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New Zealand Association of Economists

# Asymmetric information

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A newsletter to promote the exchange of information, news and ideas among members of the New Zealand Association of Economists (Inc).

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# EDITORIAL

*John Yeabsley (john.yeabsley@nzier.org.nz)*

This issue's main interview is with Len Cook, previously NZ Government Statistician and then Director of the Office for National Statistics in the UK. He is interviewed by me as a way of learning about this job.

The minor or 'Five Minute Interview' is with Dr. Bronwyn Croxson Chief Economist for the Ministry of Health.

Paul Walker contributes his regular 'Blogwatch' column, where he picks up on a behavioural economic theme prompted by the recent Nobel Prize award to Richard Thaler. Then Motu's David Fleming, Arthur Grimes, Laurent Lebreton, David C. Maré, and Peter Nunns probe the fascinating question of whether sunshine really does add value to a property, and if so, how much. (This is a summary of a fuller Motu Working Paper available on the website.)

Statistics New Zealand provides a detailed description of the Changes made recently to the Retail Trade Survey.

This issue's Research in Progress comes from the Department of Economics at Lincoln University, and new members who joined NZAE between mid-July and mid-September are also recorded.

Information and keynote speakers are provided for the Western Economics Association International (WEAI) 93rd Annual Conference in Vancouver, B.C., Canada, 2018 and 15th International Conference to be held in Tokyo, Japan, 2019.

Our advertisement on the back page continues to be from Survey Design and Analysis Services. They are the authorised Australia and New Zealand distributors for Stata and other software. **www.surveydesign.com.au.**

# INTERVIEW WITH LEN COOK (SUPERU)

*by John Yeabsley*

**JY. Len, can you talk to us about your formal training, which I understand centred around mathematics and statistics?**

LC: I got into mathematics at university because I was actually very good at mathematics at high school and it led me to believe I might have been better than I was going to be at mathematics at university. I've always been involved in or had an interest in quantitative activities. I had thought, for example, about doing a degree in Engineering at one stage. Economics attracted me because of course, in the 60s, economics was becoming very quantitative, econometrics was in its prominence.

So, from high school I went to the University of Otago, where I did a degree basically in Mathematics, moving very much quickly into Statistics – much more than Mathematics, but I did that alongside Economics. I did Economics 1 in my first year; I did stage two Economics; and then in my final, fourth year at Otago, I managed to make one of my final year papers an Econometrics paper. So that gave me a bit more of an involvement, an interest in both statistics and economics.

**JY: Obviously you had a good training at Otago. What was the most important or memorable part of this education?**

LC: Statistics was one of the most striking. I was there when Geoff Jowett was the first Professor of Statistics in New Zealand. At that stage there'd been about five or six years of six or eight really able people doing statistics: Claire Salmon was one, and Peter Thomson who's been at Victoria for quite a long time. So, there was an interesting mix of people and it was quite challenging and stimulating to be a junior in a company like that.

I think also Jowett was an *extraordinary*, interesting person in terms of teaching. When we studied multiple regression for example, we'd go out and get leaves from trees and build up a model of their length, their breadth, their different characteristics. A lot of his view of statistics was quite practical. Computing at Otago meant a big 360 computer that we could use. We wrote our own Fortran programs. It was actually quite a stimulating time to be learning in that environment, I think.

**JY: This was, what, the late 60s?**

LC: Sixties. I was there '67 to '70.

**JY: Moving along, you had to finish up and look for some kind of professional employment. How did that work?**

LC: Well, being interested in statistics, the Department of Statistics was a natural place to look at. I remember being interviewed before the end of the year by Steve Kuzmicich, later to become Government Statistician, but who used to do university recruitment at the time. They, in those days, actually invited potential graduates to come up for a day in the Department. I remember visiting Rodney Lewington's section, for example, National Accounts, which was full of young women, which interested a 22-year-old. But also, I was still not sure what to do.

John Pryde, who was my mother's cousin and General Secretary of Federated Farmers at the time, wrote me a wonderful letter, which I've still got, analysing about 10 or so different places where a graduate from Otago in Statistics or some Economics might possibly go. It was interesting: he had the argument that because Stats' leadership (at the time of Jack Lewin) was being led by someone who was making very big changes in the Department. He was a fairly feisty character compared to most. Also, John had the view that Stats being just a bit smaller provided an opportunity for a wee lad to be a wee bit more visible than a bigger organisation. I was very lucky that I took his advice and it managed to work for me.

**JY: You started work in Stats. Where did your route take you there? Where did you start?**

LC: I started off in a little section of three people which was originally called Econometrics, Estimates and Seasonal Analysis. I was responsible for bringing in the US Bureau of the Census Seasonal Adjustment Method. I also was involved in projecting electricity demand at the time.

In those days the Government Statistician was a member of the committee to review power requirements. We used to make projections every year and so I was involved in that. We also had a model for forecasting import payments, which was based on a little survey of overseas orders that took place every month. I was involved

in keeping that up-to-date after someone else, Mike Camden actually, did some really innovative work on lagged models to develop it.

**JY: That took you then on to...?**

LC: The seasonal adjustment and trend analysis and the involvement with various elements of the economy meant that I was lucky enough to be a member of the working party on overseas exchange transactions and that was when I met quite a lot of my peers. Those relationships – people like John Yeabsley, Murray Sherwin, Rob Cameron, Bryce Wilkinson – lasted over 40 years, because it was really an amazing apprenticeship.

We also used to be allowed to sit in on the Officials Economic Committee. You'd be able to listen at the feet of Jas McKenzie, and Rod Deane. For someone interested in statistics and economics, the 1970s created a wonderful apprenticeship for people, I think, that were in that environment.

**JY: Moving along, you then showed up on the Secretariat for the PM's Taskforce on Tax Reform. How did that work?**

LC: That was interesting, because in the late 70s the Department of Statistics had produced its first Household Expenditure Survey that contained a very comprehensive income questionnaire. Before that, the taskforce, we in New Zealand had developed a tax model called Asset, based on the work of Tony Atkinson in the UK. That work was beginning to influence tax policy. We'd already influenced the shift from single income and spouse tax rebates to low income family tax rebates, because we could demonstrate the impact of those rebates on households as opposed to individuals.

That was a very powerful but simple piece of analysis, where evidence did influence policy. So being involved in that model meant that I was asked to join the Secretariat along with people like Marilyn Goddard from Treasury and Brian Tyler, who was the director. That was a tremendous experience, being involved in policy analysis and data. And also, we were quite a cheeky secretariat servicing a steering committee of basically old gentlemen plus Kerrin Vautier, who was both the youngest and the only woman. In some ways, we tended to align with her more than the older guard, who were still keen on income splitting and a few other characteristics of an outdated tax system.

**JY: Well, the logical succession from there was your time with the Royal Commission on Social Policy. Can you tell us about that?**

LC: That was a rather unexpected interesting experience. When the Royal Commission was set up, they intended to have a support group of both economics and social research and they couldn't get someone to lead the economics side. Ivor Richardson, who was the Chairman, came along and chatted to me one day and said, would I be the economist? I said, 'Well, look, I've got this job of Deputy Government Statistician.' However, he was very very convincing, as Ivor could be.

So, I was able to get the Government Statistician's agreement that I work half time as Deputy Government Statistician and half time on the economics side of the Commission's work, which incidentally was very much about income maintenance, taxation, which both reflected Ivor's interests and some of my own.

At one stage I realised this wasn't going to work. After about four or five months, I'd worn myself out and got the Government Statistician to agree that I would work for a month full-time to try and set up a more comprehensive unit and Ivor would find a leader for that and I'd go back to Stats. At the end of that time, Sir Ivor came around and I found he had convinced the Prime Minister to make me a member of the Royal Commission. Here was I, quite the reverse of what anyone expected: a bureaucrat in their 30s as a member of a Royal Commission on social policy when all the other members were very wise, experienced people whose careers were about the delivery of social services. For me, that was an extraordinary, rich experience, being on the other side of government.

I learnt, for example, just how hard it was to get information out of the Department of Statistics unless you had the sort of intimate knowledge of it that I had. For the rest of my career, that was a helpful piece of knowledge. It certainly shaped how I saw the Department for the rest of my time in it. It also gave me an understanding of the community, the extraordinary breadth of things that the community does. I learnt a lot about some of the policy ministries. For example, the two departments that did, I think, the most work for the Commission were Treasury and Social Welfare. Although there were a lot of people on the left who were not very supportive of the Treasury. In fact, they made extraordinary efforts to inform the Commission and support it with analysis and information. The other departments – Housing was a very strong agency in those days. Research, Labour. It's interesting if you look now: I wonder, if we had a Royal Commission on Social Policy, whether the public sector would be able to support it as well as it certainly did that Royal Commission.

**JY: Well, perhaps it's an intervention we should use more.**

LC: I strongly agree. I think that the need for independent, very wise challenge of public institutions in significant areas of policy – periodically, not too often, once a decade or whatever – if we're able to step back, involve people who are basically the best in the world (or the best we could get) is just so important to us. We don't do it enough, and, as a consequence, I think we rely on a safe pair of hands, if we do reviews and things too often -we really don't want them to rock the boat.

**JY: You became New Zealand Government Statistician after Steve Kuzmicich. Where does Stats fit in to the economics scene?**

LC: When I was appointed, Stats had really gone through an extremely difficult five years, because of the impact of deregulation on a lot of key economic sources. I think in the late 80s Stats work in economics was *dominated* by lifting the quality of its economic statistics rather than getting into how they were used. We had a big review at the end of the 1980s where we did have a fascinating mix of some of the best economic thinkers around who used New Zealand data, and produced a blueprint for national accounts and major macroeconomic statistics that basically I was lucky to get at the start of my time as Government Statistician. It dominated my work throughout that time.

The other area which was interesting, of course, was prices. The CPI's always been, in New Zealand's public life, an indicator of extraordinary importance. I was very much involved in how it was shaped in the environment of the current monetary policy. I still had my doubts as to whether we handled housing well enough at that time. One of the things we agreed to do when we took interest out of the CPI was to have some measures of real income at different groups. But immediately after we'd made the prime decision, no-one supported getting funding for doing the other half of that and I have to admit, I think if I'd been a more devious individual, I would have said we'll do the first after we've done the second. Instead, we did the first one, removed interest, and as I say, never got support for the rest. Tactically, I think, I erred on that.

**JY: Then you took part in the Review Committee on Social Science Research. Can you talk to us a bit about that and your views on social science research?**

LC: I was lucky to be involved in that. Jas McKenzie first chaired it and then Gary Hawke. I think the most important finding of it was quite profound, which was that in New Zealand we spend a lot of our concern on the supply of social services, social research capability and far too little understanding what we should be focusing on. It was a good retrospective of the previous couple of decades and I think two decades further on, if we had a similar review, it would still come up with the same conclusion. I think even with national science challenges, and the Centres of Research Excellence, we're still at risk of providing new vehicles for researchers to do the things they're particular interested in, rather than saying there's several things which are really important, hard questions we need to address.

Take social services practice: when should we take a child away from its mother? What is the place of whānau, as opposed to a family, in social life in New Zealand? I think social scientists have got some important potential contributions to make, but they're not really grappling with some of the really hard, pivotal issues. Are there some things that just have to be universal, like housing?

**JY: You then moved to the UK; became the Director of the Office for National Statistics there. Can you talk us a wee bit about that and what worked, what didn't work?**

LC: I was very lucky to join the Office for National Statistics, which over the previous three or four years had been the cumulation of four different agencies put together in the late 1990s or a little bit earlier, but not necessarily noticeably so. The population census, for example, had been done by the Office of Population Census and Surveys which also ran the household survey, and social surveys, of which Britain had an extraordinary powerful and well-respected survey capability, going back to the Second World War and the registration service. I was also Registrar-General of England and Wales. So those three entities all operated totally independently even within the single institution.

I also had a Business Statistics office in Newport, which ran business surveys in Britain and then labour or a lot of employment stuff was run in Runcorn. Then of course you had the traditional central statistical office which ran national accounts in major macroeconomic and statistics. Creating a common culture out of that was the challenge I had, because they'd been put together institutionally, but still operated as though they were quite independent. My key lieutenants were all essentially robber barons, who liked to meet once a year to allocate the resources for each other and then possibly be left alone for the rest of the time, which I think is not unfamiliar to some departments in New Zealand.

The other thing that was different was technology. I think in New Zealand, while we groan a lot about our public sector, we've had much to be immensely positively pleased with, is the way in which technology is managed, led and innovated with in the New Zealand public sector. I think that's something that when I look around the world, I think we really are generally very good in statistics, tax, for example. We're definitely up there with the best in the world.

When I went to Britain, my first response was it looked a wee bit like a technology museum. We had products galore. We had versions and products on a scale that meant we could not afford to actually maintain them. We had 3,000 individual software products, for example. We'd innovated hugely. We innovated by resuscitating life into things that other people would have killed off.

So, you had this office, of extremely talented people, much more richly connected with the use of their data than people are in New Zealand and even Australia, but generally using tools which were inferior for the job. One of my pluses was that I managed to get 75 million pounds from the Chancellor to upgrade the technology of the office at the end of my first year. The lesson I learnt from that was really very simple: all the money in the world can improve your technology platforms, but you need to have really expertise and understanding to change your actual processes. What I found – and it took me two years to realise that we were grossly at risk of putting into contemporary technology environments the processes that we had manipulated and butchered to keep alive rather than the key fundamentals of those processes. So that was a really fascinating experience.

On the other hand, being in the UK at that time was wonderful. I arrived when Tony Blair just discovered he had money, and I left just as he found it was running out, which is almost the reverse of my career in New Zealand, when meeting up with Bill Birch to get $100,000 was actually a big event for Stats.

**JY: That takes us on to back in New Zealand. We're sitting in the Families Commission. Talk a bit about your work here and as Chair of Superu.**

LC: Superu, as you'll know, was created out of the Families Commission about four years ago, and two years ago I joined the Board and became the Chair. The residual Families Commission, although it's very much a diluted role compared to the other roles that we have that are independent, I think our role, it took a while to work out what it was. We had a review by Graham Scott and Paul Reynolds. One of the fundamental points they made was that while they interviewed many ministers, they didn't seem to find a single coherent view of exactly what we were here for.

But we found our own way, very much, to trying to understand the NGO sector. How do we understand the information that it's got? How does it get to have access to information that already exists about social services processes and about the characteristics of the New Zealand population. Around that was our niche. We developed it; we've been heavily involved in, for example, family violence pilots that have been done and family violence. We support the family violence clearing house. We're involved in the youth mental health pilots that the prime minister set up. I think out of that, we came to realise and we've done some very good work on the fact that the funder relationship with service providers is an extraordinary fraught one and that, in fact, it's far too much based on simply looking at fiscal probity of those that receive cash rather than understanding what we do.

One of the biggest issues, therefore, is that funders, whether they're government or philanthropists, have no idea when they get a good organisation whether it's good enough to scale up or whether it should be closed down. We do not know enough about the intimate practices and processes; what drives a good institution.

I think in the public sector there's unfortunately a sense that where we do something well, it's solely due to an individual. We accept entrepreneurs in business, but we distrust entrepreneurs in the social services, because we think they're one-offs. I think that's been one of the things we've done.

I think our work really coincided very strongly with the Productivity Commission Social Services report, and again, I think, my interpretation of its key finding, which isn't necessarily one of theirs, is that in this country we have a complex society. It's hard to run a second class social services system. We actually run a third class one, and we need to know more about it.

**JY: Leaping on a wee bit again, I know you enjoyed your international links when you were in the UK, but you've maintained some of those since you got back. Can you talk briefly about those?**

LC: For the first four or five years I was back I was one of the Vice-Presidents of the International Statistics Institute, which was a great opportunity to contribute a little bit to the statistical events around the world and maintain my contact with people involved in the areas I worked with. I've still be involved in official statistics, not in New Zealand, but in the Pacific, where I did some work about six years ago on a plan for how the 22 Pacific countries could better use the collective use of agencies' aid that they give them and that then led to a leadership group of Pacific statisticians being set up following this review that I did with a former Tongan minister. Over the last five years, I've been joining their meetings every six months as the friend of the Chair. I'm not sure whether the development community feels I'm an asset to them, but I think it creates just an opportunity for a Pacific voice to come through occasionally.

The other thing I think, which is two things: I hate people that do a strategic plan and then run away. I think you have to own up, because you're the only one in five years' time that can really say, look, this is where we got it wrong. Because there's often a huge amount of learning from what actually could be put in place, compared to what it is.

The other thing that I've learned from the Pacific is that people there are immensely forgiving if they know you. You need to stick around, be around, let them get a good sense of all aspects of you, and it's an *amazingly* high trust environment to work in, once people have a sense that they know you.

# THE FIVE-MINUTE INTERVIEW WITH ... BRONWYN CROXSON

1. **When did you decide that you wanted a career in economics?**
   I set off on a commerce degree, which included compulsory economics papers. And somewhere along the way I fell in love with economics' puzzles and complexity.
2. **Did any particular event or experience influence your decision to study economics?**
   If anything, I was intrigued by the quiet power of wielded by economists, in those days working in the backrooms, not the rock stars they now are.
3. **Are there particular books which stimulated your early interest in economics?**
   Arrow, Marshall, Keynes – the greats pulled me in, especially the beauty of the general equilibrium model refined by Arrow, Hahn and Debreux. Ronald Coase and Douglas North will forever be my heroes – Coase in particular with his small collection of beautifully refined and insightful papers.
4. **Did any teachers, lecturers or supervisors play a significant role in your early education?**
   So many. Of course, the greatest gift a senior economist can give to a junior is the gift of confidence. I was lucky enough to receive that at Auckland university, from so many lecturers – including Conrad Blyth (although he was, of course, a macroeconomist) and Sholeh Maani – I spent a short period as her research assistant, before heading to the UK for graduate study. And of course my lovely PhD supervisor, Shelagh Ogilvie, who approaches economic history with neoclassic rigour and... joy.
5. **Do you have any favourite economists whose works you always read?**
   Offsetting Behaviour, of course. Formerly – Tony Atkinson. He was one of my PhD examiners and the kindest brightest public economist who ever lived. I once found myself in the extraordinary position of chairing a third year Public Economics (course and examination) committee - and one of the committee members was Tony.
6. **Do you have a favourite among your own papers or books?**
   I am proud of the work I did with Carol Propper in the UK on the impact of GP fundholding. Our work married good specification and design with a deep knowledge of health system institutions, so it was both technically robust and and accurately reflected micro-economic reality.
7. **What do you regard as the most significant economic event in your lifetime?**
   In New Zealand – the end of the Muldoon era with the election of the labour government in 1984. Second, of course, to the birth of my beautiful daughter.
8. **What do you like to do when you are not doing economics?**
   I think my family would say that I am always doing economics – as I remind them to consider opportunity costs and not to consider those which are 'sunk'.

   Bronwyn is the Ministry of Health's Chief Economist. The Chief Economist's role is to provide intellectual leadership on economic issues and to champion the development of economic capability.

   Bronwyn has previously held positions in the New Zealand Treasury and the Ministry of Justice. She has also held academic posts in the United Kingdom. Her degrees include a PhD in Economics and a Master of Commerce.


NZAE is a partnership organisation of the WEAI which is arranging Allied Society sessions for these upcoming conferences:

- **93rd Annual Conference – Vancouver, B.C., Canada, 26-30 June 2018,** with Presidential Address by Orley Ashenfelter, Princeton University.
- **15th International Conference – Tokyo, Japan, 21-24 March 2019,** with Keynote Addresses by Nobel Laureate Peter Diamond, MIT, Nobel Laureate Robert Engle, NYU, and WEAI Vice President John Shoven, Stanford University.

Participation provides NZAE members additional opportunities to communicate their research and interact with economists from around the world. Beneficial network externalities accrue to all societies and individual participants.

- NZAE will be highlighted in the conference bulletin with a link on WEAI's website to the NZAE website, listing session coordinators as part of the Conference Program Committee.
- As an Allied Society, participants in NZAE-organized sessions register at the same rate as WEAI members.
- NZAE is highlighted as an Allied Society on WEAI's website at **http://weai.org/AlliedSocieties.html**

Participation information and session organizer guidelines for the Vancouver conference can be found at **www.weai.org**

If NZAE members have any questions or wish to arrange a session please contact Dr Arthur Grimes the NZAE liaison at arthur.grimes@motu.org.nz

# BLOGWATCH

*By Paul Walker (psw1937@gmail.com)*

The 2017 Nobel Prize in economics went to Richard Thaler for his contribution to behavioural economics. Kevin Bryan at the 'A Fine Theorem' blog <https://afinetheorem.wordpress.com/> writes on "The 2017 Nobel: Richard Thaler" <https://afinetheorem.wordpress.com/2017/10/09/the-2017-nobel-richard-thaler/>. At the 'ThinkMarkets' blog <https://thinkmarkets.wordpress.com/> Mario Rizzo writes on "Richard Thaler's Nobel Prize" <https://thinkmarkets.wordpress.com/ 2017/10/09/richard-thalers-nobel-prize/>. At the 'Mises Wire' <https://mises.org/wire> Peter Klein explains that "Thaler Wins Nobel" <https://mises.org/blog/thaler-wins-nobel-1>. At the Economist's 'Free Exchange' blog <https://www.economist.com/blogs/freeexchange/> R.A. notes that "Richard Thaler's work demonstrates why economics is hard" <https://www.economist.com/blogs/ free exchange/2017/10/nobel-prize-economic-sciences>. At his blog Tim Harford <http://timharford .com/> explains "Why Thaler's Nobel is a well-deserved nudge for behavioural economics" <http://timharford.com/ 2017/10/why-thalers-nobel-is-a-well-deserved-nudge-for-behavioural-economics/>. At 'VoxEU.org' <http://voxeu.org/> Hersh Shefrin writes on "Richard Thaler, Nobel laureate" <http://voxeu.org/article/richard-thaler-nobel-laureate>. At the 'Marginal Revolution' blog <http://marginalrevolution.com/ marginalrevolution/> Tyler Cowen notes the "Nobel Prize awarded to Richard Thaler" <http://marginalrevolution.com/marginalrevolution/2017/10/nobel-prize-awarded-richard-thaler.html>.

On a closely related note, at 'VoxEU.org' <http://voxeu.org/>, Paul De Grauwe and Yuemei Ji argue that "Behavioural economics is also useful in macroeconomics". Their column uses concepts from behavioural economics to develop macroeconomic models with endogenous business cycle fluctuations. Application of the models highlights how the trade-off between output and inflation is moderated by the flexibility of the economy. These models also help explain the international transmission of business cycle fluctuations <http://voxeu.org/article/behavioural-economics-also-useful-macroeconomics>.

That sport stadiums are a boondoggle is one of the few things that nearly all economists agree on. But the spectre of a new stadium is haunting Christchurch. And there is much fake news and misinformation being spread about it. Fortunately, some good sense has been written on the subject by Massey economist Sam Richardson. First, he asks "Is funding Christchurch's stadium a political forward pass?" <https://www.stuff.co.nz/sport/opinion/96244456/is-funding-christchurchs-stadium-a-political-forward-pass> at 'stuff.co.nz' <https://www.stuff.co.nz/> and then adds some additional thoughts on the "Christchurch stadium debate" <https://fairplayandforwardpasses. blogspot.co.nz/2017/08/christchurch-stadium-debate.html> at his 'Fair Play and Forward Passes' blog <https://fairplayandforwardpasses.blogspot.co.nz/>.

Another sport related, and economically suspect, activity is hosting the Olympics. The Economist magazine <https://www.economist.com/> sets about "Assessing London's Olympics, five years on" and finds that a corner of east London has been rejuvenated, but wider benefits are hard to detect. It is noted that most academics agree that the Olympics offer no long-term boon <https://www. economist.com/ news/britain/21725594-corner-east-london-has-been-rejuvenated-wider-benefits-are-hard-detect-assessing>.

The Economist magazine <https://www.economist.com/> also has a series on big economic ideas. The first of the six articles making up the series is on "Coase's theory of the firm". The big question is, If markets are so good at directing resources, why do companies exist? <https://www.economist.com/news/economics-brief/21725542-if-markets-are-so-good-directing-resources-why-do-companies-exist-first-our>.

In another Coase related blog post Peter Dorman at the 'Econspeak' blog <http://econospeak. blogspot.co.nz> notes "A Serious Misreading of Coase" <http://econospeak.blogspot.co.nz/ 2017/10/a-serious-misreading-of-coase.html>. Dorman maintains that Corey Robin "gives us a terrible interpretation of Coase" in Robin's posting "Forty Years of The Firm: Trump and the Coasian Grotesque" <http://coreyrobin.com/2017/10/23/forty-years-of-the-firm-trump-and-the-coasian-grotesque/> at the 'Corey Robin' <http://coreyrobin.com> blog.

At the website of the Royal Economic Society <http://www.res.org.uk/> Angus Deaton laments the recent passing of four economists who made a great impression on him <http://www.res.org.uk/ view/art1Oct17Corresp.html>. The four being Esra Bennathan, Hans Binswanger-Mkhize, John DiNardo and Tony Atkinson.

It is 100 years since the Bolshevik revolution in Russia. On its centenary Mark Harrison suggests that the Soviet economy should be remembered but not mourned. In a column, "The Soviet economy, 1917-1991: Its life and afterlife", at 'VoxEU.org' <http://voxeu.org/> Harrison writes that: "Russia's Soviet era was distinguished not by economic growth or human development, but by the use of the economy to build national power. On the centenary of the Bolshevik revolution of 1917, this column shows that while the education of women and better survival rates of children improved opportunities for many citizens, Soviet Russia was a tough and unequal environment in which to be born, live and grow old. The Soviet economy was designed for the age of mass production and mass armies. That age has gone, but the idea of the Soviet economy lives on, fed by nostalgia and nationalism" <http://voxeu.org/article/soviet-economy-1917-1991-its-life-and-afterlife>.

At Bloomberg View <https://www.bloomberg.com/view/> Noah Smith argues that "Free College Would Help the Rich More Than the Poor" <https://www.bloomberg.com/view/articles/2017-10-30/free-college-would-help-the-rich-more-than-the-poor>. Smith contends that free college would disproportionately benefit the wealthy and upper-middle class and it would probably worsen the quality of universities. He goes on to claim there are better ways to provide low-income students with the opportunity to get a cheap high-quality education. One way is via means-tested grants. A second useful policy is income-contingent loans – debt that students would only have to pay back if they succeeded in their careers.

At his 'Conversable Economist' <http://conversableeconomist.blogspot.co.nz/> blog Timothy Taylor writes on "Trade, Technology, and Job Disruption" <http://conversableeconomist.blogspot .co.nz/2017/11/trade-technology-and-job-disruption.html>. It is interesting that while both technological developments and international trade can disrupt an economy, and in somewhat similar ways, many people have very different reactions to these forces. For many economists their response to the economic disruption of trade is essentially same as their response to the economic disruption of technology. It appears, however, that for many non-economists their reaction to economic disruption is different depending on whether the underlying cause is technology or trade.

At the blog 'Alt-M' <https://www.alt-m.org/> George Selgin asks "Did Free Banking Stabilize Canadian NGDP?" Selgin discusses an attempt, by Casey Pender, to test Selgin's thesis that free banking contributes to NGDP stability using statistical evidence from Canada, which had a relatively free banking system between 1867 and 1935. Pender found that Canadian NGDP was not less but more volatile. Moreover, that conclusion held not just for the full 1870-1935 sample period, but also for the sub-period 1870-1914, which omits various extraordinary Canadian government interventions during WWI and the Great Depression. Perhaps not too surprisingly, as the post shows, Selgin isn't giving up on his idea just yet <https://www.alt-m.org/2017/09/14/did-free-banking-stabilize-canadian-ngdp/>.

At the 'EconLog' <http://econlog.econlib.org/> blog David Henderson reminds us of a 1953 NBC radio discussion between Milton Friedman, John Kenneth Galbraith, and David McCord Wright on subject of "What is American Capitalism"? An interesting interaction about which Henderson says "What's striking here, as already noted, is how civil the conversation is and how formal: each person calls each other by his last name" <http://econlog.econlib.org/archives/2017/07/friedman_galbra. html>. Times have changed.

Motu Economic and Public Policy Research

# VALUING SUNSHINE

*David Fleming, Arthur Grimes, Laurent Lebreton, David C. Maré, Peter Nunns*

It is commonly acknowledged that a house that gets more exposure to sunlight is more attractive, especially in 'temperate' climates like New Zealand. Until now, however, the value of that sunshine has not been calculated. This creates a difficulty when a building is designed in a way that will shade its neighbour, decreasing the value of the existing building. At present this is controlled by often inflexible regulations that specify building parameters.

This research is designed to put a value on sunlight, enabling the change to be priced, potentially allowing compensation to be calculated for affected owners. An interesting example of the latter type of approach recently occurred in Boston, USA where a developer has been required to pay $US3million for a new development that will block sunlight to local churches (however, there is no indication that this figure was derived using any formal economic approach). Our research may also be used in the private market to better value development sites.

We test our ideas using Wellington, as the city is small, so housing heterogeneity with respect to access to services and amenities is low compared to large cities. In addition, its local economy and housing market have been stable, with no important shocks over the study period. Perhaps the most important attribute of Wellington for our analysis, however, is its geographical topography and intensification. It is not difficult to find houses that, while located in the same neighbourhood, have very different exposure to direct sunlight due to the effects of hills, valleys and nearby buildings.

## DATA AND METHODOLOGY

We use data provided directly to us by the Real Estate Institute of New Zealand (REINZ). The dataset included detailed data on characteristics and sale price for houses sold in Wellington for six years – from January 2008 to December 2014. These data include variables capturing properties' sale price, location, number of bedrooms, total floor area, the decade when the house was built, access to off-street parking and the date of sale.

We then took information on the geographical coordinates of the property sales in the REINZ data and calculated zenith angles, viewspan and elevation using fine-resolution topographical models from Wellington City Council. This enabled us to determine how much sun a given property receives throughout each day of the year, assuming a clear sky. Subsequently, we computed the average daily hours of direct sunlight received during the year by each house in our database.

Our final dataset consisted of 5,584 property sales across Wellington City from Ngaio to the South Coast. The average house sale value in our data is $632,000, with a standard deviation of $293,000. The average number of bedrooms is 3.3, while mean total floor area is 148 square metres.

The average house in our sample received 8.7 hours of sunlight per day, on average, across the year. However, as expected, our sunlight data varies considerably across the sample with some houses receiving as low as 3.7 hours of sunlight on average across the year, while other houses received more than 11 hours. Also, as expected, there is a difference between summer and winter months, with a higher variation in the latter (standard deviation of 1.6 hrs/day), compared to the former (0.9 hrs/day).

We begin with a simple naïve regression of *ln(House sale price)* on our variable *Sunlight* plus a constant. The resulting Sunlight coefficient is close to zero (-0.008), with a p-value of 0.051. This would imply that variation of *Sunlight* across properties does not affect the market price of houses (or affects them slightly negatively) in our dataset. However, this simple specification suffers from two important issues: omitted variables and locational sorting. The first is obvious as we are ignoring several factors that could affect the final value of a house in the market. To address this concern, we add the extra house characteristics variables available in our dataset.

The second issue has been widely discussed in the hedonics literature and refers to the ex-ante preferences that buyers have to locate in particular areas (in our case, a preference to locate in areas with more sunlight than others), producing a self-selection bias in our simple estimates. To address this concern, we use a 'within estimator' by including fixed effects at Mesh-block (MB) level in the city. By incorporating MB fixed-effects, we reduce bias due to locational sorting considerably, as now our *Sunlight* coefficient is capturing the variation within these neighbourhoods after controlling for location preferences that purchasers might have had when selecting houses. The inclusion of meshblock fixed effects also controls for the price effects of unobserved local characteristics such as accessibility or proximity to local amenities.

Our full model incorporating both the full characteristics vector and MB fixed effects is given by

$$log\,(Y_{it}) = \beta\, Sunlight_{it} + \gamma \boldsymbol{X_{it}} + \alpha_{MB} + \delta_t + e_{it} \qquad (1)$$

where $Y_{it}$ is the sale price of property $i$ in quarter $t$, $\boldsymbol{X_{it}}$ is a vector for our available hedonic variables: *Elevation*, *Views*, *Number of bedrooms*, *Total floor area*, *Age of house* (and its squared value), and *Off-street parking access*, $\alpha_{MB}$ are meshblock fixed effects, $\delta_t$ are (quarterly) time fixed effects, and $e_{it}$ is an idiosyncratic error term.

Using equation (1) we initially used OLS for the hedonic estimation without controlling for MB characteristics and thereafter control for MBs. The inclusion of the house characteristics variables now yields a (positive and significant) coefficient on *Sunlight* of 0.019.

To address locational sorting and additional omitted variables endogeneity from unobserved location-specific time-invariant

characteristics, we incorporate the MB fixed-effects. In this regression, *Sunlight* has a statistically significant semi-elasticity of 2.4% which, at our sample average, translates into approximately $15,000 dollars extra in price for each extra hour of daily sunlight for the property.

We then test whether there is a differential effect of having more sun in summer versus winter by including the average daily hours of sunlight across the six darkest months (April to September) as a covariate. The resulting coefficient on this variable is not significant. This finding, along with similar tests, indicates that the valuation of sunlight is similar across the year. We then test whether the valuation of sunlight is related to the season when the house was sold. For this we interacted *Sunlight* with a dummy variable given by sales reported in the winter (six darkest) months, finding that the interaction term is not significant.

We also test whether the estimated coefficient on *Sunlight* alters when including its interaction with house elevation or viewspan, showing that the effect of price with respect to Sunlight remains similar (in extent and significance) when *Sunlight* is interacted with each of elevation and viewspan.

Even though the value of sunlight remains stable across the model specifications, this might change across different suburbs. After including interactions of *Sunlight* with high and low income suburbs and with dark and sunny suburbs, the coefficient on *Sunlight* remains similar to the base model and the differences in sale price are not statistically significant. Other coefficients also remain stable. These results imply that, regardless of the suburbs where purchasers choose to locate, after controlling for neighbourhood characteristics and house attributes, people are still willing to pay a premium of around 2.4% of the total house value, on average, for an extra daily hour of sunlight across the year.

Our *Sunlight* measure was computed with topographical digital elevation models built in 2010. There is a possibility, therefore, that we could be missing changes in sunlight for properties that could have occurred because of building intensification across the city between 2011 and 2014. To check any potential biases from this factor we tested our model by splitting our observations into two sub-samples: houses sold between 2008 and mid-2011 (N=2,667) and from mid-2011 to 2014 (N=2,917). Results from these two regressions produce significant *Sunlight* coefficients of 0.026 and 0.023 respectively (which are not statistically different from each other), suggesting that any potential changes of direct sunlight received as a consequence of urban intensification did not bias our results.

### RESULTS

Each additional hour of direct sunlight exposure for a house per day (on average across the year) adds around 2.4% to a dwelling's market value according to our econometric hedonic model. This estimate is robust to a variety of specifications that investigate whether the value is conditional on other factors relating to the characteristics of the house (specifically view and elevation) or its suburb. Outside of Wellington, the value may be higher or lower depending on factors such as climate, topography, city size and incomes. Nevertheless, our approach can be replicated in studies for other cities to help price the value of sunlight in those settings.

With the ability to calculate sunshine exposures, and the value placed on those exposures, the policy apparatus for dealing with sunlight provision issues in an urban setting can henceforth be shifted – at least in part – away from a regulatory approach and more towards a price-based approach.

Read the full version of the working paper at **http://motu.nz/our-work/urban-and-regional/housing/valuing-sunshine/**

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The New Zealand Association of Economists aims to promote research, collaboration and discussion among professional economists in New Zealand. Membership is open to those with a background or interest in economics or commerce or business or management, and who share the objectives of the Association. Members automatically receive copies of New Zealand Economic Papers, Association Newsletters, as well as benefiting from discounted fees for Association events such as conferences.

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# MEMBER PROFILES WANTED

Is your profile on the NZAE website? If so, does it need updating? You may want to check ...

# NEW MEMBERS

(mid-July to mid-September 2017)

**Kerry Anne Burridge** (Self employed); **Yonathan Dinku** (University of Otago – Graduate Study award winner 2016); **Yang Hu** (University of Waikato - Graduate Study award winner 2016); **Tim Maddock** (New Zealand Productivity Commission); **Dr David Fleming, Sally Owen** (Motu); **Benjamin David Smith** (NZ Transport Agency); **Kane Shea Swift** (Ministry of Transport); **John Stephenson** (Sense Partners); **Dr Ershad Ali** (Auckland Institute of Studies); **Dr Geetha Subramaniam** (Universiti Teknologi MARA); **Stephen Richards** (Crowe Horwath); **Pamela Booth, Benjamin Wiercinski, Dr Patrick Walsh, Dr Tarek Soliman** (Landcare Research); **Andreas Sebastian Heuser** (NZ Treasury), **Josef McClean** (Victoria University of Wellington), **Mike Hayward** (NZ Productivity Commission), **Stacey Bell** (Manawatu District Council), **Dr Haizhen Eric Wu** (MBIE), **Derek Foy** (Market Economics Ltd)

# CHANGES TO THE RETAIL TRADE SURVEY

Statistics New Zealand has recently introduced changes to the design of the Retail Trade Survey (RTS). These changes:

- make more data available at a lower level, both at the industry (store-type) level and by region.
- improve the quality of the published series, particularly at regional level, by removing sampling error.
- reduce respondent burden by 87 percent.
- make greater use of administrative data sources.
- implement a consistent methodology across economic statistics surveys.

These improvements were first released in the *Retail Trade Survey: September 2017* quarter, published on 23 November 2017.

## THE NEW SURVEY DESIGN PARADIGM

Stats NZ has already implemented the new survey design methodology in two other surveys: Economic Survey of Manufacturing: June 2017 quarter and Wholesale Trade Survey: June 2017 quarter. The changes made to the Retail Trade Survey will more closely align it with these other sub-annual financial collections.

Under the current RTS design, we survey all the large businesses in each industry, plus a sample of medium- and small-sized businesses. We supplement this with modelled tax data (GST) for the smaller businesses.

Under the new design, we use administrative data (GST and PAYE), sourced from Inland Revenue, wherever possible. We have done extensive work over the last few years on GST data and have established that it can be modelled to provide reliable measures of the sales and inventories of the simple and non-complex businesses found in many different industries. Robust methods of transforming the GST data, which is submitted at different frequencies, to a quarterly frequency have been developed. In addition, methods of (a) detecting and removing sales and purchases of large capital items and (b) apportioning GST to specific industries in those instances where a single GST return is from a linked business group, have been developed.

We supplement the GST data for each of the series with survey data on sales and inventories for the large and complex businesses.

With the new RTS design, despite the fact that we are now capturing data from the full population, we have reduced the number of businesses being surveyed by 87 percent. Most of the small and medium sized businesses previously included in the postal (sample) component of the old survey are no longer directly surveyed, their data now being sourced from GST records.

*Figure 1 compares the current and new designs.*

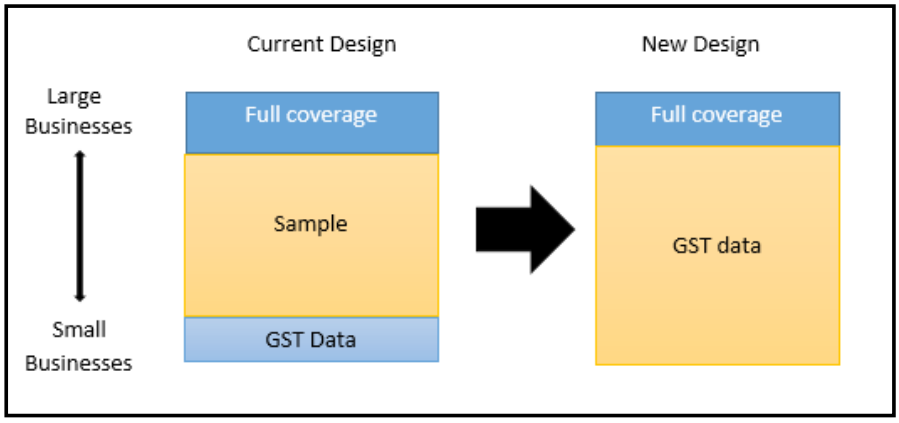
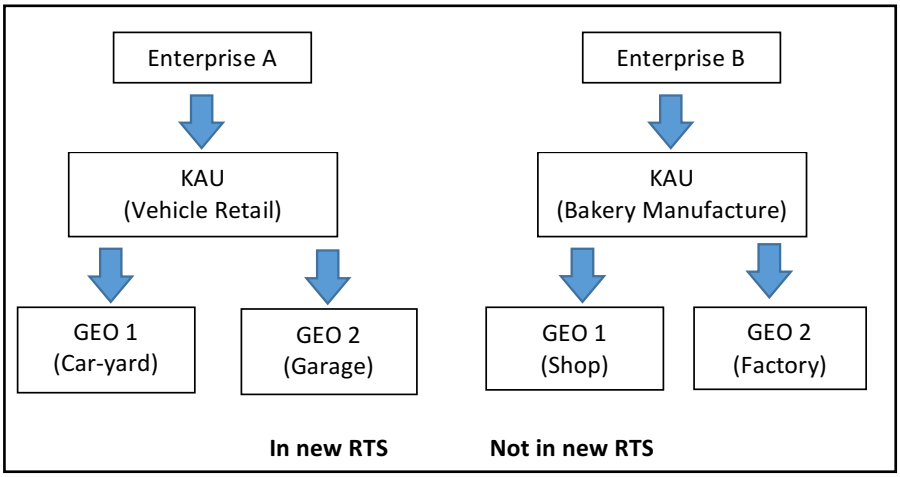



*Figure 2 provides a simplified illustration of the change in the statistical units being covered.*




The methodology changes improve the quality of the series we publish, particularly at sub-national level. This is largely because we effectively have a full coverage of all businesses within an industry, rather than relying upon a smaller sample to represent the entire population.

## THE SPECIFIC CHANGES TO THE RETAIL TRADE SURVEY

Changes have been made to the population scope and variables collected in the RTS under the new design.

### (i) Population scope

The target population is all kind-of-activity units (KAUs) operating in New Zealand classified on Stats NZ's Business Register (BR) to Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC06) Division G – Retail Trade, and ANZSIC06 Division H – Accommodation and Food Services.

Previously the target population was all geographic units (GEOs) operating in New Zealand classified on Stats NZ's Business Frame to ANZSIC06 Divisions G and H.

We moved to a KAU-based collection from a GEO-based collection to align with our other sub-annual financial collections including the Economic Survey of Manufacturing and the Wholesale Trade Survey. The Annual Enterprise Survey is also collected on a KAU basis.

In the simple structure shown, Enterprise B has a single predominant activity (a single KAU) of bakery manufacture. It has a single factory (GEO 2) but also has at a nearby location a small retail shop (GEO 1). Full financial data are kept at the KAU level, with only sales, and possibly employment, data available at the GEO level. The old RTS included the sales data from the retail shop. However, the new RTS will collect data from the KAU and so will exclude these retail sales, as Enterprise B is classified to manufacturing and is outside the scope. These shop sales are already being collected in the Economic Survey of Manufacturing. Conversely, for enterprise A, whose predominant activity is retailing, sales from both the car-yard and the garage will now be included. These gains and losses in coverage were not major, and largely cancel out, estimated to have been about 1.5% of RTS sales.

Although the RTS is collected on a KAU basis, Stats NZ will continue to collect GEO or store-based sales information from the largest retail businesses with multi-GEOs. This will ensure we continue to provide regional and other geographic-based retail sales statistics.

**(ii) Additional variables**

The old RTS collected data on sales and inventories only. Under the new methodology the RTS also collects these same variables and they are published each quarter as official statistics.

However, with the redesign, the RTS is now an integral component of the new business data collection (BDC), a quarterly financial collection covering most industries in the economy. In addition to sales and inventories, information on purchases, salaries and wages, and net profit (EBIT) is also now available. Similar data is already being published for 24 industry groups as part of the BDC.

Note that the BDC is still at an "experimental" stage and these new statistics are being released on the Stats NZ Innovation Site. (See B*usiness Data Collection – initial data release* for more information on the Business Data Collection.)

**(iii) Regional information**

The full coverage nature of the new design allows for the more accurate provision of data at lower geographic levels. RTS data is now available at the regional council level (16 regions) replacing the six retail regions previously published. These additional regional series are back-cast to the June 2011 quarter using the new methodology.

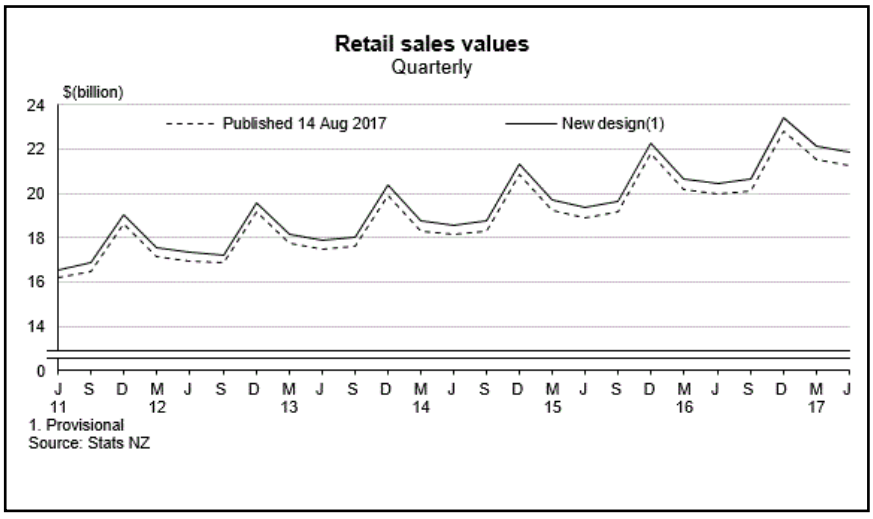
**(iv) Store-type analyses**

The RTS covers all kind-of-activity units (KAUs) operating in New Zealand classified on Stats NZ's Business Register (BR) to ANZSIC06 Division G – Retail Trade, and ANZSIC06 Division H – Accommodation and Food Services. The old series was published at the level of 15 industries or store-types. While the series from the new survey are published at the same store-type level, the full coverage design allows for finer store-type analyses if required.

**(v) Linking data from the new methodology with historic series**

To ensure continuity, the new series was linked with the previous retail trade data using the June 2017 quarter as the linking period. Each published industry has been back-cast with previously published percentage movements maintained. This has resulted in some level changes at the published industry level. As we have maintained the changes at the industry level there are some small changes at the total retail trade levels. Supermarkets and grocery stores were modified slightly as the new methodology indicated increased movements over recent quarters. Figure 3 compares the previously published data for retail sales compared with sales data using the new design.

*Figure 3*




**(vi) Timing change**

The one drawback with the new design is that due to the increased reliance on administrative data the release dates for the RTS have been adjusted slightly. Retail trade releases will be approximately one week later than they were under the old methodology.

## FOR FURTHER INFORMATION ON THE REDESIGN

**http://www.stats.govt.nz/browse_for_stats/industry_sectors/RetailTrade/Methodology-changes-retail-trade.aspx**

## CONTACT

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# RESEARCH IN PROGRESS...

Continuing our series on the research projects currently underway in Economics Departments and Economics Research Units throughout New Zealand, in this issue we profile the research currently being undertaken by economists in the School of Economics, Lincoln University. The objective of this section is to share information about research interests and ideas before publication or dissemination - each person was invited to provide details only of research that is new or in progress.

## Research in progress – Lincoln University

**Sazali Abidin – Associate Professor**

Sazali currently works on research projects related to ethical funds, socially responsible investments, equity pricing, corporate governance, rural credit, financial well-being and income inequality, particularly in the Asia-Pacific region. This includes a research grant from the Malaysian government for a comprehensive study on income inequality and financial well-being among different races in various regions in Malaysia.

**Katie Bicknell – Senior Lecturer**

Katie is undertaking research in three primary areas. The first is decentralised resource management, focusing in particular on water allocation. The second is the economics of animal welfare, paying attention to consumer reactions to animal welfare. The third is farm systems modelling.

**Paul Dalziel – Professor**

Paul is involved in the AERU research programmes on global agri-food value chains and international consumer understandings of credence attributes associated with New Zealand agri-food exports. He is the lead author preparing a manuscript for an international book on wellbeing economics commissioned by Palgrave for its Pivot series. This is co-authored with Caroline Saunders (AERU) and Joe Saunders (Leeds University) and will be published in 2018.

**Christopher Gan – Professor**

Christopher is continuing research arising out of his co-edited book on *Microfinance in Asia* published earlier this year. Two papers in Islamic Microfinance and Islamic Banking will appear shortly in the *Pacific-Basin Finance Journal* and *in Managerial Finance.* Christopher is working on revising another paper at the request of *International Journal of Social Economics.*

**Baiding Hu – Senior Lecturer**

Baiding currently works on how to measure economy-wide energy rebound effects when sectoral data, in addition to aggregate data, are available. The research tries to demonstrate the advantage of using disaggregate data over aggregate data when measuring the economy-wide rebound effect by taking into account possible effects of inter-sectoral relationships on aggregate energy consumption.

**Geoff Kerr – Professor**

Geoff is an environmental economist in the Department of Environmental Management at Lincoln University. His research focuses, among other things, on applying non-market valuation tools to increase understanding public perceptions of natural resource use. He is co-author for the biennial Public Perceptions of New Zealand's Environment.

**Zhaohua Li – Senior Lecturer**

Dr Li works on corporate finance. In particular, Zhaohua investigates the impact of the Qualified Foreign Institutional Investor (QFII) scheme regulated by the Chinese government on firm innovation in China. By explicitly addressing the potential endogenous relationship between foreign institutional ownership and firm innovation, her study finds that foreign institutional investors enhance firm innovation in China.

**Caroline Saunders – Professor**

Caroline is the Science Leader for Theme 1 of the Our Land and Water National Science Challenge, which focuses on capturing value in global agri-food value chains. She is also Science Leader for the $4 million Endeavour Fund research programme on Unleashing Export Prosperity, which began on 1 October this year and will continue until 2022. Caroline is organising a special session on Lessons from New Zealand's Agricultural Reforms at the Agricultural Economics Society Conference in 2018 and will be AES President in 2019.

**Peter Tait – Associate Professor**

Peter continues to lead research in the AERU that uses choice experiments to estimate values of consumers and citizens. He is involved in the agri-food research programmes of the AERU, and is responsible for related projects commissioned separately by industry partners. He is advising the Ministry for Primary Industries on choice modelling. In July, Peter was elected Vice-President of the New Zealand Association of Economists.


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