households, living in rented dwellings, where the weekly rent is greater than 25% of the gross equivalised household income
	Crowding	The percentage of households that are living in dwellings where they require at least one additional bedroom to meet their sleeping needs
<b>Health</b>	Health-related benefits	The percentage of households where at least one adult receives either a sickness or an invalid's benefit
	Smoking	The percentage of households where at least one adult regularly smokes cigarettes
<b>Connectedness</b>	Internet access	The percentage of households where there is no access to the Internet

In contrast, a household is defined as any group of families or individuals living in the same dwelling, regardless of their relationships to one another. Therefore, census families are wholly contained within households. However, it is important to note that not all households contain families and also that some households are made up of a family or families cohabiting with non-family members.

In this research note the primary focus is the household. Indicators are presented for four categories: *couple-only households*, *single-parent family*

<sup>1</sup> <http://www.stats.govt.nz/Census/about-2006-census/information-by-variable/family-type.aspx>

*households, other one-family households and multi-family households.* The makeup of these categories at each census point is presented in Table 2.

**Table 2: Household categories examined in this research note**

Household composition	1981	1986	1991	1996	2001	2006
<b>Couple-only households</b>	<b>27.8%</b>	<b>30.1%</b>	<b>31.6%</b>	<b>32.6%</b>	<b>34.1%</b>	<b>34.3%</b>
Couple only	213,405	249,765	278,715	309,819	330,201	366,042
<b>Single-parent family households</b>	<b>10.7%</b>	<b>12.5%</b>	<b>15.3%</b>	<b>15.0%</b>	<b>16.7%</b>	<b>15.6%</b>
One-parent family	68,904	85,377	108,435	114,957	126,840	134,517
One-parent family plus others	13,299	18,504	26,367	27,762	34,944	32,454
<b>Other one-family households</b>	<b>58.8%</b>	<b>53.3%</b>	<b>48.5%</b>	<b>45.3%</b>	<b>43.1%</b>	<b>42.4%</b>
Couple with children	412,134	404,322	388,407	379,218	358,779	392,268
Couple only plus others	11,493	12,186	15,870	23,526	26,748	29,166
Couple with children plus others	27,999	25,893	24,150	27,639	31,563	31,095
<b>Multi-family households</b>	<b>2.6%</b>	<b>4.1%</b>	<b>4.6%</b>	<b>7.0%</b>	<b>6.1%</b>	<b>7.7%</b>
Two 2-parent families with or without children	9,372	10,182	13,584	25,701	4,224	5,796
Two-parent plus one-parent family	7,575	14,373	17,274	23,925	10,518	13,101
Two 1-parent families	2,286	5,916	6,738	10,701	8,514	10,095
Other two-family households	-	-	-	102	30,537	45,168
Three or more families	1,281	3,459	3,057	6,117	4,749	7,794
<b>Total households</b>	<b>767,748</b>	<b>829,977</b>	<b>882,597</b>	<b>949,467</b>	<b>967,617</b>	<b>1,067,496</b>

The second and third categories have at least one child by definition, and as we did not break things down any further, there is no restriction in those categories on the age of children – the only requirement is to be living with parent(s) and thus identified as dependent/independent children by the census. In previous FWWP reports the family types were broken down into, for instance, *couples with dependent children* and *couples with only independent children* – defined based on considerations of age and employment status. Again, the terminology used here is consistent with the more recent reports on wellbeing from FWWP and associated projects.

The following analysis examines changes in wellbeing for the household categories described earlier. A selection of the indicators presented in Table 1 is covered below.

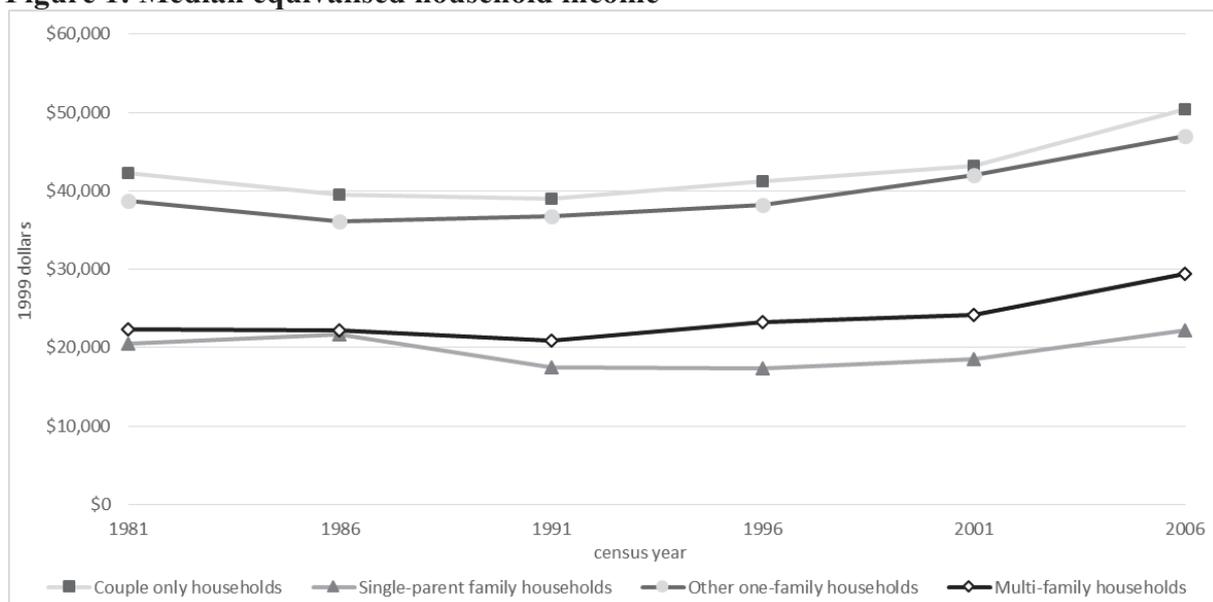
### **Median equivalised income**

The first income indicator measures median equivalised household income and Figure 1 below shows the shifts in income experienced by each of the household categories over the period under review. Equivalised income is gross income adjusted for family composition using the Revised Jensen Scale (Jensen, 1988). Income equivalences and the estimation of family expenditure on children are expressed in 1999 dollars using the Consumers Price Index with the base to 1999 for the relevant year.

For all four of the household categories, median equivalised income rose over the period, although for single-parent family households this was marginal. For most, income declined through the 1980s, a period marked by high inflation and rising unemployment, and then recovered partially thereafter.

Single-parent family households had the lowest median equivalised income over the period and while multi-family households were also low, their relative income increased more.

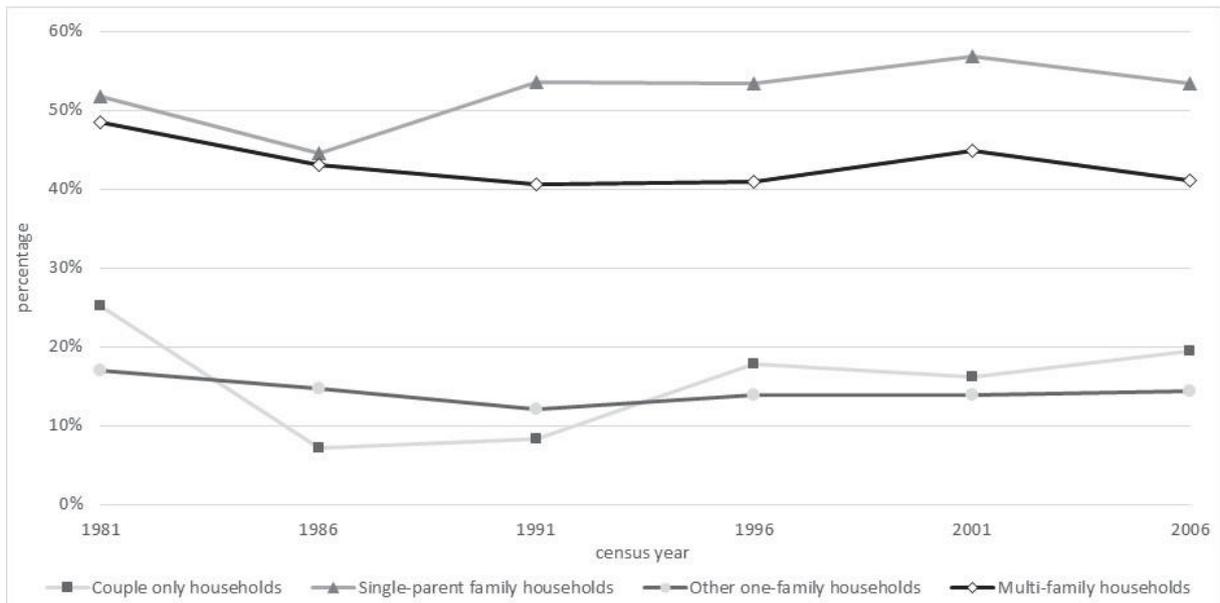
**Figure 1: Median equivalised household income**



**Low income**

The low income indicator captures the percentage of households in each category with less than 60% of the overall median equivalised household income for that category. The results are presented in Figure 2 below. Among our household categories, only single-parent family households saw a small increase over the period as a whole. They were also the most likely to experience low income at each time point, followed by multi-family households.

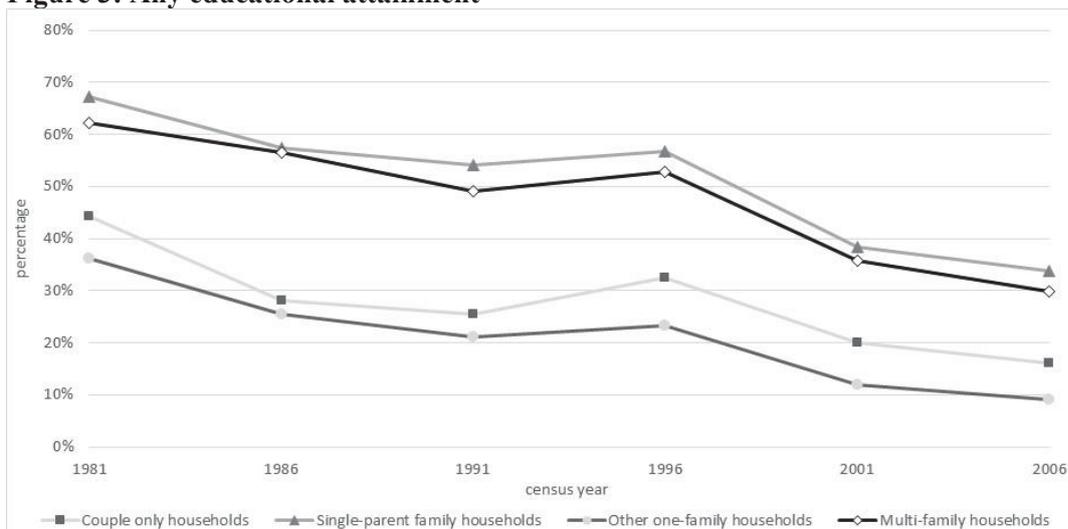
**Figure 2: Low income**



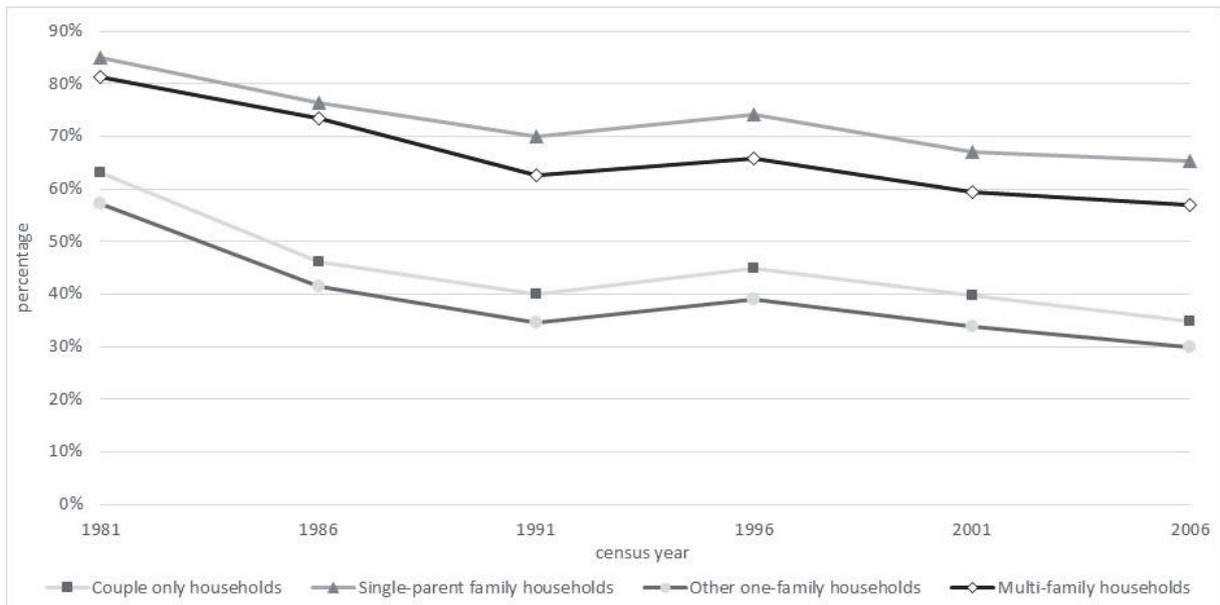
### Educational attainment

The any educational attainment indicator measures the percentage of households where no adult has any educational qualification. Figure 3 shows the results for this. All of our household categories saw declines in this indicator over the period, with the largest consistently occurring between 1981 and 1991. Other one-family households were the least likely to have an adult with no educational qualifications. This pattern is echoed in the post-secondary educational attainment indicator, which similarly shows the percentage of households where no adult has any post-secondary educational qualification. Figure 4 shows the results for this indicator.

**Figure 3: Any educational attainment**



**Figure 4: Post-secondary educational attainment**

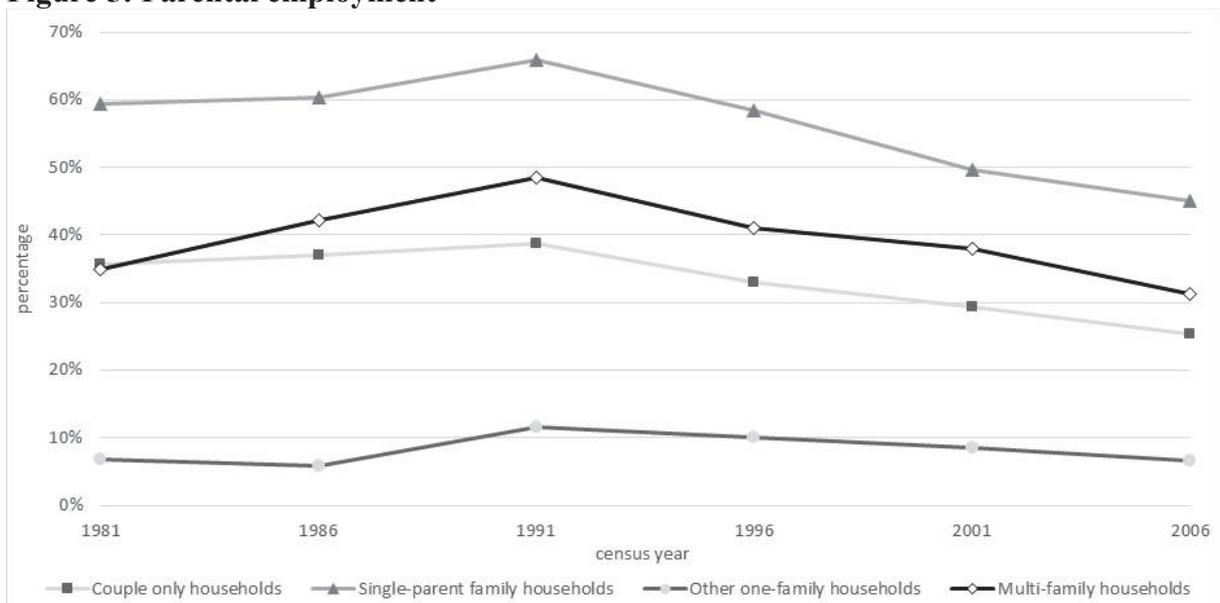


### Parental employment

This is calculated as the percentage of households where no adult is in formal paid employment. Figure 5 shows the results for this indicator.

For all household categories, the indicator peaked in 1991. Other one-family households were the least likely to have no adult in formal paid employment, while single-parent family households were the most likely, at more than 50% for most of the period.

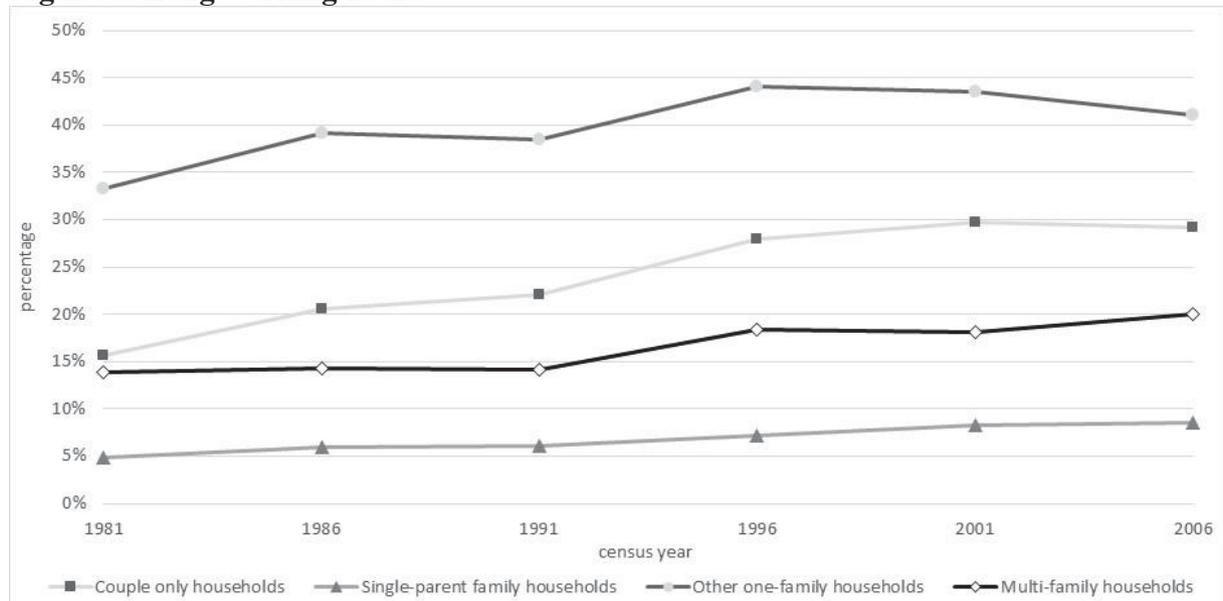
Figure 5: Parental employment



### Long working hours

This indicator specifies the percentage of households where at least one adult works more than 48 hours per week. Figure 6 shows the results. All household categories experienced an increase in the likelihood of their having at least one adult working more than 48 hours per week over the period. Single-parents were the least likely to be working long hours, at every census point.

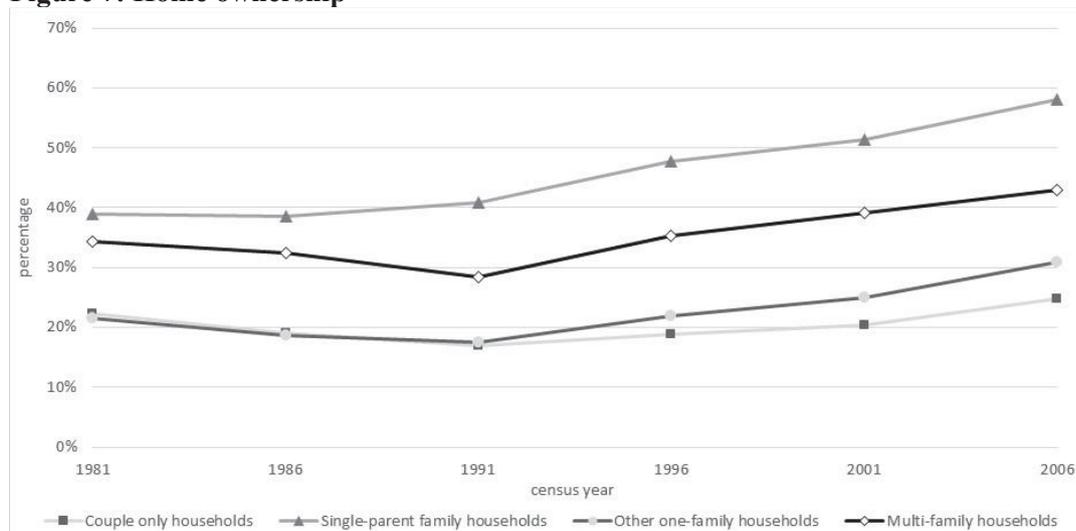
**Figure 6: Long working hours**



## Home ownership

This is the percentage of households that are not owner-occupied. Figure 7 shows the results. All household categories experienced an increase in the percentage not living in their own dwellings, over the period. Couples-only households were the most likely to own their dwellings, at every census point, while single-parent family households were consistently the least likely.

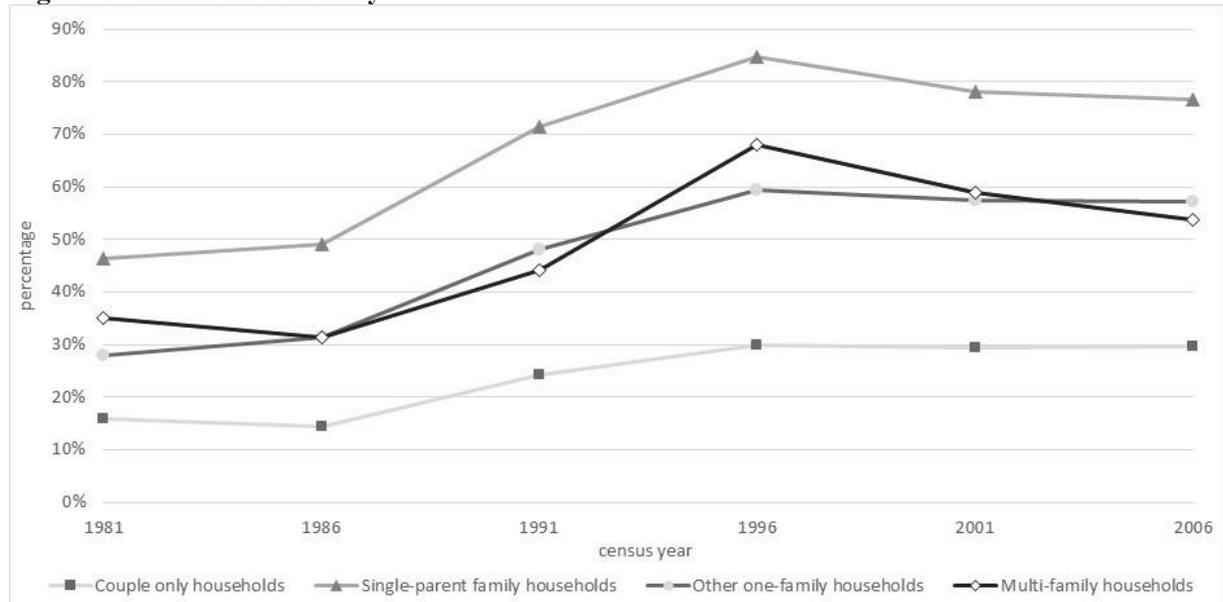
**Figure 7: Home ownership**



## Rental affordability

The rental affordability indicator shows the percentage of households, living in rented dwellings, where the weekly rent is greater than 25% of the gross equivalised household income. Figure 8 shows the results for this indicator. Over the period this indicator increased for all household categories, with the steepest increases occurring in the 1986-1996 period. Single-parent family households were the most likely to be paying more than 25% of their equivalised income in rent over the period.

**Figure 8: Rental affordability**



## Crowding

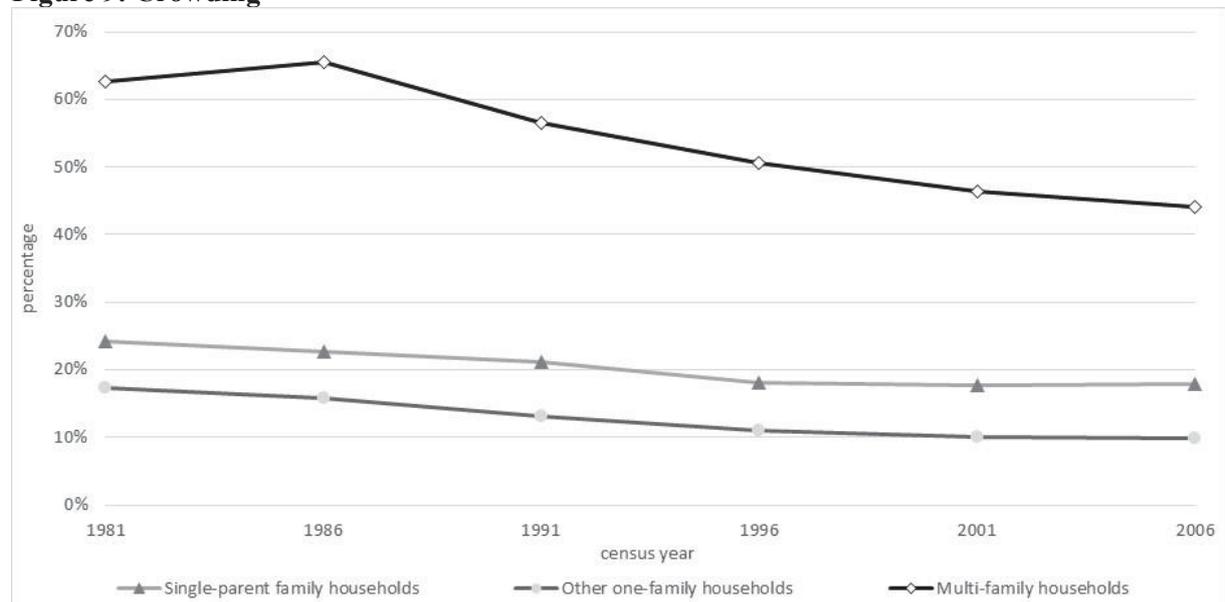
The household crowding indicator shows the percentage of households that are living in dwellings where they require at least one additional bedroom to meet their sleeping needs. (The number of bedrooms required by a household is calculated using the concept of the adult equivalent. The required number of bedrooms is calculated as:  $\frac{1}{2} \times$  the number of children under 10 years + the number of couples + the number of remaining householders aged 10 years and over (Morrison, 1994; Statistics New Zealand, 2004). All household categories saw decreases in this indicator over the period. Not too surprisingly, multi-family households were the most likely to be crowded, at each census point.

## Health-related benefits

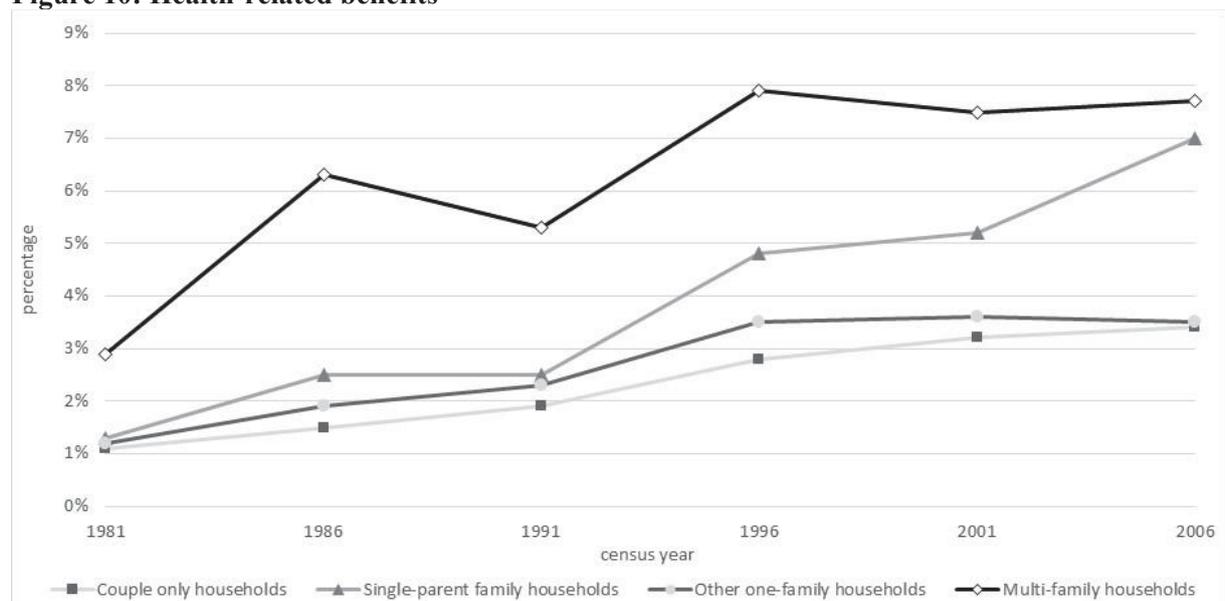
This indicator gives the percentage of households where at least one adult is receiving a sickness or invalid's benefit. Figure 10 shows the results. All household categories saw increases in this indicator over time. Multi-family households had the highest percentage at every census point, while single-

parent family households saw the biggest absolute percentage increase over the period.

**Figure 9: Crowding**



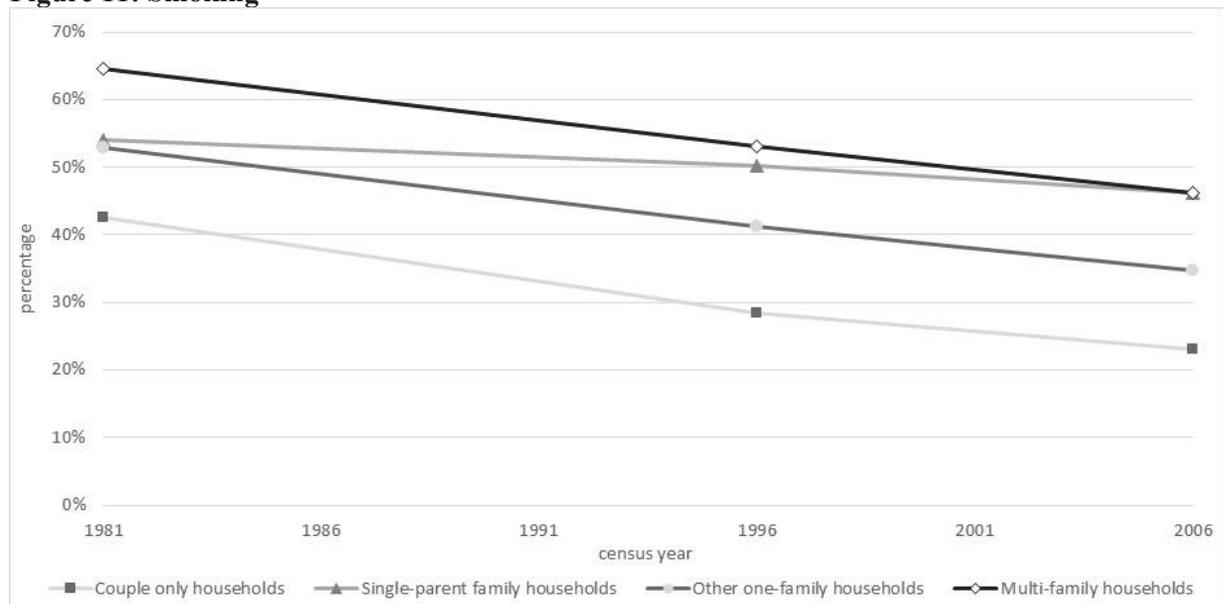
**Figure 10: Health-related benefits**



## Smoking

The smoking indicator reports the percentage of households where at least one adult regularly smokes cigarettes. Data on smoking were only captured in the 1981, 1996 and 2006 Censuses, so we do not have as good a time series as for the previous indicators. Figure 11 shows the three figures using the same scale on the graph. With these limitations in mind, the data available do suggest that there was a distinct and even decline in smoking rates over the period. Single-parent family households did not see nearly as big an absolute decrease as did the other household categories.

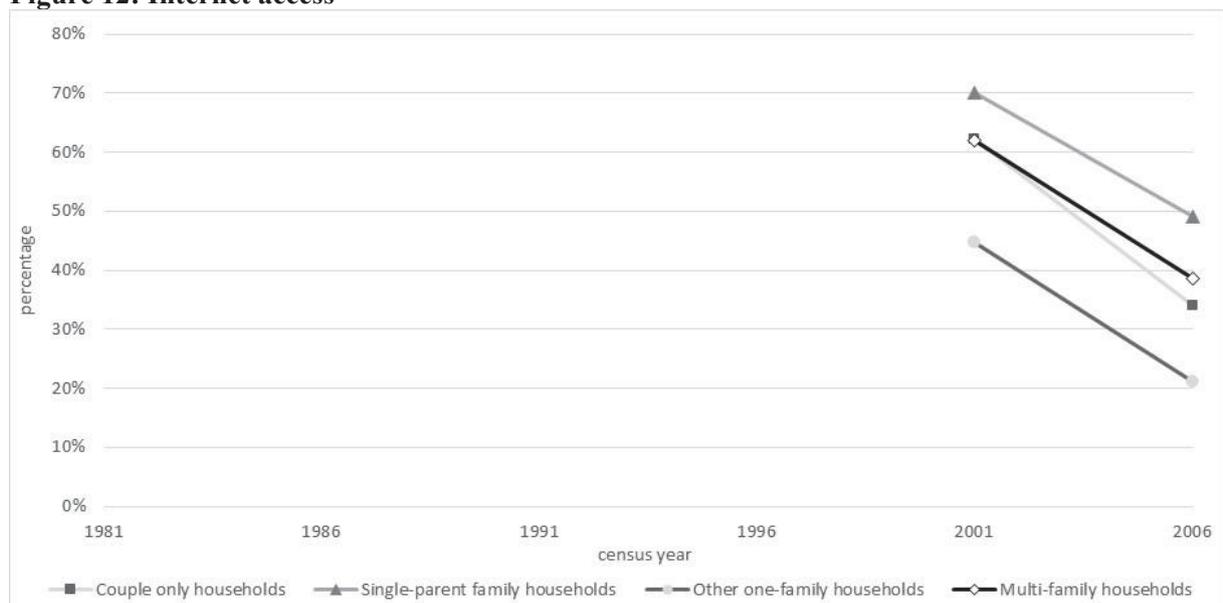
**Figure 11: Smoking**



**Internet access**

Again reading negatively, this indicator gives the percentage of households where there is no access to the Internet. Data for this were only collected in the census from 2001, so we have only two measurement points. Figure 12 presents these on the same time scale as for the other graphs. All that can be said is that there were substantial increases in access to the Internet over the 2001–2006 periods for all household categories, and especially for couple-only households.

**Figure 12: Internet access**



## **Discussion**

The data displayed above show that single-parent family households fared worst over the twenty-five year period of reforms. In terms of income levels the gap between single-parent family households and the other household categories widened over the period, and the same was true for levels of home ownership. Even where they did see improvements in wellbeing, as in the education indicators, single-parent family households improved their positions at a slower rate than their couple equivalents.

These results have significant implications in the New Zealand context. The previous Labour-led government made building stronger families and improving outcomes for children an important part of its policy focus (Maharey, 2000). Indeed it went as far as to establish a Families Commission in 2004, charged with the role of acting as an advocate for the interests of families within the government and in the public arena.

Given that different household categories had different experiences during the reform period, any policy introduced to strengthen families and improve the wellbeing of children needs to take into account these different experiences. The evidence displayed above suggests that in most cases it is the single-parent family households upon whom policy needs to be focused if lifting levels of wellbeing is a priority. This is particularly the case in New Zealand where in a recent review of literature, Mackay noted that “children raised in lone-parent families have been found, on average, to do less well across a range of measures of wellbeing than their peers in two-parent families, while parental separation has been found to be associated with an array of adverse outcomes for children” (Mackay, 2005: 111).

## **Other and future research**

The wellbeing indicators developed have allowed further projects to examine changes in family and household wellbeing at a more detailed level of analysis. Central to this analysis is an examination of differences in the wellbeing of families with parents of different ethnicities. Wellbeing for ‘Pacific families’ (Sua’ali’i-Sauni, et al., 2009) and for ‘Māori families’ (Kiro, et al., 2010) have been examined since the original FWWP reports were produced. Other focuses have included wellbeing by education level (Cotterell, et al., 2008b) and attempts to track wellbeing for specific family groups across censuses (Davis, et al., 2012).

Furthermore, data from the 2013 Census will be available around mid-2014, and hopefully will be incorporated into the analysis to determine whether the economic growth experienced in New Zealand during the 2000s has translated into an improvement for all families/households or for perhaps just a subset of them.

## Conclusion

The wellbeing indicators of FWWP provide a unique way of assessing the impact of the economic reforms of the 1980s, 1990s and 2000s on a range of different household categories, filling a long neglected analytical gap. The data indicate that New Zealand households experienced considerable changes in their levels of wellbeing, with single-parent family households generally faring worst. The differences are important when taking into account the current government's concern with family wellbeing, and the strong suggestion that different family types or household categories will require different types and levels of resources in order to improve their wellbeing.

While analysis of the impact of the reforms on different household categories is limited to some extent by the nature of the data collected by the census, the results show that our indicators do offer a useful way to monitor ongoing changes in family and household wellbeing over time. In addition, with the inclusion of data for subsequent censuses the wellbeing indicators have the potential to become an established part of the social wellbeing monitoring programme and so to contribute to information-based policy in New Zealand.

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