



# NEW ZEALAND PUBLIC FINANCE



## NZPF Newsletter

Issue 1

November 2013

[www.nzpublicfinance.com](http://www.nzpublicfinance.com)

# TABLE OF CONTENTS

|  |                |
|--|----------------|
| <b>Editorial</b> .....   | <b>Page 1</b>  |
| <b>Research Report</b> .....   | <b>Page 2</b>  |
| 2013 NZAE JAN WHITWELL PRIZE WINNER<br>Distributional Impacts of Government Tax & Spending |                |
| <b>Research Report</b> .....   | <b>Page 5</b>  |
| AFFORDING OUR FUTURE<br>Treasury's Third Statement on NZ's Long-Term Fiscal Position       |                |
| <b>Feature</b> .....   | <b>Page 7</b>  |
| The Long-Term Fiscal Calculator  |                |
| <b>Conference Report</b><br>Three Public Finance Conferences in Europe.....                | <b>Page 9</b>  |
| <b>Upcoming Events</b> .....   | <b>Page 10</b> |
| <b>Working Papers in Public Finance</b> .....  | <b>Page 11</b> |
| <b>Recent Publications</b> .....   | <b>Page 15</b> |
| <b>Useful Links</b> .....  | <b>Page 16</b> |
| Institutions Working on Public Finance Research or Policy<br>Public Finance Journals       |                |

# EDITORIAL



## Welcome to the first New Zealand Public Finance, *NZPF* Newsletter

The *NZPF* website is an initiative of the Chair in Public Finance at Victoria University of Wellington – a professorial position established at VUW with sponsorship from three government departments (Ministry of Social Development, Inland Revenue and the Treasury) and PwC.

New Zealand Public Finance, or *NZPF*, is a recently launched website dedicated to promoting research and informed policy debate on the public finance issues in New Zealand. Public finance is defined broadly here to include taxation, public expenditures and deficits, social welfare, macro-fiscal policy and public sector performance. Though primarily taking an economics focus, the website also promotes public finance research from Accounting, Law and other disciplines.

In this, and future, *Newsletters*, we aim to provide:

- summaries of recent research
- a forum for discussion of topical public finance policy issues
- short articles by guest contributors
- updates on recent and forthcoming events
- useful web links to other public finance organisations in New Zealand and overseas

In this issue you will find:

- short articles by Athene Laws on “Distributional Impacts of Government Tax and Social Spending” and Neil Cribbens on “Treasury’s Third Statement on NZ’s Long-Term Fiscal Position”
- a feature on the ‘long-term fiscal calculator’ web-tool
- a conference report
- summaries of recent Working Papers and publications
- upcoming events and useful links

We hope you enjoy reading this *NZPF* issue and welcome any feedback or suggestions for future issues. Or if you have upcoming public finance events you would like to promote, please let us know. Please note, however, that *NZPF* has been established to promote independent, apolitical research and policy discussion and will not promote the views or events of particular political organisations, lobby or advocacy groups.

Norman Gemmell  
Chair in Public Finance, VUW  
[Norman.Gemmell@vuw.ac.nz](mailto:Norman.Gemmell@vuw.ac.nz)

Cherry Chang  
Editor, *NZPF* Newsletter  
[Cherry.Chang@vuw.ac.nz](mailto:Cherry.Chang@vuw.ac.nz)

New Zealand Public Finance (*NZPF*) is an apolitical website dedicated to promoting research and informed policy debate on public finance issues in New Zealand. The *NZPF* Newsletter is an extension of the website, informing readers of recent public finance research, news and events. For further information, go to [www.nzpublicfinance.com](http://www.nzpublicfinance.com).

To contribute to the website or the newsletter, please contact the [editor](#)

# RESEARCH REPORT

## 2013 NZAE JAN WHITWELL PRIZE WINNER:

### Distributional Impacts of Government Tax & Social Spending

A recent working paper from the Chair in Public Finance investigates the age and gender dimensions of income distribution and fiscal incidence in New Zealand. Co-authored by Omar Aziz (New Zealand Treasury), Norman Gemmell (Victoria University) and Athene Laws (Victoria University of Wellington student intern), the paper uses data from the 2010 Household Economic Survey and a non-behavioural micro-simulation model to analyse the distributional impacts of various forms of government tax and social spending. The motivation behind such work derives from recognition that many fiscal policies may have quite different incidences across age groups and genders, contrasting with their intended aggregate impacts. In addition, changing demographic structures may result in age-gender dimensions of fiscal policies becoming an increasingly relevant issue.

One framework that the paper used for examining lifecycle distributional consequences was the comparison of income incidences across the age-range prior to and following government activity. The approach starts by plotting *market income*, defined as income from wages and salaries, investments, self-employment and from other forms of taxable income earned by private means. After accounting for the addition of income support and removal of direct taxation *disposable income*, which reflects the income available for consumption or savings, can be derived. Lastly, by removing indirect tax (GST and excises) and adding the value of publicly provided health and education, *final income* can be added to the mix. Figures 1a and 1b on the next page show the average of these three types of incomes across age groups for males and females respectively.

It can be seen that market income is higher than both disposable and final income for males aged 25-64, indicating redistribution away from this demographic. Equivalently - aged females do not demonstrate such a significant reduction; this largely stems from lower average levels of market income.

Conversely, disposable and market incomes rise at either end of the age distribution, both for males and females. Noticeably, the transition from disposable to final income has a larger effect for these age groups, than for those of middle age. The two trends highlight the distribution towards younger and older members of society through both direct taxation/income support and indirect taxation/age-related stages of government spending.

Overall, the two graphs display the life-cycle smoothing effects from government intervention, as income is redistributed predominantly from working aged males to either end of the age spectrum.

A second key framework the paper utilised, to focus more on gender discrepancies, was directly comparing the fiscal incidences of females and males across the lifecycle. Figure 2 plots average net fiscal incidence disaggregated by age and gender. Here, net fiscal incidence is obtained by adding direct and indirect tax contributions, then subtracting income support and health and education spending. Intuitively, those above the axis are, on average, net tax payers and those below are, on average, net recipients of the components included (though, of course, some taxes and expenditures are excluded here).

The graph demonstrates that males 'break-even' in this fiscal sense in their early twenties, and then cross below the axis again at retirement age. The corresponding 'break-even' point for females is delayed until their early forties, and then they similarly re-cross the axis just before retirement age.

Figure 1: Three concepts of income

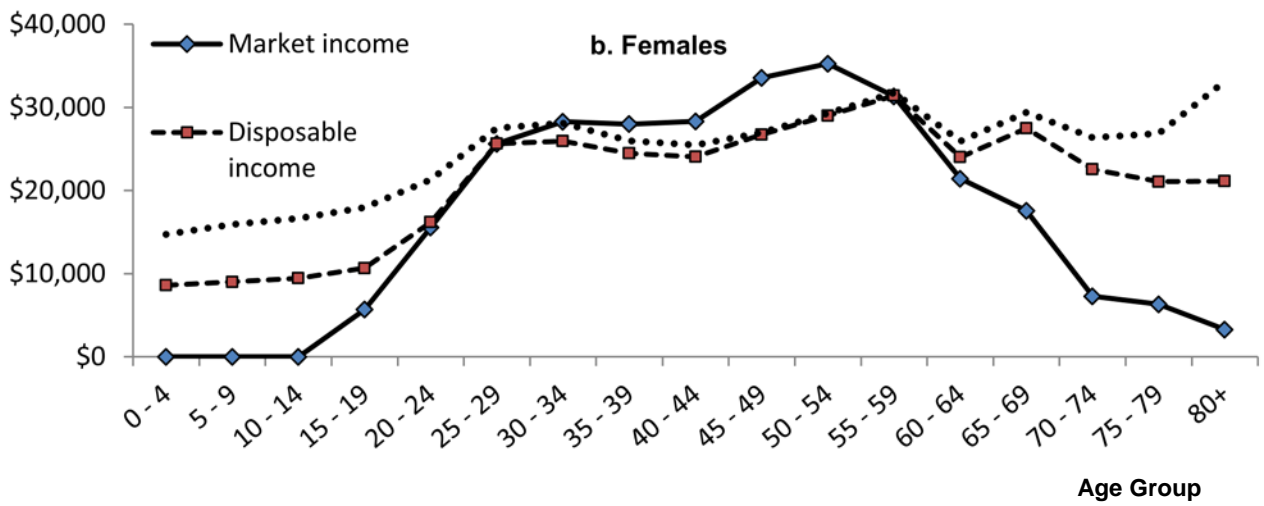
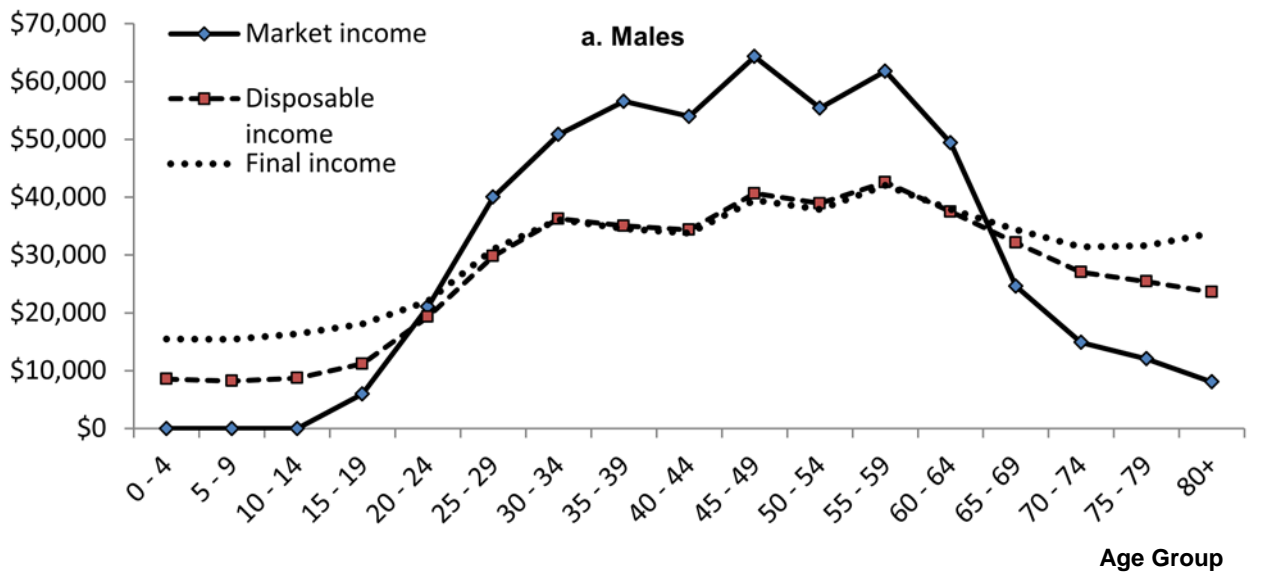
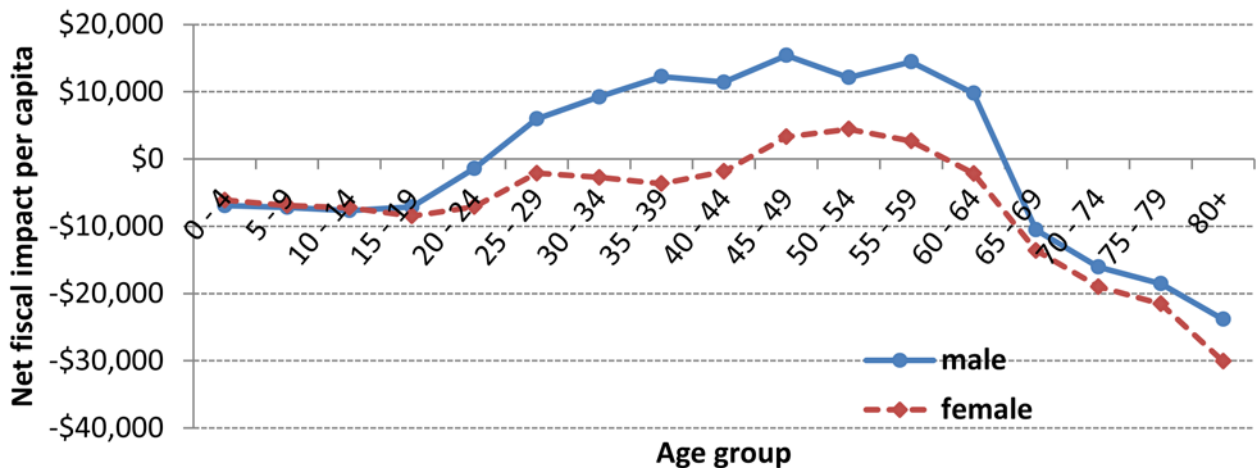


Figure 2: Average net fiscal impact by age group and gender, 2010



This overall pattern is due to the age-gender incidences of individual fiscal components and can be summarised as follows:

*It is important to bear in mind that the trends discussed are all averages and do not take into account individual variation.*

- **Direct taxation:** is higher for males than females across all age groups partially due to lower labour market participation rates for females. Across both genders, direct tax liabilities rise during the ages of 20-40, plateau across middle age and then fall from age 60 onwards.
- **Income support:** is higher for females than males, once again across all age groups. The discrepancy is particularly pronounced during child rearing ages, peaking at age 35-39 where women receive income support payments on average 4.8 times that of men of the same age. Overall it stems from lower workforce participation rates, higher rates of providing for dependents, and an increased likelihood of being a sole parent.
- **Indirect taxation:** follows a gradually rising profile of indirect tax liabilities from early adulthood to the late-50s age group, followed by declines at around 60-65 years of age. From age 20 onwards, males have slightly higher indirect tax payments than females.
- **Health spending:** starts at high levels in the 0-4 age group, but then falls before rising with age, at an increasing rate. Across child-bearing ages women receive more health spending than men given the costs of birth, pre-natal and post-natal care.
- **Education spending:** as expected shows the bulk of education spending concentrated around the younger age groups where it is roughly equivalent across genders. There is more education spending directed at women than men in the early 20s and 30-44 year old age groups.

The overall message to be taken from the paper is that there is evidence of significant variation in government spending impacts across age groups and genders. This implies that future policy changes might have quite different consequences for males and females of different ages which is obscured when policy impacts focus solely on intended aggregate distributional consequences. More systematic age-based and gender-based analysis would ensure that these distributional consequences of policy options are more fully understood.

**By Athene Laws**

**Winner of the 2013 Jan Whitwell Prize, Best presentation by a Bachelor's or Master's student at the New Zealand Association of Economists (NZAE) Annual Conference, Wellington 2013**

Athene Laws is an undergraduate economics and finance student at Victoria University (Wellington, New Zealand). To contact Athene, please email [Athene.Laws@gmail.com](mailto:Athene.Laws@gmail.com)

*A longer version of this paper is available as "The Distribution of Income and Fiscal Incidence by Age and Gender: Some Evidence from New Zealand" Working Paper 10/2013 at [www.nzpublicfinance.com/working-papers-in-public-finance-series](http://www.nzpublicfinance.com/working-papers-in-public-finance-series)*

# RESEARCH REPORT

## AFFORDING OUR FUTURE:

### Treasury's Third Statement on NZ's Long-Term Fiscal Position

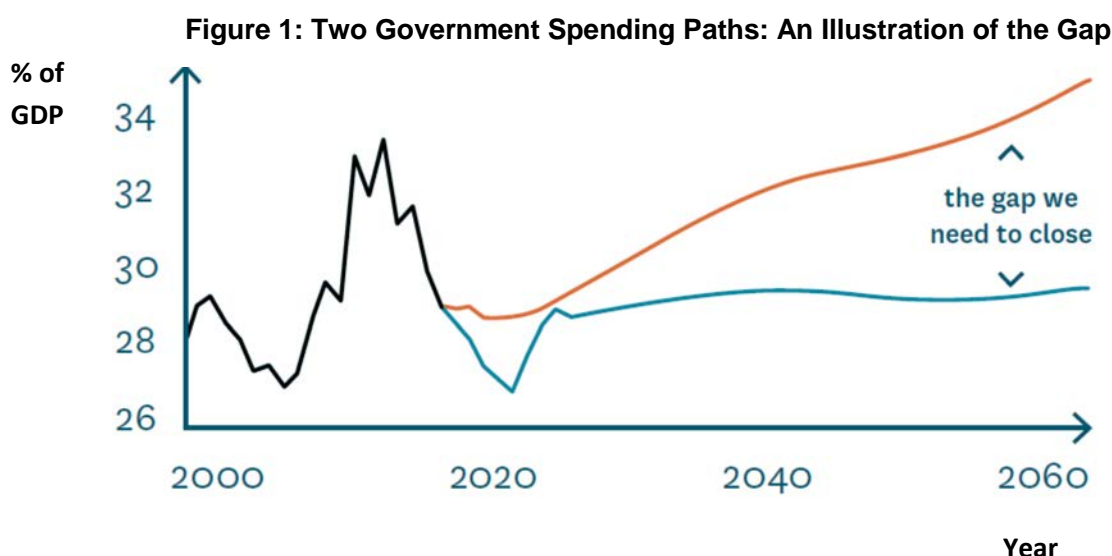
On average, we will likely be healthier, richer, and live longer in the future. But the future will also require some adjustments. Population ageing, rising demand for certain services, and increasing prices for those services mean that some things the government provides will become more expensive – indeed this process has already started. These cost pressures create a fiscal challenge, which a growing economy alone will not fix.

The Public Finance Act 1989 requires the Treasury to prepare a statement on New Zealand's long-term outlook for government finances at least every four years to discuss these issues. *Affording Our Future*, released on July 11<sup>th</sup>, is the Treasury's third such statement. It aims to give people a sense of the size of the fiscal challenge we face and what we might do to address it.

#### What is the long-term fiscal challenge?

One way of thinking about the size of the policy changes required is by comparing two spending paths. The first is the average spending path we might see if expense areas grow at historic growth rates, while taking into account expected demographic changes and current legislative settings (the orange line in Figure 1 below). The other is the average spending path that would allow us to maintain net government debt at an average of 20% of GDP from 2020 - used here as an illustration of a more sustainable path (the blue line in Figure 1). It is also assumed that our tax take remains constant at 29% of GDP, roughly consistent with recent history.

Figure 1 shows the two projected spending paths until 2060. The gap between them grows to over 5% of GDP by 2060. These are obviously "what if" scenarios, which are very sensitive to assumptions. But changing the assumptions within realistic bounds makes little difference to the overall message: some major expense categories are growing, and future governments won't be able to afford these if the same amount of tax is collected and adjustments aren't made.



So what is causing these overall spending pressures? The significant expense growth under the historic cost growth scenario can be attributed to two main areas of spending:

- Government spending on healthcare, projected to grow from 6.8% of GDP in 2010 to 10.8% of GDP in 2060.
- Gross spending on NZ Superannuation (NZS), projected to grow from 4.3% of GDP in 2010 to 7.9% in 2060.

Population ageing is one source of this growth, particularly in NZS where longer life expectancies raise the number of eligible recipients. But, also, non-demographic factors play a key role, especially in health. Population ageing only accounts for around a tenth of the projected expense growth in health spending, with the remainder arising from higher expectations of public health services associated with rising incomes and advancements in medical technology.

### **How should we meet the challenge?**

There is no perfect solution to the long-term fiscal challenge. We have choices. We could have lower spending growth in NZS or healthcare, as these are driving the pressures. Or we may wish to accommodate the pressures in these areas by having lower spending in others, such as education or justice. Alternatively, we could allow costs to grow as projected, and pay for it through higher taxes. Or we could do a bit of all three.

*Affording Our Future* and its supporting background papers canvass a range of policy options to help explain and share information about how we might afford our future.

The Statement illustrates that achieving a sustainable fiscal path won't be without trade-offs. For example, these might be trade-offs between fiscal sustainability and equity, between equity and economic growth, or between economic growth and social infrastructure. It uses the Treasury's Living Standards Framework to illustrate the different implications involved with the various options. The options which people prefer will depend on their judgements and what they see as the appropriate role of government. But, importantly, if we are aware of the trade-offs, we can make informed decisions about what is best for New Zealand overall.

No matter what policy changes society decide on, it is important that it decides early. Fiscal pressures are already starting to build, and acting early will avoid rising debt and interest payments that will grow rapidly and only add to the size of the adjustment required. The sooner we can address the pressures, the easier it will be.

**By Neil Cribbens**  
**Analyst, Macroeconomic and Fiscal Policy**  
**Member of the Long-Term Fiscal Policy Team, The Treasury**

*Affording Our Future*, along with a range of background papers that support the document, can be found on the Treasury website at [www.treasury.govt.nz](http://www.treasury.govt.nz).



# FEATURE

## The Long-Term Fiscal Calculator

The Long-Term Fiscal Calculator, launched in July on the New Zealand Public Finance website, has attracted numerous users who have identified how they would balance the government finances in the decades ahead. Have your go [here](#).

### What is the Long-Term Fiscal Calculator?

The Long-Term Fiscal Calculator has been created from the Treasury's Long-Term Fiscal Model with the aim of raising public awareness about the policy change options to retain a sustainable fiscal position over the long term – one that can withstand the increasing fiscal pressures facing New Zealand. Under current policy settings, population ageing and rising demand for certain services is projected to cause New Zealand Superannuation and public healthcare costs to grow significantly.

The Long-Term Fiscal Calculator projects government spending and revenue generated over the next forty years. It shows that, if spending grows in line with historical growth rates and demographic trends, and if the government is to maintain a net debt average of 20% of GDP, policy changes will be required. The dilemma is which policy changes to choose, to either generate more revenue or decrease expenditure or both. The Long-Term Fiscal Calculator invites users to make, and submit, their choices.

### How does it work?

As the website screenshot on the next page illustrates, users are given a range of revenue and spending options such as increasing GST, introducing a capital gains tax (excluding the family home), increasing health spending, allowing more funds for education, and so on. For the options that the user selects, a Beehive icon fills up by an appropriate percentage. The goal is to reach 100% - or to fill the Beehive – which means the user has successfully achieved a sustainable financial path for the government. In other words, the options the user has chosen, if implemented, are expected to allow the government to maintain a net debt average of 20% of GDP for the next 40 years while meeting the demands of an ageing population.

**By Cherry Chang**  
**Administrator, Chair in Public Finance**  
**Project Manager, Design & Launch of the Long-Term Fiscal Calculator**

The Long-Term Fiscal Calculator is an initiative of the Chair in Public Finance, Victoria University, in conjunction with The New Zealand Treasury who provided the background information and data. The options modeled in the calculator are based on policy papers the Treasury published in preparation for the 2013 Statement. These papers, each covering a different area of government spending or revenue, provide an overview of pressures expected within each policy area, as well as a range of options available to address them. Click [here](#) to view background materials.

# LONG-TERM FISCAL CALCULATOR

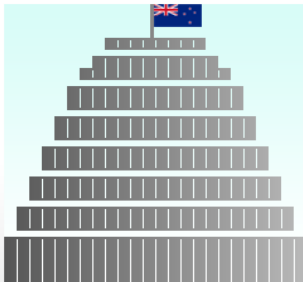
Home » Long-Term Fiscal Calculator

## How would you manage the government's future financial pressures?

It's easy. Simply:

1. Select the options you would choose to ease the financial pressures.
2. Watch as the Beehive icon gradually fills up. The percentages on the right-hand side indicate the proportion of the Beehive that each option will fill.
3. Once the Beehive is "full", you have successfully closed the long-term "gap" between revenue and expenses – i.e. you have returned the government's finances to a sustainable long-term path.
4. If you like, you can 'submit' these choices anonymously, recording your preferences for how governments should address future fiscal challenges. This will permit us to see how choices compare overall.

For more information on the long-term pressures, the Treasury's Long-Term Fiscal Statement, and the methodology used in this tool, click [here](#).



Your current selections:

Total **0%**

**RESET**

[Submit Results for Overall Comparison](#)

## Retirement Income

### Change eligibility age of NZS

- |   |            |
|---|------------|
| <input type="checkbox"/> <b>Raise Age to 67</b><br>This would reduce superannuation expenses, and could support economic growth through encouraging longer participation in the workforce.<br><br>However, it would hit certain groups harder, such as lower income people, Maori and Pasifica. They tend to work in more physically demanding jobs - restricting their ability to work to the eligibility age - and have lower life-expectancies, so the total amount of superannuation received over their lives would be reduced proportionately more. | <b>14%</b> |
| <input type="checkbox"/> <b>Raise Age to 70</b><br>This would have similar effects as raising the age to 67, but these effects would be larger.   | <b>41%</b> |

### Prefunding alternatives for NZS

- |  |            |
|--|------------|
| <input type="checkbox"/> <b>Compulsory private savings (4% from employers and employees), which are drawn down and part-substituted for NZS upon reaching the eligibility age</b><br>Over time, government superannuation expenses would reduce as people become able to pay for more of their own pension.<br><br>However, the government would not save money immediately, as it would take time for people's balances to build up. Also, mandatory savings contributions could reduce people's take home pay. The resulting reduction in take home pay could be particularly adverse for low-income families, and could discourage people from working.       | <b>62%</b> |
| <input type="checkbox"/> <b>Introduce a levy to increase contributions to the New Zealand Superannuation Fund</b><br>This would allow the government to save money to fund the future cost of NZS. Because this money would earn interest, the government would be able to collect less money than it pays out. Entitlements would not be affected. Economic growth will be supported by the higher national savings.<br><br>However, the levy would in effect be a tax increase, which could reduce take home pay and adversely affect low-income families. Also, there is a risk that future governments may be tempted to "raid" the fund for other purposes. | <b>63%</b> |

### Change the way the annual growth in NZS payments is calculated

- |   |            |
|---|------------|
| <input type="checkbox"/> <b>Remove the "wage floor" for NZ Superannuation (i.e. a slower growth rate for NZS payments)</b><br>Currently, NZS payments increase annually to ensure the married couple rate is at least two thirds of the average wage, through a "wage floor". This could be changed so that payments grow at a slower rate (e.g. at the rate of inflation). This would reduce the growth of NZS expenses over time.<br><br>Indexing NZ Super payments to inflation would mean that their real purchasing power would stay the same over time. However, since average wages tend to grow faster than inflation, retirees solely dependent on NZS would become worse-off relative to workers. | <b>61%</b> |
|---|------------|

**etc.**

# CONFERENCE REPORT

## Three Public Finance Conferences in Europe

As part of a trip to the UK and Italy during August and September this year, I attended three interesting public finance conferences.

First the **Annual Congress of the International Institute of Public Finance**, was held in Sicily at the end of August (yes, a bit too hot!). This year's theme was 'The Role of the State in Growth and Development'. There were several sessions and papers directly related to this theme, but also many more on broader tax or public finance topics. Several on 'behavioural responses to taxation' attracted my attention, especially one by Chris Heady (University of Kent, UK) on the question of "does tax planning always reduce the government's ability to tax the rich?". You might think the answer would be a simple 'yes'. But Heady shows that this is not necessarily the case if tax planning is more prevalent by those on higher incomes – a likely scenario!

<http://www.iipf.net/cng.htm>

I also spent two weeks at the Tax Administration Research Centre (TARC) at the University of Exeter (a new research centre sponsored by the UK's Economic & Social Research Council, and the UK's Revenue & Customs, and Treasury Departments. Two interesting, and quite different, conferences were held there.

The **Annual Conference of the Tax Research Network**, held at TARC in early September attracted a large number of Australasians including a few from VUW – NZPF Research Associates, Lisa Marriott and John Prebble, among them! This conference brings together tax specialists especially in Law and Accounting. Among the papers I found interesting were one by Lisa Marriott updating the conference on her research on differences in the criminal penalty regimes for 'blue-collar' and 'white-collar' crime, and a paper by Kevin Holland (Southampton University, UK) on comparing accounting income declared in companies' accounts with their declared taxable income. The two can differ substantially and persistently – though how far this is associated with tax planning is much harder to tell.

<http://trn.taxesage.co.uk/conference/>

The third conference, was held at the Department of Economics at the University of Exeter, and was their **Public Economics Conference**, 13-14 September. This was a much more narrowly focussed conference both in terms of discipline (economics) and with a leaning towards theory in particular. Contributors came mainly from the UK, US, and continental Europe, and topics covered property taxation, efficient taxation, local government and 'valuing natural capital'. One of the more intriguing papers – on "Happy Voters" (by Michela Redoano, University of Warwick, UK) – asked how far voting behaviour is influenced by the impact of government policy on voters' overall 'happiness', rather than the more narrow economic outcomes of policy. Her empirical answer was a definite 'yes' for at least some role for 'happiness' in voting choices.

And, in a short but challenging paper, Roger Gordon (UC, San Diego) asked: "When are 'Sufficient Statistics' Sufficient?". This is a reference to the recent literature on Feldstein's argument that, under some circumstances, the taxable income responses of taxpayers to changes in tax policy tell us all we need to know to evaluate their welfare effects. Gordon is quite skeptical of recent trends in this literature, concluding that "the hard work of analyzing the efficiency effects of tax reforms cannot be circumvented through an appeal to the elegant theory of Feldstein's".

<http://business-school.exeter.ac.uk/events/conferences/publiceconomicsconference/> .

By Norman Gemmill, Chair in Public Finance, Victoria Business School

# UPCOMING EVENTS

## Public finance events in New Zealand and Australia

**26-28 Nov 2013**

**[Workforce Planning for the Public Sector](#)**

Rydges Lakeside, Canberra, Australia

*Fee required*

**2 December 2013, 4:00-5:30pm**

**[Public Finance Debate 3: 'It's time...NZ adopted a social insurance approach to welfare'](#)**

Victoria University, Old Government Buildings, 15 Lambton Quay, Wellington, Lecture Theatre 1

Organised by Chair in Public Finance, Victoria University & Government Economics Network (GEN)

*Free event*

**6 December 2013, 9:00-4:30pm**

**[Understanding Public Sector Finance](#)**

Victoria University, Old Government Buildings, 15 Lambton Quay, Wellington

Organised by Victoria University

*\$675 excl GST*

# WORKING PAPERS IN PUBLIC FINANCE

Latest papers from the Victoria University series available on the NZPF website

WP01/2013

Gemmell, N., Kneller, R., McGowan, D., Sanz, I. and Sanz-Sanz, J. F., ['Corporate Taxation and Productivity Catch-Up: Evidence from European Firms'](#)

Firms that lie far behind the technological frontier have the most to gain from imitating the technology or management practices of others. That some firms converge relatively slowly to the productivity frontier suggests the existence of factors that cause them to underinvest in their productivity. In this paper we explore how far higher rates of corporate taxation affect firm productivity convergence by reducing the after tax returns to productivity enhancing investments for small firms. Using data for 11 European countries we find evidence for such an effect; productivity growth in small firms is slower the higher are corporate tax rates. Our results are robust to the use of instrumental variable and panel data techniques with quantitatively similar effects found from a natural experiment following the German tax reforms in 2001.

WP02/2013

Gemmell, N., Kneller, R. and Sanz, I., ['The Growth Effects of Tax Rates in the OECD'](#). \*Recently listed on SSRN's Top Ten download list for: *ERN: Economic Growth (Econometrics)* - 23/06/13

The literature testing for aggregate impacts of taxes on long-run growth rates in the OECD has generally used tax rate measures constructed from macroeconomic aggregates such as tax revenues. These have a number of advantages but two major disadvantages: they are typically *average*, rather than *marginal*, rates, and are constructed from endogenous tax revenues. Theory predicts a number of responses to both average and marginal tax rates, but empirical analogues of the latter tend to be at the micro level. In addition though most OECD economies are best regarded as small open economies, previous macroeconomic tests of OECD tax-growth relationships have implicitly been based on closed-economy models, focusing on domestic tax rates. This paper explores the relevance of these two aspects – „macro average“ versus „micro marginal“ tax rates, and open economy dimensions – for test of tax-growth effects in OECD countries. We use annual panel data on a number of average and marginal tax rate measures and find:

- (i) statistically small and/or non-robust effects of macro-based average tax rates on capital income and consumption but more evidence for average labor income tax effects;
- (ii) statistically robust GDP growth effects of modest size from changes in marginal income tax rates at both the personal and corporate levels;
- (iii) international tax competition, in which both domestic *and* foreign corporate tax rates play a role, is consistent with the data;
- (iv) tax effects on GDP growth appear to operate largely via impacts on factor productivity rather than factor accumulation.

### **WP03/2013**

Creedy, J. and Gemmell, N., ['Can Automatic Tax Increases Pay for the Public Spending Effects of Population Ageing in New Zealand?'](#)

This paper examines the extent to which projected aggregate tax revenue changes, association with population ageing over the next 50 years, can be expected to finance expected increases in social welfare expenditures. Projections from two separate models, dealing with social expenditures and income tax and GST revenue, are used. The results suggest that the modest projected required increase in the overall average tax rate over the next 50 years can be achieved automatically by adjusting income tax thresholds using an index of prices rather than wages. Based on evidence about the New Zealand tax system over the last 50 years, comparisons of average and marginal tax rates suggest that such an increase may be feasible and affordable. The paper discusses the range of considerations involved in deciding if this automatic increase in the aggregate average tax rate, via real fiscal drag of personal income taxes, is desirable compared with alternative fiscal policy changes.

### **WP04/2013**

Creedy, J., ['The Elasticity of Taxable Income, Welfare Changes and Optimal Tax Rates'](#)

This paper provides a technical introduction to the use of the elasticity of taxable income in welfare comparisons and optimal tax discussions. It draws together, using a consistent framework and notation, a number of established results concerning marginal welfare changes and optimal taxes, in addition to presenting some new results, particularly in terms of non-marginal tax changes.

### **WP05/2013**

Ball, C. and Creedy, J., ['Population Ageing and the Growth of Income and Consumption of Tax Revenue'](#)

This paper investigates the implications of population ageing and changes in labour force participation rates for projections of revenue obtained from personal income taxation and a consumption tax (in the form of a broad-based goods and services tax). A projection model is presented, involving changing age-income profiles over time for males and females. The model is estimated and applied to New Zealand over the period 2011-2062.

### **WP06/2013**

Ball, C. and Creedy, J., ['Tax Policy with Uncertain Future Costs: Some Simple Models'](#)

This paper considers the extent to which the standard argument, that the disproportionate excess burden of taxation suggests the use of tax-smoothing in the face of future cost increases, is modified by uncertainty regarding the future. The role of uncertainty and risk aversion are examined using several highly simplified models involving a possible future contingency requiring an increase in tax-financed expenditure.

### **WP07/2013**

Creedy, J. and Makale, K., ['Social Expenditure in New Zealand: Stochastic Projections'](#)

This paper presents stochastic projections for 13 categories of social spending in New Zealand over the period 2011-2061. These projections are based on detailed demographic estimates covering fertility, migration and mortality disaggregated by single year of age and gender. Distributional parameters are incorporated for all of the major variables, and are used to build up probabilistic projections for social expenditure as a share of GDP using simulation methods, following Creedy and Scobie (2005). Emphasis is placed on the considerable uncertainty involved in projecting future expenditure levels.

### **WP08/2013**

Aziz, O., Carroll, N. and Creedy, J., ['An Analysis of Benefit Flows in New Zealand using a Social Accounting Framework'](#).

This paper presents a social accounting model to examine the entrants, exits and transitions of individuals among a wide range of benefit categories in New Zealand. Transition rates and flows are estimated separately for periods before the global financial crisis (GFC) and periods following the crisis. The data were obtained from the Benefit Dynamics Dataset maintained by the Ministry of Social Development. The model is used to examine, using simulations, the implications for the time profile of changes in the stock of benefit recipients under a range of counterfactual situations. It is suggested that the model can provide a useful tool for policy analysis.

### **WP09/2013**

Creedy, J., ['Alternative Distributions for Inequality and Poverty Comparisons'](#)

This paper provides an introductory review of the alternative possible income distributions which can be used when making cross-sectional evaluations of the effects of taxes and transfers using a household economic survey. This paper attempts to clarify the various alternatives, both for users of data and those wishing to interpret results. Special attention is given to the choice of income unit. The need to avoid spurious comparisons is stressed. The use of adult equivalence scales and the application of an explicit sharing rule are considered. Comparisons over time, where both the tax structure and the populations differ, are also considered. Numerical examples are used to highlight the alternative approaches and distributions.

## WP10/2013

Aziz, O., Gemmell, N. and Laws, A., ['The Distribution of Income and Fiscal Incidence by Age and Gender: Some Evidence from New Zealand'](#)

This paper examines the age and gender dimensions of income distribution and fiscal incidence in New Zealand using Household Expenditure Survey (HES) data for 2010 and a non-behavioural micro-simulation model. Since many fiscal policies are likely to have quite different incidences across age groups and genders, and with population ageing changing the age and gender composition of the voting population in many countries, age/gender dimensions of fiscal incidence become increasingly relevant. While this single 'age distribution snapshot' cannot fully capture lifecycle incidences, it avoids the complex and uncertain assumptions implicit in the latter and is an important component of lifetime redistribution calculations. We explore alternative methods of intra-family allocation of resources including 'unequal share' assumptions based on recent research into how families allocate their spending. Our evidence, which in general is not highly sensitive to sharing assumptions, suggests a strong 'life cycle' aspect to fiscal incidence whereby net tax liabilities are low, and generally negative, at younger and older ages but positive during much of the 'working age' period. Women, on average, are found to have a systematically and persistently lower net fiscal liability than men, most pronounced at older ages when greater female longevity exercises a strong influence. Nevertheless, considerable heterogeneity of fiscal incidence for both men and women is observed with the distributions of various fiscal incidence measures showing substantial overlap.

## WP11/2013

Gemmell, N. and Hasseldine, J., ["Taxpayers' Behavioural Responses and Measures of Tax Compliance 'Gaps': A Critique"](#)

The work of Feldstein (1995, 1999) has stimulated substantial conceptual and empirical advances in economists' approaches to analysing taxpayers' behavioural responses to changes in tax rates. Meanwhile, a largely independent literature proposing and applying alternative measures of tax compliance has also developed in recent years, which has sought to provide tax agencies with tools to identify the extent of tax non-compliance as a first step to designing policies to improve compliance. In this context, measures of 'tax gaps' – the difference between actual tax collected and the potential tax collection under full compliance with the tax code – have become the primary measures of tax non-compliance via (legal) avoidance and/or (illegal) evasion. In this paper we argue that the tax gap as conventionally defined is conceptually flawed because it fails to capture behavioural responses by taxpayers. We show that, in the presence of such behavioural responses, tax gap measures both for indirect taxes (such as the 'VAT-gap') and direct (income) taxes exaggerate the degree of noncompliance. Further, where these conventional tax gap measures motivate reforms designed to increase the tax compliance rate, they will likely have a tax base *reducing* effect and hence generate a smaller increase in realised tax revenues than would be anticipated from the tax gap estimate.

## WP12/2013

Fabling, R., Gemmell, N., Kneller, R. and Sanderson, L., ['Estimating Firm-Level Effective Tax Rates and the User Cost of Capital in New Zealand'](#)

Effective marginal tax rates can be very different from the statutory rate and vary across firms, reflecting such factors as the extent and nature of taxable deductions (losses, depreciation), asset and ownership structures, and debt/equity financing. We estimate firm-specific EMTRs and related user cost of capital (UCC) measures allowing for shareholder-level taxation using data for 2000-2010 from the Longitudinal Business Database. Examining distributions of various UCC measures we find substantial firm-level heterogeneity; systematic changes as a result of tax reforms between 2004 and 2011; and systematic differences between foreign owned and domestically-owned firms. Choices among alternative UCC measures make a difference to interpretations.



# RECENT PUBLICATIONS

## Recent publications by NZPF Research Associates (in bold)

**Creedy, J.**, Halvorsen, E. and Thoresen, T.O. (2013), 'Inequality Comparisons in a Multi-Period Framework: The Role of Alternative Welfare Metrics', *Review of Income and Wealth*, 59, no. 2, pp.235-249. Working Paper Version: *Working Papers in Public Finance Series* [WP08/2012](#)

**Gemmell, N.** and Au, J. (2013), '[Do Smaller Governments Raise the Level or Growth of Output? A Review of Recent Evidence](#)', *Review of Economics*, vol 64, issue 2, 85-116.

**Gemmell, N.** and Au, J. (2013), 'Government Size, Fiscal Policy and the Level and Growth of Output: A Review of Recent Evidence', *Journal of the Asia Pacific Economy*, 18, Apr, 203-209. Working Paper Version: *Working Papers in Public Finance Series* [WP10/2012](#)

**Gemmell, N.**, **Kneller, R.** and **Sanz, I.** (2013), 'Fiscal Decentralization and Economic Growth: Spending Versus Revenue Decentralization', *Economic Inquiry*, vol. 51, issue 4, 1915-1931. Published [on-line, January 2013](#).

**Marriott, L.** (2013), Partnerships and Trusts, In New Zealand Taxation: Principles, Cases and Questions, *Thomson Reuters*, Wellington, pp.633-666.

**Misch, F.**, **Gemmell, N.** and **Kneller, R.** (2013), '[Growth and Welfare Maximization in Models of Public Finance and Endogenous Growth](#)', *Journal of Public Economic Theory*, 15 (6), 939-967.

**O'Connell, A.** (2013). "[Longevity trends and their implications for the age of eligibility for New Zealand Superannuation](#)." Wellington: Commission for Financial Literacy and Retirement Income.

**O'Connell, A.** (2013). "[Submission in response to Discussion Document "Flexible Superannuation"](#)" to the New Zealand Treasury.

# USEFUL LINKS

## Institutions Working on Public Finance Research or Policy

### In New Zealand

1. [Centre for Accounting, Governance & Taxation Research \(CAGTR\) & Chair in Public Finance \(CPF\)](#)

*Victoria University of Wellington*

“The CAGTR was established within the School of Accounting and Commercial Law to advance and apply knowledge germane to the accounting and legal professions, commerce and industry and the public sector.”

“The Chair in Public Finance (CPF) is a joint venture between Victoria University and four sponsoring institutions with an interest in public finance -PricewaterhouseCoopers, the Inland Revenue Department, The Treasury and the Ministry of Social Development.” The Chair conducts research and organises events to increase awareness and discussion around public finance issues.

2. [Retirement Policy & Research Centre \(RPRC\)](#)

*The University of Auckland*

“The Retirement Policy and Research Centre (RPRC) is an academically focused centre specialising in the economic issues of demographic change.”

### Overseas

1. [CESifo Group Munich](#)

*Munich, Germany*

Centre for Economic Studies, the ifo Institute and the Munich Society for the Promotion of Economic Research in Germany

2. [London School of Economics Public Economics Programme \(PEP\)](#)

*London, UK*

The PEP’s activities include “theoretical and empirical work on the economics of taxation, the provision of public goods, social insurance and the economics of income distribution.

3. [Oxford University Centre for Business Taxation](#)

*Oxford, UK*

“The Oxford University Centre for Business Taxation is an independent research centre which aims to promote effective policies for the taxation of business.”

4. [University of Exeter, Tax Administration Research Centre](#)

*Exeter, UK*

“The Tax Administration Research Centre undertakes research on tax administration in order to strengthen the theoretical and empirical understanding of tax operations and policies. The Centre is operated in partnership by the University of Exeter and the Institute for Fiscal Studies.”

---

# Public Finance Journals

1. [International Tax and Public Finance](#)
2. [Journal of Public Economics](#)
3. [Journal of Public Economic Theory](#)
4. [National Tax Journal](#)
5. [Public Finance Review](#)
6. [Public Finance and Management](#)
7. [Tax Notes International](#)
8. [FinanzArchiv](#)

the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million (12% of the population).

There are a number of reasons for this increase. One is that the public sector has become a more important part of the economy. Another is that the public sector has become more efficient. A third is that the public sector has become more attractive to workers. A fourth is that the public sector has become more diverse.

The public sector has become a more important part of the economy. In 1990, the public sector accounted for 10.5 million jobs, or 12% of the total workforce. By 2000, this had increased to 12.5 million jobs, or 14% of the total workforce.

The public sector has become more efficient. In 1990, the public sector spent £100 billion on goods and services. By 2000, this had increased to £120 billion, but the number of jobs had only increased by 20%.

The public sector has become more attractive to workers. In 1990, the public sector was seen as a 'safe' place to work. By 2000, it was seen as a place where workers could enjoy a good work-life balance.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.

The public sector has become more diverse. In 1990, the public sector was dominated by men. By 2000, women had become a significant part of the public sector workforce.