NEW ZEALAND PUBLIC FINANCE

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Editorial

Welcome to the latest issue of the New Zealand Public Finance Newsletter. How often do major unexpected shocks hit the global or New Zealand economies? Leading up to the last issue it was the Brexit news that came out of the blue generating economic uncertainty, not to mention political upheaval in Europe. This time, we have witnessed the election of Donald Trump in the US and the Kaikoura earthquake.

Both will undoubtedly have public finance consequences in each country. Here, new Prime Minister English is already signalling that tax cuts before the 2017 election look less likely than before. In truth, as Minister of Finance he seemed less of an enthusiast anyway.

But this issue reports some unanticipated positive shocks too! In September, John Creedy received the 2016 NZIER Economics Award; it's great to see his huge contribution to New Zealand public finance recognised in this way. John has spent two spells at The Treasury working mainly on tax policy and research and is currently also a part-time professor at Victoria University. This issue reproduces John's NZIER citation and his response.

A second piece of good news was the award of an MBIE 'Smart Ideas' research grant to Victoria University (principal investigators: Norman Gemmell and John Creedy) to help build new behavioural models of the New Zealand income tax system. We will be working closely with modellers at The Treasury and Inland Revenue over the next three years to deliver these new models, and benchmarking them against best practice overseas.

This modelling work will involve working closely with collaborators at the Melbourne University's Institute of Applied Economic & Social Research. In this issue Drs Guyonne Kalb and Nicolas Hérault introduce us to the Institute's work on taxation and labour markets.

This issue also includes a summary by Paul Conway on the Productivity Commission's latest firm-level research into New Zealand's productivity record. While that record remains something of a puzzle, at least now we are getting a fuller diagnosis of where the problems lie. A first step to a policy solution, surely?

Last, but by no means least, Public Finance People this issue profiles two prominent international tax experts who visited Wellington this month to deliver a Tax Compliance Masterclass. They are Professor Gareth Myles from the University of Exeter, UK and Professor James Alm from Tulane University, New Orleans, USA. The masterclass took place over two days at the Wharewaka with around 40 participants, many (not surprisingly) from Inland Revenue! It proved to be highly informative and thought-provoking.

We hope that, like us, you are now looking forward to a well-earned summer break. We will be back with another Newsletter in the Autumn, hopefully without any further disturbing shocks in the meantime! Happy Christmas everyone.

Fiona Taylor
Editor, NZPF Newsletter

Norman Gemmell
Chair in Public Finance, VUW

Public Finance People

Professor James Alm & Professor Gareth Myles

A brief profile of contributors to public finance in New Zealand.

This issue we highlight two prominent international public finance scholars who are visiting New Zealand in December this year to deliver a tax compliance masterclass at Victoria Business School – Professor James Alm from Tulane University in New Orleans, USA, and Professor Gareth Myles from the University of Exeter, UK. – Ed.

Professor James Alm

I began my study of economics at Earlham College, with a B.A. in chemistry and economics, followed by a Masters in economics at the University of Chicago in 1974. I then completed my doctorate at the University of Wisconsin-Madison in 1980. Following early academic appointments at Syracuse University and the University of Colorado at Boulder, I moved to Georgia State University in Atlanta in 2000 as Regents Professor in the Department of Economics at the Andrew Young School of Policy Studies. While there I also served as Chair of the Department and as Dean of the School. After a decade in Atlanta, in 2010 I moved to New Orleans to my current position of professor and chair of the department of economics at Tulane University.

My teaching and research interests are primarily in the area of public economics. Much of my research has examined the responses of individuals and firms to taxation, in such areas as tax compliance, the tax treatment of the family, income reporting, tax reform, social security, housing, indexation, and tax and expenditure limitations. My research has been published in a variety of leading economics journals such as the American Economic Review, Journal of Public Economics, Review of Economics and Statistics, the National Tax Journal, and Public Finance Review. I have also authored ten books, including the recently published The Economics of Taxation and Behavioral Responses to Taxation. For several years I have been the editor of Public Finance Review, I am on the editorial board of several other economics journals, and I am currently the President of the Southern Economic Association in the US.

Studying tax reform has been a particular interest, working on numerous US state tax reforms, including a recent study for Louisiana. But I have also worked extensively on overseas tax reforms, often with an emphasis on decentralization. A strong focus has been on developing countries including reforms in Asia (e.g., Bangladesh, China, India, Indonesia, Pakistan the Philippines), Africa (e.g. Egypt, Nigeria, South Africa, Tunisia, Uganda) and Central/South America (e.g. Colombia, Grenada, Jamaica, Puerto Rico).

Professor Gareth Myles

I obtained my B.A. in Economics from the University of Warwick in 1983 and was fortunate to take lectures in public economics from Nick Stern and economic theory from Kevin Roberts. This was followed by an M.Sc. in Economics from the London School of Economics in 1984 with lectures from Tony Atkinson, Oliver Hart, Ken Binmore, and (unforgettably) Michio Morishima. I completed my D.Phil. in 1987 at Nuffield College, Oxford, with James Mirrlees as supervisor. My dissertation analyzed the design of the commodity tax structure in the presence of imperfect competition and product differentiation. While in Oxford I also worked as a research assistant for W.M. ("Terence") Gorman which lead to my first publication on the characteristics model.

My first appointment was as a lecturer at the University of Warwick from 1987 until 1992. I then moved to the University of Exeter as a senior lecturer and was promoted to professor in 1995. I have been a Research Fellow at the Institute for Fiscal Studies since 1998 and at CESifo since 2014. I founded the Tax Administration Research Centre with funding from the ESRC, HMRC, and HMT in partnership with the Institute of Fiscal Studies in January 2013 and have been the director since then. In January 2017 I will be moving to the University of Adelaide to become the Head of the School of Economics.

My major research interest has always been in public economics, particularly taxation and public goods. I initially worked on optimal taxation but much of my recent work has been focused on tax compliance. There has also been a steady flow of papers on issues in international taxation. Initially the focus of these papers was the choice between origin and destination principles but more recently I have worked on tariff regimes and imperfect competition. I have also worked on the public economics of growth. The tax compliance work has included theoretical papers, experiments, applied econometrics, and agent-based modelling. The latter is a relatively new technique for economists which has yet to be accepted into the mainstream economist's toolkit.

Alongside the research work I have also been involved in academic journals. I was a managing editor of Fiscal Studies from 1998 to 2013 and this year became a managing editor of the Journal of Public Economic Theory and vice president of the Association of Public Economic Theory. I also founded the Journal of Tax Administration and remain on the journal's advisory board. I have acted an Academic Adviser to HM Treasury and HM Revenue and Customs and have also provided economic advice to international bodies including the European Commission and the OECD.

Research

Public Finance Research at the Melbourne Institute

Nicolas Hérault and Guyonne Kalb

As part of our series of short articles about public finance research around the world we invited Nicolas Hérault and Guyonne Kalb, respectively Senior Research Fellow and Professorial Research Fellow at the Melbourne Institute of Applied Economic and Social Research to share with us some of the public finance related research being done there. – Ed.

The Melbourne Institute of Applied Economic and Social Research (or Melbourne Institute in short) involves itself in a broad range of applied research with policy relevance. A number of researchers are involved in tax and transfer related research, as well as research on income distribution and inequality, and policy evaluation. This article highlights the work of two researchers: Guyonne Kalb (Professorial Research Fellow and Director of the Labour Economics and Social Policy Programme) and Nicolas Hérault (Senior Research Fellow). Both researchers have played a major role in the development and maintenance of the Melbourne Institute Tax and Transfer Simulator (MITTS).

MITTS is an Australian microsimulation model that combines a tax-benefit calculator (predicting morning-after effects of tax and income support reforms) and a behavioural component (predicting the effects of these reforms on labour supply responses of individuals) so that a range of outcomes from tax and transfer policy reform can be estimated with and without accounting for labour supply responses.[1] The focus of research has been mostly around the behavioural component, and aims to incorporate the full effect of labour responses to tax reforms by including changes in "leisure" time as well as income in the welfare measures used in MITTS to assess reforms. Below we describe one of the research projects making use of this microsimulation tool.

Aside from analyses of tax and transfer reforms in Australia, the Labour Economics and Social Policy team is also involved in assessing the impact of other types of policy changes on labour market outcomes. An example, discussed in more detail below, is the evaluation of Paid Parental Leave introduced in Australia in 2011. Other examples are the impact of the Work for the Dole programme on the exit rate of income support recipients[2], or the impact of an intensive programme supporting homeless persons in retaining housing and ultimately employment.[3]

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[1] See http://melbourneinstitute.com/labour/research-topics/microsimulation/mitts.html for more information.

[2] See Borland, J. and Tseng, Y.-P. (2011) Does 'Work for the Dole' work?: an Australian perspective on work experience programmes, *Applied Economics*, 43(28), 4353-4368.

[3] See https://www.sacredheartmission.org/sites/default/files/publication-documents/j2si_sustaining_exits_from_longterm_homelessness_2015.pdf

Tax and Labour Market Research – Some Recent Examples

Recent trends in income distribution and redistribution in Australia: how much did fiscal policy reforms contribute to the rise in income inequality?

In recent decades, income inequality has increased in many developed countries. Although fiscal policies are the main tools available to policymakers to address widening inequality, there is mounting evidence that taxes and transfers have become less effective at redistributing income. We examine recent trends in income inequality and income redistribution in Australia and develop a new decomposition framework based on a microsimulation model to explore the many potential factors underlying these trends.

What is particularly striking in the Australian case is that the increase in disposable income inequality occurred despite a concomitant reduction in market (i.e. pre-tax pre-transfer) income inequality. How could disposable income inequality increase in this context?

Our results show that Australia's tax and transfer system has become less effective at redistributing income over the last two decades and that policy reforms over that period contributed to that change.

Focussing more specifically on the period between 1999/2000 and 2007/08, when most of the inequality changes occurred, the novel decomposition explains the apparent Australian paradox of the concomitant reduction in market income inequality and increase in disposable income in the following way. The main driver behind the reduction in market income inequality was the booming labour market that led to a sharp decline in the unemployment rate and to an increase in employment rates. Everything else being equal, this should have led to a reduction in disposable income inequality. Instead, disposable income inequality increased and we show that half of that increase was due to the tax and transfer policy reforms, and in particular to successive tax cuts, implemented during the 1999-2008 period. This was the single most important factor our study identified, although we found evidence that the increased dispersion of wages and capital income also played a significant role in widening both market and disposable income inequality.

For more detail on this research, see:

- Hérault, N. and Azpitarte, F. (2016). Understanding Changes in the Distribution and Redistribution of Income: A Unifying Decomposition Framework, *Review of Income and Wealth*, 62(2), 266-282.
- Hérault, N. and Azpitarte, F. (2015). Recent Trends in Income Redistribution in Australia: Can Changes in the Tax-Benefit System Account for the Decline in Redistribution?, *The Economic Record*, 91(292), 38-53.

The Impact of Paid Parental Leave on Labour Supply and Employment Outcomes

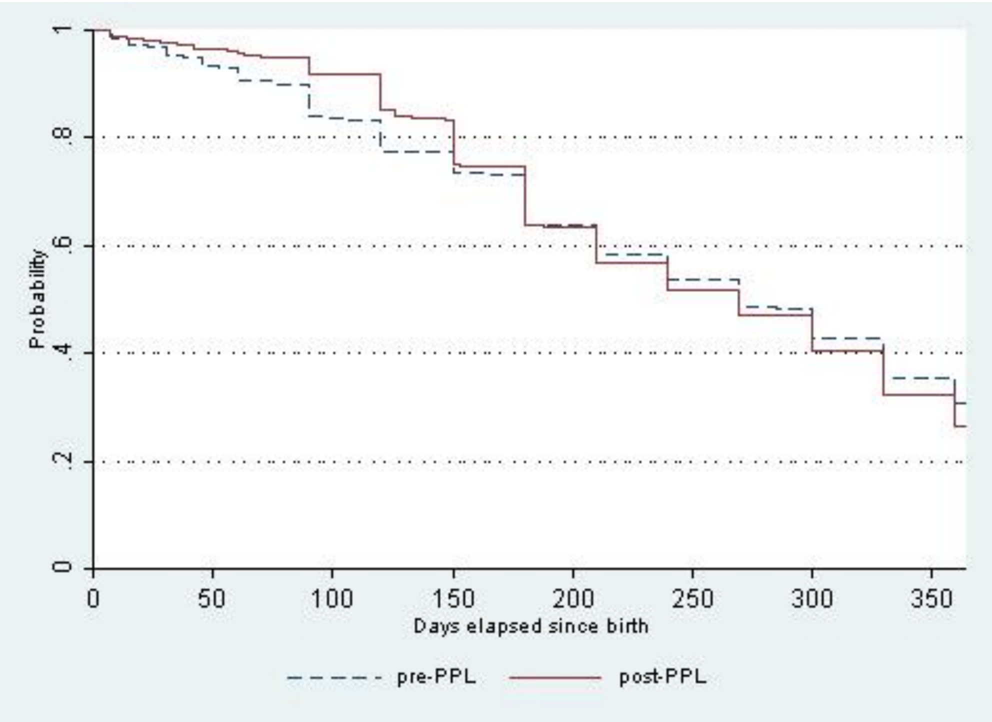
Until 2011, there was no universal paid parental leave in Australia. Only 56.8 per cent of employed women aged 20 to 45 in Australia had access to paid parental leave provided by their employer. This was also not distributed evenly across all women, but concentrated amongst those with fixed-term or permanent work, on above-median wages, in full-time employment, with higher education, and in professional occupations. Overall, more advantaged women were more likely to have access to paid parental leave than less advantaged women.

The introduction of the Australian Paid Parental Leave (PPL) scheme in 2011 provides a rare opportunity to estimate the labour supply and employment impacts of a publicly-funded paid leave of modest duration and payment level on mothers in the first year post-partum. In most other developed countries, paid parental or maternity leave had been introduced a long time ago, and is more generous in nature. With the US, the only developed country not to have a universal paid parental leave scheme, debating its introduction, analysis of the Australian scheme is timely.

We examine the impact of PPL on the timing of returning to employment by the mother, the proportion that returned to employment within one year, and the proportion that returned to their pre-birth employer and/or job.

In line with much of the existing literature, we find that post-PPL mothers initially return to work more slowly, but that the return to work speeds up later so that they catch up by the middle of the first year, and by the end of one year more post-PPL mothers than pre-PPL mothers have returned to work.

Figure 1 Survivor function of being out of work by access to PPL - Kaplan Meier estimate



Source: Baseline Mothers Survey (BaMS) and Family and Work Cohort Study (FaWCS) wave 1 and wave 2, own calculations.

The paper provides new evidence of a positive impact on continuing in the same job and under the same conditions. Further new evidence shows that the mothers' characteristics matter for the impact of the scheme. We find that labour market impacts of the PPL scheme are stronger for lower-educated than for higher-educated women. In addition, we find that impacts are stronger for low-income women, for those *not* eligible for *employer-provided* paid leave, for self-employed women and for women on casual contracts. This provides support for hypothesis that paid leave schemes are more likely to affect disadvantaged groups of women than more advantaged women.

A stronger attachment to employment is just one of the potential benefits of paid parental leave, it also encourages longer periods of breastfeeding, and has potentially positive impacts on maternal and child mental and physical health. Furthermore, the impacts are likely to continue beyond the first year after birth.

For more detail on this research see:

- Broadway, B., Kalb, G., McVicar, D., Martin, B. (2016) The Impact of Paid Parental Leave on Labour Supply and Employment Outcomes. Melbourne Institute Working Paper No. 9/16 (http://melbourneinstitute.com/downloads/working_paper_series/wp2016n09.pdf).

Nicolas Hérault is a Senior Research Fellow at the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne, which he joined in 2007. He holds a PhD and a Master's degree in economics from the University of Bordeaux (France). Nicolas' research interests include labour economics, tax and transfer policies, education economics, welfare economics, development economics, microsimulation modelling and micro-macro modelling. Nicolas is responsible for the day-to-day management of the Melbourne Institute Tax and Transfer Simulator (MITTS).

Guyonne Kalb is a Professorial Research Fellow and Director of the Labour Economics and Social Policy Program in the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne. She has a PhD in Econometrics from Monash University. Her research interests are mainly in the field of micro-economics, and include: labour supply issues, in particular female labour supply; the interaction of labour supply, social security and taxation; labour supply and childcare; and the impact of childcare/parental activities on child development and health. Her work is well-cited and includes more than 50 refereed publications in national and international journals, in addition to numerous (government) reports.

Feature

Bill English as Finance Minister, 2008-2016: From 'English Patient' to English Legacy

Norman Gemmell

Well, Bill English has gone. But 'up' (to the ninth floor) rather than 'out'. After eight successive years as Minister of Finance, he hands over the portfolio to Steven Joyce. Now seems like a good time to ask whether those successive years were also successful ones?

Remember what he inherited. An economy in mid-2008 already showing signs of heading into a slowdown if not a recession, which was then hit in late 2008 by the global financial crisis (GFC). No sooner was Mr English getting into the swing of his portfolio and planning his first-term achievements than the GFC put a dramatic brake on tax revenue growth and raised recessionary expenditures through unemployment and social welfare benefits. By 2010, Mr English's deteriorating fiscal health may not have quite resembled that of Ralph Fiennes' character in The English Patient, but it certainly was not looking like recovery would happen any time soon.

The budget balance rapidly shifted from a healthy net debt position of five percent of gross domestic product (GDP) inherited from Labour Finance Minister Michael Cullen in 2008 to 20 percent within three years. It peaked at over 25 percent in 2013 boosted by the unwelcome spending shock from the Canterbury earthquakes. But, as we all now know, with determination deficits were brought under control, debt is on a downward track and the Treasury now (2016 Half Year Economic and Fiscal Update) forecasts net debt reaching 19 percent by 2021.

This is no mean achievement. Cutting government debt in good economic times is difficult enough for Finance Ministers, who invariably face Cabinet colleagues who want to spend more but resist any tax increases. But for Mr English to cut government debt in the difficult economic times of GFC and after was a much bigger challenge. That he achieved it without much, if any, resistance from his own party (and little from the political left) will mark him out as an especially successful Finance Minister, both politically and fiscally.

And remember, this was all done while delivering in 2010 what has been described as the "biggest tax reform for a generation" and radically restructuring public spending. First he challenged public servants to deliver more for less (perhaps not too difficult given the profligate expansion under Dr Cullen) and then refocus social spending to where his new data-driven social investment approach suggests it can be most effective.

If you doubt these represent a major 'English legacy'—debt reduction, tax reform and public sector restructuring—you only have to look at the fiscal efforts, or lack of, in some other countries over this period.

Since the GFC, European countries have struggled to muster any kind of fiscal recovery. Their pre-GFC debt-fuelled public sector expansion set the scene for major post-GFC tussles with financial markets. Now lending to European governments is no longer seen as a risk-free investment and the Euro-zone in particular continues to keep its head firmly in the sand of unsustainable fiscal policies.

As for tax reform, can anyone name an OECD (or indeed any) country other than New Zealand that has undertaken a major, principles-based tax reform since the GFC, despite their various fiscal crises crying out for a more efficient tax system?

Faced with growing fiscal deficits, almost no OECD government has had the courage to risk their political capital with the electorate by doing anything other than raise tax rates on the highest earners. The latter, of course, is an easy vote winner with the middle income majority during an economic crisis.

In 2009-11, Australia, New Zealand and the United Kingdom each undertook major reviews of their tax systems generating clear recommendations for improvement. Yet only the New Zealand government had the courage to respond comprehensively. Instead Australia lurched headlong into a politically crazy 'resource rents tax' on the mining industry, while Chancellor of the Exchequer George Osborne ignored the UK's tax system deficiencies. Instead he performed more budgetary backflips than an Olympic diver, which did nothing to improve the fiscal position.

But if Prime Minister English is proud of himself for anything, I suspect it might be the social investment approach to spending he initiated. It seems genuinely to reflect his social conscience and a desire to leave a legacy that commentators from both the political left and right will eventually (if not yet) acknowledge as a significant and worthy reform. If so, it will have been achieved despite the initial foot-dragging of his own public service advisers, many of whom even now appear to be half-hearted in their support of the process.

It is always dangerous to try to reach a verdict on any Minister's public achievements as soon as his or her term of office comes to an end. But eight years since Mr English was handed the fiscal reins is plenty of time to build a legacy.

So while his social investment approach to welfare and other spending is perhaps too soon in the making to allow judgments on its success, a verdict on his handling of the country's public debt and tax system can certainly be reached.

In my view, these will likely remain as signal achievements of his time in office while facing significant economic headwinds and a Prime Minister at the time whose appetite for anything radical seemed lacking. By persuading John Key and the rest of Cabinet to risk a voter backlash when he made tax the centrepiece of his 2010 Budget, Mr English risked his own Ministerial and political future.

Instead, if rumours are to be believed, not only did Mr Key bask in the unexpected glow of positive publicity that followed the 2010 reforms, apparently he was up for a repeat performance in 2011. Perhaps wisely, they decided one big tax reform success in a parliamentary term is about as many as you can expect. But it certainly should be regarded as a major English legacy.

A shorter version of this article appeared in the New Zealand Herald on 20th December 2016.

Feature

Below we reproduce the citation by the New Zealand Institute of Economic Research (and acceptance speech) on the occasion of the award of the 2016 NZIER economics prize to John Creedy - Ed

Professor John Creedy NZIER Awards Citation

Professor John Creedy is half time with Victoria University of Wellington (School of Accounting and Commercial Law) and half time with the New Zealand (NZ) Treasury as Principal Advisor in the Tax Strategy team. His immediately prior position was with the University of Melbourne, as the Truby Williams Professor of Economics. He was appointed as full professor at the age of 28 (Durham University, UK). His main research interests are public economics, labour economics, income distribution and the history of economic analysis.

John is undoubtedly one of the most prolific academic economists in NZ. The respected bibliographical website for Economics, RePEc, enumerates John's publications as 220 articles and 38 books (plus 177 working papers). This is an underestimate, since this list does not capture all of his works – e.g. in excess of 50 book chapters. In terms of the worldwide RePEc author rankings, John ranks 144 out of 47,731 registered authors based on his career work (i.e. comfortably inside the top 1% (https://ideas.repec.org/top/top.person.all.html)).

Despite spending the vast bulk of his career overseas, John will have written more papers specifically addressing NZ economic policy problems than many NZ economists who have spent their whole careers in the country. In this context, it is worth mentioning specifically John's contributions to the New Zealand Economic Papers (NZEP) as another example of his commitment to NZ Economics and policy. He is one of the top three contributors to NZEP.

Throughout a long and distinguished academic career, John has consistently addressed substantive and topical issues relevant to current policy. The coverage of these topics is extremely broad, including ageing, retirement incomes, savings, welfare, social rates of discount, tax policy (e.g. GST, excise taxes). His recent work on long term fiscal policy has addressed major conceptual issues in the Treasury's approach and made significant contributions towards enhancing policy advice in this area.

In all his work John builds on a solid theoretical base enriched by his knowledge of the history of economic thought. A defining characteristic of his work is to identify and emphasise the implicit value judgements that many economists make but fail to acknowledge.

The Treasury's current Taxwell-B model owes its existence to John. In the early 2000s he (with help from Ivan Tuckwel) built NZ's first income tax and transfer model with labour supply effects - Taxmod-B. This was then resurrected in the form of Taxwell-B, which owes much to John's multiple skills of economic and computer modelling.

John played a critical role in the tax reform process in 2010, through both his advice to the Treasury and to the Tax Working Group (TWG). Several papers that were commissioned from him at that time proved convincing reading for TWG members. He also did some important work on the distributional effects of indirect taxes in NZ in the early 2000s (with Cath Sleeman) while both were at the Treasury. More recently John's work on measuring inequality in NZ has been hugely significant, technically first-class, and is proving highly influential in the currently topical policy debates.

As John's long term colleague and collaborator over a period of fifteen years, Dr Grant Scobie, observes, "John has an outstanding record of collaboration and in particular mentoring younger scholars and publishing with them."

Professor Norman Gemmell at VUW was one of these young scholars who benefited from John's advice: "Surprisingly perhaps I was one such young economist in my early PhD days when John arrived for his first Chair at Durham University in 1978! I have since witnessed him bring out the talents of many younger economists, especially in Treasury where his publication record reveals both his working with young people and his generous willingness to share joint-authorship even when the lion's share of the work is his!"

The direct impact of John's work on Treasury's policy advice has also been acknowledged and appreciated by the Minister of Finance and his Office staff. As one of the Office staff (Matt Burgess) commented with regard to John's policy analysis and advice around the issue of the appropriate threshold for GST on internet sales (co-authored with Eina Wong), "This is perhaps the best piece of analysis supporting policy advice from Treasury that we (MoF et al) have seen. … What made the advice exceptional was its direct connection to informing an important policy problem, the clarity and coherence of the framework, caveats and conclusions, the paper's methodological and written parsimony, and that it provided a framework that will inform future policy advice as more data becomes available. It introduced rigour into a politically contentious area and provided a way to test widespread intuition on the appropriate direction to move thresholds. Couldn't ask for more!"

Acceptance Speech NZIER Award 2016: John Creedy

I'd like to thank NZIER and the Award Panel very much for this honour. I'm very pleased indeed to be recognised by my peers in this way, and when I look at the list of previous awardees – some of whom are here tonight - it certainly is an honour to be included among them. Most of us are well aware that, as a profession, economists are a very negative lot (those of us here are of course the exceptions). Anyone who wants to publish in journals has quickly to develop a 'thick skin' and if anything it gets harder with age – you just learn to deal with it a bit better. So it's especially pleasing to get this kind of positive recognition.

It is also particularly pleasing by coming completely 'out of the blue', and at an age when most – thankfully not all - of my cohort have long-since retired. This is a strange year for me. Earlier in the year, after being a professor on three continents and four countries for 38 years, I had the unusual experience of giving an Inaugural Lecture for the first time. For most of the intervening years my Mother has repeatedly asked, ‘are you still a professor?’ with an implied ‘only’ in there and the suggestion that I probably haven’t done anything worthwhile since 1978. So at last I have something else that might impress her.

Another very pleasing aspect of the award is the fact that it is explicitly not for a general contribution to economics, but relates specifically to contributions to New Zealand and indeed comes from a non-academic institution. I’ve always taken the view that, since I’m paid by taxpayers, it is appropriate to devote a large proportion of my research to ‘local’ practical issues – although this is increasing a minority view in universities.

I first started work on New Zealand – on income mobility – in the mid-1990s, using a special dataset compiled by the IRD. Then I spent two years here in the Treasury in 2002/03. But of course since returning here in 2011 my work has concentrated almost exclusively on NZ issues. Very importantly, I have benefited from my unusual situation of working both in the Treasury and in the Business School at Victoria University. I’m not going to read a list a names, but I would like to mention two people who, I’m very pleased to say, are here tonight. My present position arose through the initiative and energy of Bob Buckle. Added to this is his contribution in setting up the Chair in Public Finance. This has benefited me enormously by making collaboration with Norman Gemmell so much easier. We have worked on many joint projects over many years, while separated by thousands of miles, and this is the first time we have been located in the same building.

This is perhaps also the place to pay a big tribute to my Treasury colleagues. I’ve had the privilege of working closely with treasury colleagues from a variety of sections and on many research projects, resulting in joint papers. These collaborations continue to be very stimulating and rewarding. But also I believe there are great synergies from being a researcher in a predominantly policy environment, and I’ve gained much from my colleagues who are at the ‘sharp end’ of policy, have to work to very tight deadlines, and compress a lot of thinking into short reports. I appreciate both the stimulus from discussions with them and also the patience they show towards me – since research takes time, and I often spend a lot of time pointing out qualifications which I think need to be made to policy statements.

It is quite possible that they also find rather tiresome my endless reminders that policy recommendations cannot be value-free. But I won’t promise not to repeat the argument that we need to separate analytical and empirical issues from value judgements. The ultimate aim is to conduct what I have long referred to as ‘rational policy analyses’, which is investigating the implications of adopting particular value judgements, and then allowing people to make their own policy choices.

Policy issues generate a wide range of challenges, involving empirical measurement (always more complex than ‘theorists’ assume), estimating the likely responses of individuals and firms to tax incentives, and the construction of economic models which simplify the real world to something tractable while keeping focus on what is important or, as I like to say, ‘avoiding throwing the baby out with bathwater’.

This award gives me the impetus to continue the endeavour to produce ‘rational policy analyses’ in New Zealand. So, again, thank you very much!

Research Report

A firm-level perspective on New Zealand's persistently weak labour productivity

Paul Conway

Director, Economics and Research, New Zealand Productivity Commission

New Zealand has enjoyed good growth in average income since the global financial crisis. Labour participation is strong and our public finances are in relatively good shape. But one area holding the economy back is our persistently weak labour productivity, with the OECD estimating that New Zealand had the fourth lowest labour productivity growth of OECD countries between 1995 and 2014. Fortunately New Zealand is in a good position to address this area of persistent weakness.

Achieving New Zealand's Productivity Potential (Conway, 2016) is the Productivity Commission's commentary on New Zealand's productivity performance.[4] This report shows that New Zealand needs to shift from a model based on working more hours per person to one that is focused on generating more value from time spent at work. With labour force participation forecast to decline with population ageing, the focus now needs to go on lifting productivity.

New Zealand's productivity performance has been described as a paradox. This is because a country in which broad policy settings in many important areas appear close to best practice should have had a better productivity track record. Indeed, OECD research estimated that New Zealand's broad policy settings should have generated GDP per capita 20% above the average for advanced OECD countries. In fact, New Zealand was 20% or so below average (de Serres, Yashrio & Boulhol, 2014).

More recent research, particularly that using the Longitudinal Business Database, has allowed us to move on from this idea of a paradox and better understand what in the business environment is holding back some Kiwi firms. For example, we can measure the impact on productivity of small domestic markets, low levels of competition in services, and the role of barriers to export success, like market knowledge and financing. By providing a more granular and detailed view of the economy, firm-level analysis has improved the evidence base available to policymakers.

The firm-level perspective

There has been growing international interest in a firm-level analysis of productivity growth (OECD, 2015). This is partly in response to the global productivity slowdown. In particular, the global slowdown has sparked a debate between technological optimists ("we are seeing a temporary blip") and technological pessimists ("this is a sign of things to come"). In turn, this has highlighted three key forces that shape an economy's productivity growth experience: pushing out the technology frontier, technology diffusion and the reallocation of people, physical resources and finance from lagging to leading firms.

These three productivity drivers can be better understood using firm-level data. These data allow researchers to move beyond looking at the performance of the "average" firm and to

[4] This report and a shorter overview are available at: http://www.productivity.govt.nz/research-paper/achieving-new-zealands-productivity-potential.

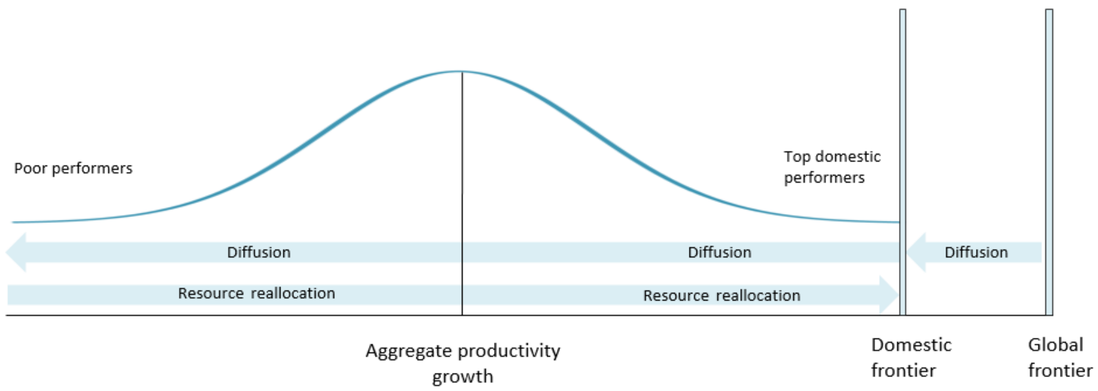
understand the distribution of performance and productivity dynamics across firms (Bartlesman, Haskel & Martin, 2008; Iacovone & Crespi, 2010; OECD, 2015).

For example, technology diffusion occurs when leading New Zealand firms adopt new ideas and innovations developed by the world's most productive firms operating at the global technology frontier. In turn, this paves the way for lagging New Zealand firms to adopt this technology, once adapted to local conditions.

But this is a sticky process and a lot can go wrong. During the 2000s, productivity growth for the world's most productive firms was much stronger than for the laggards and substantial productivity gaps have opened up. Possible reasons include "winner takes all" dynamics and tacit knowledge that cannot be easily replicated. So while technological advance is happening at the global productivity frontier, the diffusion machine appears to be broken, especially across firms in the services sector (OECD, 2015).

Because technology diffusion is sticky, the reallocation of productive resources within the domestic economy is also a key productivity driver. Economies in which resources flow more easily from low-productivity to high-productivity firms enjoy higher aggregate productivity growth than economies in which allocation is more ossified across firms. This includes the ability of innovative firms to scale up while unproductive firms shrink and exit.

Figure 1 A stylised model of firm productivity



Source: Conway (2016) based on OECD (2015)

These drivers of firm productivity can be shown in Figure 1. This model is stylised and so should not be seen as necessarily describing current firm productivity in New Zealand. The model shows the two key technology frontiers: the domestic one and the global one. There is a gap between the global frontier and the most productive domestic firms (the domestic frontier), and all the other firms in New Zealand can then be arranged by how close or far they are to the domestic frontier (giving a distribution of performance).

Characteristics of a low productivity equilibrium – disconnected and stuck

A few New Zealand firms operate at or close to the international productivity frontier. But firm-level data shows that the processes of diffusion and reallocation generally do not work as well as they could in New Zealand. Many domestic frontier firms are disconnected from the international frontier, laggard firms in some industries tend not to converge to the domestic frontier, and resources are stuck in a tail of unproductive firms.

Even though there is significant potential for catch up in New Zealand – firms starting at a productivity disadvantage have greater scope for catch-up productivity growth – there is evidence that too few New Zealand firms are benefiting from new productivity-enhancing technologies and ideas developed at the global frontier.

While there are some very successful New Zealand firms, in most industries productivity growth in New Zealand's frontier firms has generally been well below that of global frontier firms. This suggests weak technology diffusion into the New Zealand economy and a lack of scale opportunities for high-productivity New Zealand firms.

In the domestic economy, there is some tendency for productivity spillovers from leading to lagging firms. However, these spill overs are less likely across firms in some service industries and the construction industry compared to firms in other parts of the economy. Many firms in these industries operate in small local markets insulated from competition and learning opportunities.

Another feature of firm dynamics in New Zealand is an impaired process of reallocation. From the perspective of the economy as a whole, the gains from an increase in a firm's productivity will be magnified when productive firms gain market share at the expense of less productive competitors. However, economies vary significantly in the degree to which this reallocation takes place. In New Zealand, although high-productivity firms are attracting more resources, a large share of employment and capital is still concentrated in firms with low productivity.

One indicator of impaired reallocation is a high proportion of small, old and unproductive firms who neither grow rapidly nor exit the market. Compared to other OECD countries, firms in New Zealand are born with few employees (Meehan & Zheng, 2015). If firms survive for ten years – which about 30% do – they exhibit slower growth than overseas counterparts. This is particularly the case for service-sector firms operating in small and insular regional markets.

This weak post-entry employment growth indicates a lack of "up or out" dynamics. In better connected or larger economies firms do not have much of a choice – they either grow or they exit in one way or another. Because this dynamic is less evident in New Zealand, there is a large share of small and old firms.

Turning this around

In sketching out some of the broad policy considerations that might help in achieving New Zealand's productivity potential, it is useful to first consider what success could look like. Encouragingly, new opportunities for international engagement are opening up around knowledge-intensive products that can be traded down fibre-optic cables, and the global centre of economic gravity is also moving towards New Zealand's part of the world.

Most obviously, a successful New Zealand economy would be one in which the still substantial gaps in income and productivity vis-à-vis the more advanced OECD countries steadily close. This would require more global-productivity frontier firms to be operating in New Zealand, better diffusion of new technologies into and within the economy and greater competitive intensity to encourage productivity-enhancing resource allocation.

Achieving these objectives would mean increased international connection across New Zealand firms and much stronger growth in the tradables part of the economy as resources increasingly move towards globally integrated firms. The diversity of exports would continue improving as the economy progressively moves away from a "grow it-box it-ship it" strategy based on the agricultural sector and firms become increasingly integrated into high value-add parts of GVCs with fast-moving productivity frontiers.

New Zealand's science and innovation systems would increasingly produce and commercialise new ideas and technologies with high global visibility. And the skills system would be well integrated into the labour market and produce training well-matched to future jobs. New Zealand's macro imbalance would close, with the real interest rate premium falling, leading to less appreciation pressures on the real exchange rate.

Within the domestic economy, diffusion would improve, with firms and workers learning from frontier firms and lifting their productivity over time. New technology and ideas developed at the international and national frontiers would diffuse to lower-productivity firms in regional markets. More productive firms would grow and benefit from scale economies while poor performers would be more likely to shrink and exit as competition plays a bigger role in resource allocation. Capital intensity in the economy would increase.

Achieving New Zealand's productivity potential

How could reform support a successful New Zealand economy steadily closing the income and productivity gaps with the rest of the world? Whereas the mid-1980s reforms enabled productivity-enhancing economic restructuring, the current challenge is to lock in dynamic gains from ongoing changes in technology and new opportunities for international connection.

This is not to say that New Zealand's broad policy setting are poor compared to other countries. Indeed, successive governments have improved important aspects of New Zealand's policy and institutional settings, which are often assessed as being highly supportive of productivity growth. For example, New Zealand ranks well in cross-country indicators of regulation and has a well-established monetary policy framework and relatively strong public finances. However, the productivity payoff from these policy settings has been disappointing. So while lifting productivity is a challenge in all economies, it is a particularly difficult one in New Zealand.

In some respects, New Zealand's policy challenge is different to what has been faced previously. With dramatic falls in the price of transmitting data over distance, a window of opportunity is opening for some firms to engage in new ways internationally. This trend is likely to continue given the strong growth in digital products that can be marketed and delivered worldwide through fibre-optic cables. This is consistent with some promising signs in the New Zealand economy, such as increasing export diversity and a growing high-tech sector.

Conway (2016) highlights a number of areas where reform could help, including housing market reform so that people can live where their skills are most valued, and lifting the skill composition of migrants. This report also emphasises practical measures to lift competition in the services sector. Connections across the innovation system could also be strengthened, and the Foreign Direct Investment regime and remaining tariffs need review in the context of growing international trade in services and digital products.

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Research Report

In New Zealand we need to know more about taxpayer responses to tax changes

Norman Gemmell

It is no surprise to anyone to be told most people don't like paying more tax. Recent global media attention has focused especially on companies' behaviour, with accusations of multinationals effectively choosing where to pay their taxes and how much to pay—or avoiding tax altogether. But the issue is just as relevant for ordinary New Zealanders.

For example, someone in New Zealand currently earning $75,000 a year pays $15,670—or about 21 percent—in income tax. But for every dollar they earn over $70,000 ($5,000 in this case) they pay 33 cents in tax, taking home just 67c.

Now imagine this top tax rate is almost doubled to 60c in the dollar. If they keep earning $75,000, they will pay an extra $1,350 in tax, raising their average tax rate by less than two cents to 23 percent. But for every dollar earned over $70,000, this taxpayer now only gets to take home 40 cents.

Would you work extra overtime if you got to keep just 40 cents out of every dollar earned instead of 67 cents or more? And, of course, if earning more also means losing transfer payments like family tax credits, you could end up effectively with less than 40c per dollar.

High tax rates have another, more insidious, effect on people's taxable earnings—some taxpayers go looking for ways to avoid the extra tax, either legally or illegally. Negatively gearing a rental property or earning less income while your lower-paid partner earns more are two of the legal ways. Or you might move to work in Hong Kong where tax rates are lower.

Discovering which people respond to higher taxes, how they respond and by how much, is the main driving force behind a new research project being run at Victoria University of Wellington over the next three years, supported by funding from the government's Ministry of Business, Innovation and Employment. Using the latest microsimulation modelling techniques for income taxes and transfers, and data for New Zealand taxpayers and transfer recipients, the project will help to answer some of the questions around how people alter their behaviour when taxes change.

This is important for several reasons.

Firstly, illegal tax avoidance undermines the tax system's fairness and credibility by forcing law-abiding taxpayers to pay more. Secondly, all tax-avoiding responses involve lost revenue that otherwise could fund better public services or welfare benefits. Thirdly, such difficult-to-predict revenue losses make it harder for governments to forecast how much extra revenue they can expect from a new tax policy, and so how much more they can afford to spend. Fourthly, these responses also undermine the efficient running of our economy. If entrepreneurs and the self-employed spend their time on ways to minimise their taxes, this is time that could be better spent doing what they are good at, generating new ideas and employment along the way.

Politicians and others often suppose that behavioural responses to tax rates are not much of a big deal. But consider a somewhat different, but highly relevant, example from Australia that was highlighted by the Australian Treasury's 2009 'Henry Review'.

That Review showed that, for Australian employees who have a company-owned car, Fringe Benefit Tax (FBT) is levied on any kilometres driven for personal use. Until recently, the tax rate per kilometre was lower (on all the personal use kilometres) if you travelled more than 15,000kms, then lower still if you travelled more than 25,000kms and more than 40,000kms. So, clearly, driving more—or claiming to—would be good for your FBT bill.

How far did Australians claim they drove using their company cars for private use and did FBT make a difference? It is hard to know exactly how many kilometres Australians would have driven if there was no FBT regime. But The Henry Review data on how many cars travel various distances showed an awful lot of company car owners paying FBT reckoned they drove just over 15,000, 25,000 and 40,000 kilometres, with very few company cars apparently travelling other distances. Strangely, that aligned remarkably well with their fiscal interest.

Tax researchers in other countries have identified many other examples similar to this Australian case. But not a lot is known about New Zealand income taxpayers. So getting a better understanding of how Kiwis respond to their taxes, through the MBIE-supported tax-modelling project, could potentially help improve understanding of the New Zealand tax system and assist future tax policy setting. In this respect at least, Australian income tax modelling seems to be ahead of New Zealand with the Melbourne Institute already able to estimate some behavioural responses using their Melbourne Institute Tax and Transfer Simulator (MITTS) model. Indeed, in New Zealand we aim to work with them and learn from their trail-blazing!

A second aspect of our project will examine how New Zealand taxpayers change the amount of income they declare when tax settings change. Based on data for individual income taxpayers, this will look at the major income tax and benefit reforms in 2010 to see what we can learn about responses. For example, did the major cuts in income tax rates, especially the top tax 39% rate induce some taxpayers to declare more income than they otherwise would? Did the simultaneous increase in GST rates simply cancel out any effect? This particular reform raises particularly tricky modelling issues for two reasons at least. Firstly, because of these compensating GST and income tax changes, disentangling their separate effects may be difficult. Secondly, when the top tax rate was raised to 39% in 2001, it created an incentive to set up some tax avoidance vehicles (like trusts) at some cost to the taxpayers who pursued this option. So, when the top rate was cut again in 2010, would taxpayers not simply stick with their post-2001 tax arrangements? Perhaps so, but over time we might expect fewer taxpayers will set up such trusts etc. as they are no longer required to minimise their tax liabilities.

So, overall, a first step towards a fairer and less distorting tax system in New Zealand has to be better modelling to improve our knowledge of how distorting and equitable the current system is. This way, we might help Kiwi governments and voters make better choices over what kind of tax system they want in future. And with tax changes already being talked about as the 2017 election comes ever closer on the horizon, now is a good time to try to contribute some helpful analysis to the debate!

Event Report

Tax Compliance Masterclass

held at Te Wharewaka o Pōneke, Wellington Waterfront, 6-7th December

Norman Gemmell

Part of my role as a 'partnership chair' in the Victoria Business School is to help build capability in public finance in New Zealand, especially among those engaged in public finance-related policy debates and advice. And what better way to achieve that than by bringing together the two elements of that 'partnership' – academia and policy advisers – to learn from the best international experience and evidence.

So, for this event we invited participants to attend classes over one and a half days provided by two of the world's leading researchers on the economics of tax compliance: Professor James Alm from Tulane University, in New Orleans, Louisiana and Professor Gareth Myles, director of the Tax Administration Research Centre at the University of Exeter in the UK. They both feature in our Public Finance People feature in this issue, and are highly respected for their tax research over many years.

Around 40 people attended the masterclass from several government departments and the private sector. During seven 90 minute sessions on different aspects of tax compliance, they were brought up to date on the latest research. Those sessions covered:

1: Tax compliance theory – what is the 'standard model' and how well does it perform?

2: Testing theory – what alternative methods and datasets have been used to gather evidence?

3: Behavioural insights from tax experiments – with results from an on-line experiment with Masterclass participants

4: Empirical evidence – on tax (non)compliance by individuals

5: Empirical evidence – on tax (non)compliance by companies

6: Tax gaps – how are they measured and how useful are they?

7: What conclusions can be drawn that are helpful for NZ research and policy?

In addition, session 6 heard from Richard Braae of the Inland Revenue department on recent preliminary investigations into New Zealand's GST gap.

Participants seemed especially impressed by the breadth and depth of useful material that the presenters had assembled, with a large amount of guidance material made available via powerpoint slides and reading lists from the class. These will be available on the CPF website in due course – likely in January 2017.

Asked in session 7 about what conclusions they drew from all of this literature, professors Alm and Myles offered several thoughts. Firstly (and perhaps unsurprisingly) financial incentives for compliance (whether carrots or sticks) seem to matter. But they are generally estimated to have smaller effects that is often supposed. Secondly, the 'standard economic model' (that essentially analyses non-compliance exclusively in terms of financial incentives) is clearly insufficient, and additional factors often influence compliance behaviour.

However identifying those additional factors has proved much more difficult and robust results are (as yet) much scarcer. Gareth Myles in particular stressed that, among those other factors, behavioural economics offers considerable insight. Indeed results from the on-line tax compliance ‘game’ that participants played in the run-up to the masterclass confirmed those obtained from many previous iterations of this game using a variety of students and taxpayers. Namely, that intrinsic honesty by many taxpayers seems to persist even when strict financial considerations suggest this makes them ‘worse off’.

Further, when participants play the game ‘as if’ it is about how much tax evasion to risk, compared to playing an otherwise identical game around how much ‘risky’ investment to undertake, they behave very differently in the two situations. What conclusions can we draw from this? That analysing tax compliance/evasion as if it were a pure gamble (akin to a risky investment), is not the right way to think about tax compliance decisions.

Both presenters argued that the increasing availability of detailed administrative data on tax compliance (such as is occurring here in New Zealand) provides scope for substantial improvements in empirical work on tax compliance. But the data must be assessed and analysed carefully to avoid drawing false, or at least non-robust, conclusions about the causal influences on taxpayers’ choices between complying and not complying with tax laws. More generally there are plenty good examples of tax compliance research from overseas that New Zealand researchers could follow to begin to deal with the current paucity of Kiwi evidence.

Finally, a big thank you to Matt Benge and his colleagues at Inland Revenue for helping to make James Alm’s visit possible, to Fiona Taylor for organising the Masterclass in challenging post-earthquake circumstances in Wellington, and to Gareth Myles for flying from the UK and back over less than a week, to deliver his Masterclass contributions.

Past Events

The 2016 Public Finance Debate Series

Hosted by the Government Economics Network and the Chair in Public Finance

Debate 1: “Big data in policy advice: big opportunity or big risk?”

In the absence of detailed knowledge of individuals’ circumstances, the traditional approach to policy targeting has often been to target the policy as widely to ensure that all those who might be eligible are reached. But now ‘big data’ is providing unique opportunities to identify individual characteristics, so radically improving our ability to target those most in need. But what are the risks? Some might argue that while big data can provide a more detailed picture of targeted individuals, it focuses policy on the symptoms, not the causes, of their condition.

Debate organisers allocated positions for the two speakers in advance of the debate. Speaking for the motion was Dr Simon Wakeman, Principal Advisor for the Social Investment Unit, who argues in favour of using ‘Big’ Data and the push for agencies to use data better to predict demand for services. Dr Peer Skov, Economics Lecturer at Auckland University of Technology, countered this, noting that the Big Data approach to policy is too narrow, and all-too-readily misidentifies causal factors important for policy evaluation. Mark Sowden, Deputy Government Statistician, Statistics New Zealand, closed the debate and facilitated the Q&A session with the audience. Both speakers presented strong cases and, perhaps surprisingly, the majority voted against the motion, implying that they were more concerned about the risks of Big data than welcoming the opportunities it provides.

Thank you to all of those who able to attend and participated in the debate.

Christmas Debate: “New Zealand needs a sugar tax to protect us from Christmas excesses”

This year’s debate presenters were*:

For the motion: Sarah Hogan, senior policy analyst in the Office of the Chief Economist at the Ministry of Health

Against the motion: Jenesa Jeram, policy analyst at The New Zealand Initiative

Commentator: John Creedy, principal adviser, The Treasury, and professor at VUW.

The event kicked off with a quick quiz to test attendees’ knowledge of the sugar content of different foods and drinks – which turned out to be (surprisingly?) misinformed! In particular, sugary drinks are not among the highest sugar content items that many people, including children, consume.

The two presenters then treated us to a lively and enjoyable session as they made passionate and humorous appeals to support or oppose a sugar tax for New Zealand. Obesity, diabetes and tooth decay all received close attention as unhealthy consequences of excess sugar consumption. John Creedy, as commentator, then ‘weighed in’ (so to speak) by suggesting that consumers’ elasticity of “mirth with respect to girth” – whether being fatter or slimmer made them feel happier or sadder – was not necessarily negative!

On the question of the economic case for a sugar tax – as opposed to acknowledging that excess sugar is unhealthy – the proposer recognised the importance of recent evidence from John Gibson (Waikato) that ‘true’ price responses by consumers are much lower than often supposed. However, she argued, this simply makes the case for a higher tax rate! (Mmmm … at this point I’m thinking: ‘distortionary costs rise with the *square* of the tax rate’). An important point raised by the opponent was that poor knowledge of health effects of sugar is *not* a market failure. Neither is consumers’ lack of self-control. Hence the ‘market failure’ argument in favour of a sugar tax does not apply if these are the reasons behind the argument for action.

The usual final votes offered comfort for both presenters with a majority of the audience unpersuaded by the argument in favour of a sugar tax, but voting this the best presentation! Thereafter, sugary treats contributed to a lively networking session.

Finally, a special thank you to Zaneta Waitai at MBIE and Fiona Taylor at VUW, for their efforts in organising another successful event, and to Patrick Nolan and Veronica Jacobsen (at the Government Economics Network) for their on-going support of the public finance debates.

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* As usual the debaters were allocated to argue ‘for’ and ‘against’ cases by the organisers to help ensure that the audience understood that the views expressed were not necessarily the presenters’ personal views and certainly not those of their employers.

Recent Public Finance News

New Zealand

- 2 September 2016, Opposition to sugar tax not just ideology, The New Zealand Initiative
- 13 September 2016, NZIER Economics Award for 2016 given to Professor John Creedy, NZIER.
- 18 October 2016, Rhema Vaithianathan: Big Data should shrink bureaucracy big time, Stuff.co.nz
- 19 October 2016, Study finds young people don't expect to rely on the 'bank of mum and dad', NZ Herald
- 19 October 2016, Editorial: Govt should use extra to cut debt, not taxes, NZ Herald
- 17 November 2016, What will a Trump presidency mean for KiwiSavers?, interest.co.nz
- 14 December 2016, What does Bill English as Prime Minister mean? Scoop.co.nz
- 15 December 2016, Why world-beating NZ Super has a long-term future, Stuff.co.nz
- 16 December 2016, Tax the house? It's worth a look, NZ Herald

World

- 22 August 2016, Chileans protest against privatised pension scheme, Public Finance International
- 30 August 2016, European Commission orders Apple to pay €13bn in unpaid tax, Public Finance International
- 5 September 2016, G20 pledge to go beyond monetary policy to target growth, Public Finance International
- 7 September 2016, Chinese provincial pension funds struggle to break even, Public Finance International
- 16 September 2016, European Commission takes first steps toward tax blacklist, Public Finance International
- 7 October 2016, UN expert set out demands to tackle offshore tax abuses, Public Finance International
- 12 October 2016, World Health Organisation calls for sugar taxes to combat obesity, Public Finance International
- 12 October 2016, Financial Literacy Is Still Abysmal Everywhere, The Wall Street Journal
- 14 October 2016, Why the Economy Doesn't Roar Anymore, The Wall Street Journal
- 19 October 2016, European commission to resurrect overarching corporate tax proposals, The Guardian
- 19 October 2016, UK employment rate at record high despite vote to leave European Union, The Guardian
- 27 October 2016, The economic and fiscal context and the role of longitudinal data in policy advice, Treasury AUS
- 12 December 2016, UN slams Brazil's plans to cap public spending growth, Public Finance International

Public Finance Publications

Working Papers in Public Finance

This working paper series is published by the Chair in Public Finance, Victoria University of Wellington, in collaboration with researchers in New Zealand and overseas.

*NZPF Research associates in **bold***

WP06/2016

Ball, C. 'Estimating Income Dynamics from Cross-Sectional Data using Matching Techniques.'

This paper considers using direct matching techniques to construct synthetic panels, based on annual data from 2000 to 2015 held by Statistics New Zealand in the Integrated Data Infrastructure (IDI).1 The IDI holds administrative tax data and household survey data on income linked together so that individuals can be tracked through the different data sets available. Thus, the IDI allows for the calculation of population level income mobility measures, and can be used for comparative analysis to validate the synthetic panel methods explored in this study.

Direct matching techniques, such as Nearest Neighbour matching, are used to construct synthetic panels for estimates of income mobility. Consideration of the variables used, and methods to construct the relative variable weights is presented. Matching techniques perform better than existing synthetic panel techniques across a range of measures. With further refinement, matching techniques may allow synthetic panels to estimate income mobility.

WP07/2016

Creedy, J. 'Optimal Tax Enforcement: Keen and Slemrod Explored'.

Keen and Slemrod (2016) provide a framework for examining optimal tax enforcement in an income tax context. This combines the well-known elasticity of taxable income with an enforcement elasticity of taxable income. They derive a number of insightful general results that essentially involve first-order conditions for maximising a 'social welfare function'. The aim of this note is to provide a more elementary derivation of their main results and to produce a number of extension. The model is extended to allow for a direct effect on labour supply of tax enforcement. The single-person model of Keen and Slemrod is then extended to the many-person context. The paper finally introduces some simple functional forms in order to consider closed-form solutions. This illustrates not only how the model can be solved in practice, but helps to reveal some important properties that may not be immediately clear.

WP08/2016

Grimes, A., **Gemmell, N.**, Skidmore, M. **'Do Local Property Taxes Affect New Building Development? Results from a Quasi-Natural Experiment in New Zealand'**.

This paper takes advantage of a quasi-natural experiment in local property tax reform that arose from the amalgamation of several local councils in 2010 in Auckland, New Zealand, to form a unitary local authority. The reform involved several tax changes including a shift in the base of the local tax (known as 'Rates' in New Zealand) from a land-value, to a capital-value, base; changes in the relative levels of Rates across the former councils; and changes in the level of a separate tax (Development Contributions) levied specifically on new and altered buildings.

These reforms provide opportunities to examine empirical support for a number of established hypotheses in the local property tax literature related to the level and structure of local taxation. Empirically, the exogenous nature of the New Zealand reforms enables more reliable estimates than hitherto of hypothesized effects of the tax changes on new property development arising from the tax switch (land to capital values), and changes in relative levels of both Rates and Development Contributions.

To test these hypotheses, we use difference-in-difference type regression analysis to examine how far observed changes in consents for new building development are consistent with predictions from our economic models, having controlled for a variety of other influences. Our results suggest that there is little evidence of tax effects on new building development after the amalgamation, but there is stronger support for such effects on building alterations. Since our dataset covers only two post-amalgamation years, we speculate that this apparent difference may arise from the greater flexibility of building alterations to respond in the short-run, compared with new development responses.

WP09/2016

Gemmell, N. '**An Allingham-Sandmo Model of Tax Compliance with Imperfect Enforcement**'

The Allingham-Sandmo (1972) model of tax evasion in which compliance depends on the perceived probability of detection, the tax rate and the penalty for evasion has been extensively analysed but in the context where detected evasion is assumed to be fully enforced. This paper adapts the A-S model to examine the consequences of partial enforcement of evaded tax. Specifically it models the case where evasion/avoidance take the form of late payment of tax subject to penalties, but where these cannot be fully enforced. It then explores how reduced penalty incentives for tax debtors, and penalty rate misperceptions, affect non-compliance decisions.

WP10/2016

Gemmell, N., Gill, D. and Nguyen, L. 'Explaining the Size of the State in New **Zealand, 1972-**2014'

Historical data on various measures of the economic size of the government sector in New Zealand suggest considerable short-term variability and hint at a number of possible longer term trends. This paper follows up on that description by asking the question: how far can established models of government size help to 'explain' those changes in New Zealand since the early 1970s? Using public expenditure as our size metric, we specify three distinct econometric models each consistent with explanations offered in one of three separate strands in the international public finance, public choice and public administration literatures.

We then nest those models to see whether any one model dominates or whether a more eclectic explanation finds support. Our empirical testing for the period 1972-2015 reveals that all three models offer some insight into changes in the size of government expenditure in New Zealand; indeed the best performing empirical model contains variables associated with each of the three literatures. The public choice approach seems to receive strongest support when a nested model is permitted. More generally, suitably capturing short-term dynamics turns out to be important for reliable estimation of longer-term trends in government expenditures.

Public Finance Journals

1. FinanzArchiv
2. Fiscal Studies
3. International Tax and Public Finance
4. Journal of Public Economics
5. Journal of Public Economic Theory
6. National Tax Journal
7. Public Budgeting and Finance
8. Public Finance Review
9. Public Finance and Management
10. Tax Notes International

Institutions Working on Public Finance Research or Policy

New Zealand

Centre for Accounting, Governance & Taxation Research (CAGTR)
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.

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.”

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

World

Tax and Transfer Policy Institute
Canberra, Australia
“The Tax and Transfer Policy Institute (TTPI) carries out research on tax and transfer policy, law and implementation for public benefit in Australia.”

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

Institute for Fiscal Studies
London, UK
The Institute for Fiscal Studies aims to promote effective economic and social policies by better understanding how policies affect individuals, families, businesses and the government's finances.

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.

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."

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."

Office of Tax Policy Research

Michigan, USA

The Office of Tax Policy Research (OTPR) is a research office at the Stephen M. Ross School of Business at the University of Michigan. OTPR supports and disseminates academic research on all aspects of the tax system, with the goal of informing discussion about the future course of policy.

OECD Centre for Tax Policy and Administration

Paris, France

The Centre for Tax Policy and Administration (CTPA) is the focal point for the OECD's work on all taxation issues, both international and domestic.

Congressional Budget Office

Washington, DC, USA

The Congressional Budget Office (CBO) has produced independent analyses of budgetary and economic issues to support the Congressional budget process. The agency is strictly nonpartisan and conducts objective, impartial analysis.

National Institute of Public Finance and Policy

New Delhi, India

The National Institute of Public Finance and Policy (NIPFP) is a centre for research in public economics and policies. The institute undertakes research, policy advocacy and capacity building in areas related to public economics.

Centre for Public Finance Research

Washington, DC, USA

The Center for Public Finance Research (CPFR) offers research and education in public budgeting and finance, public financial management, public economics, and benefit-cost analysis at the local, regional, national, and international levels.

National Institute of Economic and Social Research

London, UK

"NIESR aims to promote, through quantitative and qualitative research, a deeper understanding of the interaction of economic and social forces that affect people's lives, and the ways in which policies can improve them".

Feedback, enquiries or suggestions to:

The Editor, New Zealand Public Finance newsletter
Chair in Public Finance
Victoria University of Wellington
PO Box 600
Wellington 6041
New Zealand
Phone: +64-4-463-9656
Email: cpf-info@vuw.ac.nz