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EDITORIAL

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After serving four years as editor of Asymmetric Information, I will be handing over to Professor Viv Hall. I'd like to take this opportunity to thank the many people who have contributed articles. In particular, the regular contributors, Stuart Birks ('Frames'), Grant Scobie (2B RED) and Paul Walker ('Blogwatch'), have been a 'gift' to any editor. They have provided their interesting and often entertaining pieces as regular as clockwork. Motu have continued without exception to provide a summary of one of their latest papers, and Statistics New Zealand, thanks to Jeff Cope, have contributed regular articles describing new and valuable data sources. I'd specially like to thank Stuart and Grant, who have decided to end their long series with the current issue.

Sadly, this issue begins with three obituaries, of Peter Conway, Allan Catt and Seamus Hogan. The tenth in the series of interviews with eminent New Zealand economists features John Yeabsley, interviewed by David Galt. The 'Five Minute Interview' is with Rhema Vaithianathan. From Motu, Adam Jaffe and Trinh Le discuss the impact of R&D subsidies on innovation by New Zealand firms. Daniel Griffiths of Statistics New Zealand, writes about improving our understanding of labour demand. The A.A. Bergstrom Prize in Econometrics was awarded this year to Michelle Lewis: the citation is published here. The School of Economics and Finance at Victoria University of Wellington provides this issue's report of Research in Progress. As this is my last issue, I have allowed myself the luxury of writing the 'Fine Lines' piece, on reciprocal demand curves and the gains from trade, and at the same time introducing a bit of history of economic analysis by paying tribute to Alfred Marshall.

OBITUARY: PETER CONWAY (1953-2015)

By Arthur Grimes[1]

For many New Zealanders, Peter Conway was one of our best-known and most respected economists. After many years of union involvement, he became CTU Economist and Director of Policy in 1999. He was subsequently elected to the position of CTU Secretary in 2008, a position he retained until 2014. Peter was no old-time ideologue. He was always considered in his analysis of issues and was admired for his thoughtfulness both by people he represented and by people who sat across the table from him.

While still at school, Peter was involved in causes such as the anti-Vietnam war protests and Amnesty International. He studied for a BCA at Victoria University saying that he "wanted to understand business". While studying, Peter developed a strong interest in the burgeoning feminist movement, introducing a number of those close to him to its insights.

After university, he set out to find out more about the world and worked in a number of jobs including six months at Todd Motors. He was the "door fixer" on the assembly line and the experience excited his interest in Marxist economics. He also spent six months working on a farm in the Southern Hawkes Bay. Moving to Christchurch, Peter got his first union job as Assistant Secretary of the Canterbury West Coast and Nelson Marlborough Clothing Workers Union. He was an organiser, along with Rob Stevens and Geoff Mason, of the Marxist Political Economy Conference in Christchurch in 1981.

After six years with the Clothing Workers Union, he and his wife, Liz, set out to explore the world. After travelling though Melanesia, Asia, the Middle East and Europe, they arrived in the UK to rampant Thatcherism and the Miners' Strike. This timing could either be seen as a potential nightmare or as an opportunity for an economist/unionist like Peter. He landed a job at the Hounslow Trade Union Support Centre and was soon heavily involved in organising support for the miners and their families. The Centre developed a special relationship with the miners in Whitwell, Derbyshire and Peter and Liz made several trips there. The film *Pride* reflects their experience. His colleagues at the Hounslow Centre recall the work they did with workers in unskilled, un-unionised low-paid catering and cleaning jobs at hotels around Heathrow

1 This obituary draws very substantially from Ross Wilson's Eulogy at Peter's funeral. I thank Ross for his permission to reproduce this edited material, and record my sorrow to Peter's family, friends and colleagues for his passing.

airport. Frequently they had to hide in hotel linen cupboards or were chased out of hotels by angry managers!

On their way back to New Zealand, he and Liz detoured via a Nicaraguan collective farm where they picked coffee, made music and talked politics. They arrived in New Zealand in 1986 to rampant Rogernomics – another potential nightmare or opportunity! He quickly got a job in Auckland with the Distribution Workers Federation, which later became the Northern Distribution Union. Here he developed a reputation for providing meticulous research for bargaining and sound advice on strategic matters. One colleague noted that the union movement had always had a lot of characters and the NDU had its fair share of them. Some organizers had militancy but not much else, and Peter had to provide counsel through considered tactics and strategy. On one occasion in the 1980s, Peter was pressed into representing striking NDU Daily Freightway members in a Labour Court hearing. It was a partial strike and Peter put up the innovative argument that the workers could not be on strike because they were undertaking more work than normal! The judge agreed.

In 1996, Peter (in line with his feminist credentials) took over the "home front", looking after the children at home for the next three years. Apparently playgroup discussion moved swiftly from childrearing to politics and the Miners' Strike! He took this opportunity to fit in some further university study. He finished his BA, got a Massey Scholarship, and graduated in 1999 with an MA in Economics. Meanwhile, he became a Director of the Yellow Bus Company in Auckland.

Shortly after the election of the Clark Labour Government and Ross Wilson's election as CTU President, Peter came to work for the CTU in Wellington as Economist and Director of Policy. He had been Helen Clark's electorate chair and was keen to work with the new Government. Ross Wilson recalls how Peter's reputation grew as he engaged with the Government bureaucracy, and political and business leaders. He was especially appreciated for his ability to explain economic issues in a simple and convincing way through the media. In 2006, he was granted the Winston Churchill Fellowship to the United States, where he furthered his academic interest in productivity and building high-value high-skill jobs and industries.

He was deeply interested in trade negotiations and was involved in confidential discussions with MFAT trade negotiators. He acted as a Board member of NZ Trade and Enterprise for several years and was Chair of their Audit and Risk Committee. He was also involved in international development work through his period as a Board member of Oxfam New Zealand from 2005 until 2014, being Chair from 2008 until 2013. In addition, he was a foundation Trustee of the international development agency, UnionAID.

Peter was elected CTU Secretary in 2008, reflecting the huge credibility he had built through his work as CTU Economist. He retained this position through another difficult economic and political environment for the union movement through to 2014. Even while CTU Secretary, he continued to lead policy work, such as the "Under Pressure" Report on insecure work published in 2013. Any economist interested in applied labour economics would find much of interest in this in-depth report (available at: http://union.org.nz/sites/union.org.nz/files/Under-Pressure-Detailed-Report-Final.pdf.)

In addition to his union and economics activities, Peter was dedicated to his family while also being an excellent sportsman and a superb musician. He had a long involvement in the folk music scene. His band, Jade, appeared a number of times on television in the 1970s. I still remember their performance on New Faces (a precursor to New Zealand's Got Talent!); they also appeared on Grunt Machine and the Max Cryer show. In later years, Peter appeared in bands such as Red Gumboot and Not the Day Job. He was a wonderful mandolin player to go with his other gifts.

Sadly, Peter developed chronic depressive illness and, after little more than a year, this resulted in his death. He was such a well-respected and well-loved man that his funeral drew a huge crowd from all walks of life and from all political and economic persuasions, a testament to the contribution that this economist made to the nation. No-one could describe Peter better than did Business NZ in their tribute when they described him as a "leader of the highest integrity".

His contribution is a reminder to any young economist that there are many avenues through which one can use economics to contribute to society. The New Zealand economics fraternity has lost a wonderful contributor both to our profession and far beyond.

OBITUARY OF ALLAN JOHN LEWIS CATT (1926-2015)

By Brian Silverstone[1]

1 I am very grateful to Hessel Baas, Tim Hazledine, Robert Scollay and John Ward for their helpful contributions. For further details, see Max Lambert, ed. (1991) Who's Who in New Zealand (12th edition). Wellington: Reed.

The death of Emeritus Professor Allan Catt in his 90th year on 17 May 2015 in Auckland marks the passing of one of the last members of a very influential post-war group of New Zealand economists. These economists dominated many of the leading positions in government, academia and research. Members of this group, Allan amongst them, appeared frequently in New Zealand academic analyses and policy debates, in awards and, more recently, in *Asymmetric Information* interviews. They also encouraged and mentored many younger economists.

Allan was born in Thames and educated locally, then Auckland Grammar School and subsequently Victoria University of Wellington where he gained an MCom in 1950 with First Class Honours. His first employment was at the Reserve Bank of New Zealand as a senior research officer (1946-1960) with secondment to the South Pacific Commission (SPC) between 1953 and 1955. His SPC work included the preparation of national income accounts for Western Samoa. Employment at the NZIER (1960-1966) followed as a senior research officer and, effectively, deputy director.

Between 1966 and 1970, Allan worked for the IMF as Chief of the Fiscal Analysis Division and as the resident representative in Kabul, Afghanistan. A decade later (1979-1980) he took leave from Auckland University to undertake a Fund assignment as financial adviser to Mauritius. Between these IMF periods, Allan was Professor of Economics in the University of Waikato (1970-1977). His final academic appointment was as Professor of Economics in the University of Auckland from 1977 until his retirement in 1990. He was appointed emeritus professor but never retired as an economist and advocate. Even in his final days, he was discussing monetary policy with his bedside visitors.

At the NZIER, Allan inaugurated macroeconomic analysis and forecasting and was a member of the team that established the *Quarterly Survey of Business Opinion* (QSBO). Published continuously since its inception in 1961, QSBO is now one of the world's longest running surveys of its type with an excellent reputation due to largely unchanged questionnaires, loyalty of respondents and extensive research outcomes from well-maintained records. In 1964, Allan became the first editor of *Quarterly Predictions* (QP). This respected Institute publication has also been published continuously since its inception. Just prior to joining the Institute, Allan became an inaugural member of the newly-established consultancy firm Business and Economic Research Limited (BERL) in 1958. His connection with BERL continued well into his retirement from Auckland University.

The first half of the 1960s was a very productive period in Allan Catt's academic writing. His internal Institute research papers included *Investment Decision Making in New Zealand* (1964), *A Suggested Company Tax Reform* (1965) and *A Portrait of the New Zealand Share Investor* (1967). *A Suggested Company Tax Reform* is especially noteworthy. In this well-argued 1965 paper, which included the results of a questionnaire with almost 200 replies, Allan proposed that New Zealand income tax on company profits be replaced entirely with a value-added tax. Some 20 years later, New Zealand introduced a value-added tax (GST). The tax on company profits has remained, although at progressively lower rates and with the tax now imputed to shareholders.

During his time at the Institute, Allan's research into aspects of monetary theory and policy appeared in highly-ranked international journals including *Oxford Economic Papers* ('Idle Balances and the Motives for Liquidity' 1962), *Quarterly Journal of Economics* ('Credit Risk and Credit Rationing: Comment' 1963) and the *Economic Journal* ('Credit Rationing and the Keynesian Model' 1965). The main theme in these papers was the impact of monetary and credit expansions and contractions on borrowers, lenders and savers and the questionable role - in Allan's opinion - of interest rates as a market-clearing device. These papers have a contemporary relevance and potentially useful insights into behavioural responses in monetary regimes characterised nowadays by quantitative easing policies.

Allan taught macro and monetary economics at Waikato and Auckland Universities, supervised dissertations and projects and published further academic articles on topics that included inflation and the monetarist-Keynesian debate. He was also was editor of the *New Zealand Economic Papers* for 1978 and 1979. Students benefitted from his intellect and extensive institutional knowledge together with his national and international connections. His Waikato and Auckland students were keenly sought by the Reserve Bank and NZIER, among other institutions, and by the private sector.

One of Allan's most enjoyable experiences at Waikato was membership of a group that invited essay contributions from national and international scholars to honour Professor Bill Phillips. Bill received the essays in typescript on his 60th birthday (16 November 1974) but never saw the final version which appeared in 1978 as *Stability and Inflation: A Volume of Essays to Honour the Memory of A.W.H. Phillips.* The volume was well received.

Particularly noteworthy amongst Allan's public contributions was his opposition, with just a few other economists, to aspects of the Reserve Bank Act 1989. His discussion paper, 'New Classical Economic Theory and the Reserve Bank Bill (1990), is especially vigorous. It is a reply to a Reserve Bank critique of a 1989 submission by the Manufacturers' Federation to Parliament's Finance and Expenditure Committee. Allan argued that the Reserve Bank had accepted uncritically New Classical Macroeconomics despite weak international empirical evidence. The Bank had also accepted - wrongly in Allan's view - the long-run neutrality of money proposition and, above all, overlooked objectives and factors other than price stability.

Although the inaugural Reserve Bank Policy Targets Agreement (PTA) of 1990 was somewhat less strict and somewhat more democratic than Allan had envisaged, his paper is still worth revisiting. Subsequently, in 1996, the inflation target range was increased from 0-2 percent to 0-3 percent. By 1999, inflation targeting had become more explicitly constrained whereby 'In pursuing its price stability objective, the Bank ... shall seek to avoid unnecessary instability in output, interest rates and the exchange rate' (1999 PTA, Clause 4c). Allan would have agreed with these developments. An ongoing reservation, however, (expressed with his BERL colleagues) was 'that the appropriate levels of interest rates and the appropriate growth in money supply are *both* essential to maintaining a sound financial system' (2007, p.1).

Allan remained academically active in retirement. In 1995, for example, he advocated a financial transactions tax in a national newspaper. His proposal became the subject of a parliamentary question (*Hansard* 25 July 1995):

> Jim Anderton: Has the Minister read the comments of the eminent economist and Director of Business and Economic Research, Professor Allan Catt, in the *Sunday Star-Times,* when he stated that a financial transaction tax has many advantages over GST including that 'because the income is raised on such a very low rate, it means there is no distortion to people's decisions. Economically speaking, it has tremendous advantages'; and if he has not seen it, why not?

The Minister, in reply, said he was aware of Professor Catt's proposal but was not persuaded by the idea of a financial transactions tax. It is interesting to note that 20 years on from Allan's proposal, the debate on a financial transactions tax has been re-opened internationally.

The obligation to be a 'critic and conscience of society' was a professorial commitment that Allan took seriously. He commented frequently on economic matters particularly monetary policy and the post-1984 reforms. Even in his final years, he was still sharing his views. A nice illustration, beautifully written, is his 2009 review of Bryan Gould's book *Rescuing the New Zealand Economy.* The review is entitled 'Assessing the New Zealand Experiment' and can be found at: http://nzbooks.org.nz/2009/non-fiction/assessing-the-new-zealand-experiment-allan-catt/ Overall, Allan is sympathetic to Bryan Gould's 'left-of-centre analysis' (Allan's words). It is clear from this review that Allan still held firmly to his long-established opinion that:

> It is very seldom that reforms can be introduced without someone being hurt ... and the questions we must ask are who would be hurt, by how much would they be hurt and would any disruption to the economy that might occur be worth the gains that would be made' ('Company Tax Reform' 1965, p.5, Allan's emphasis).

Allan is remembered fondly as an encouraging teacher and colleague who made important contributions to New Zealand economic research and debate. He was stubborn on some matters but always 'an economist with a heart', as one colleague has recalled. Allan enjoyed attending academic gatherings of economists. Indeed, as recently as last year, he appeared on the Auckland campus to attend a seminar by one of his former Waikato students, Arthur Grimes. Allan also enjoyed keeping in touch with colleagues and research partners and especially any occasion that would provide an opportunity for a lively discussion. Allan is survived by his wife, Ailsa, and by his daughter, two sons and grandchildren.

Selected Publications of Allan Catt

Idle Balances and the Motives for Liquidity (1962) *Oxford Economic Papers* 14(2) June.

Credit Risk and Credit Rationing: Comment (1963) *Quarterly Journal of Economics* 77(3) August.

Investment Decision Making in New Zealand (1964) *Research Paper* No.5, Wellington: NZIER.

Comparative Price Levels in Australia and New Zealand (1964) with H.R. Hardie, Wellington: Business and Economic Research Ltd (BERL).

A Suggested Company Tax Reform (1965) *Discussion Paper* No.6, Wellington: NZIER.

Credit Rationing and the Keynesian Model (1965) *Economic Journal* 75(298) June.

A Portrait of the New Zealand Share Investor (1966) *Research Paper* No.9, Wellington: NZIER.

Finance in the New Zealand Economy (1977) *Studies in the New Zealand Economy* No.7, Auckland: Heinemann.

Stability and Inflation: A Volume of Essays to Honour the Memory of A.W.H. Phillips (1978) edited with Rex Bergstrom, Maurice Peston and Brian Silverstone, Chichester: Wiley.

Monetarist versus Keynesian Causation in New Zealand (1979) with Chor-Hoon Tan and Wan-Hwee Tan, *New Zealand Economic Papers* 13(1) December.

The Inflationary/Unemployment Dynamic in New Zealand (1981) *New Zealand Economic Papers* 15(1) December.

New Classical Economic Theory and the Reserve Bank Bill (1990) *Policy Discussion Papers* No.6, Auckland: Department of Economics, University of Auckland.

BERL's Supplementary Note on the Operation of Monetary Policy (2007) with Kel Sanderson and Ganesh Nana, Wellington: BERL.

OBITUARY OF SEAMUS HOGAN

by Eric Crampton

Seamus Davie Hogan, newly elected President of the New Zealand Association of Economists, died of a brain aneurysm on 17 July, aged 53. He is survived by his wife, Sarah, and their children, Emma, Liam and Flynn.

Seamus was a Canterbury economist. Born and raised in Christchurch, Seamus completed his undergraduate and Honours training in economics at Canterbury in 1985 and there began his doctoral work under Richard Manning. When Manning left to Chair the Economics Department at the State University of New York in Buffalo, Seamus followed him and completed his doctorate in 1989. He then took up an Assistant Professorship at McGill University in Quebec where, with co-author Chris Ragan, he completed a series of papers modelling labour markets. More importantly, he there met Sarah.

Seamus advanced to Associate Professor at McGill before moving to Ottawa. There, Seamus served as Principal Researcher with the Bank of Canada and as a research unit Director with Health Canada, before moving to Canterbury where Seamus took up a Senior Lectureship in 2001.

The Economics Department was then building out of long slump. The Department, from the 1980s through the mid-1990s, had been unable to hire to fill standing vacancies. By 1995, the Department had dropped to seven economists plus two fixed-term appointments. Rebuilding began slowly in 1996. With the hiring of Seamus Hogan and Ken Carlaw in 2001, the Department had grown to twelve, though there had been much turnover. Frank Tay's history of the Economics Department identifies the Department's real turning point at 2001, with Les Oxley's appointment and Headship.

Seamus provided support to Les Oxley's Headship, and to John Gibson's subsequent Headship from 2005. Oxley ran the department as a participatory democracy with strong roles for standing committees. Seamus's long history with the Department, his willingness to provide departmental and university service, and his adept familiarity with the university's regulatory arcana proved critical to the Department's strong performance in the 2000s. Seamus spent much time as head of the Teaching Committee before his later term as Head of Department.

With the Department having been able to improve its staffing complement, more mass-market courses could be offered. Seamus helped to ensure the continuation of the rigorous calculus-based intermediate microeconomics offering as the intermediate course was split into honours-bound and majors-oriented streams, and during the subsequent semesterisation of both courses. He also greatly assisted the Department's navigation through the Faculty's creation of core requirements in the Commerce degree.

Seamus had been a student during the Department's lean times in the early 1980s and had maintained connections with the Department during its worse times in the 1990s. He consequently understood the importance of building a strong, collegial environment. In his Headship, he continued the management tradition established by Oxley. He oversaw the successful integration of Finance into the Department when Finance left the Department of Accounting and Information Systems.

For all of his importance in ensuring a steady and foresighted hand on the Department's administrative tiller, Seamus will be most remembered at Canterbury for his contributions to the teaching programme. Seamus taught the core calculus-based intermediate microeconomics course during all but two years of his appointment at Canterbury; while he was on sabbatical, his stand-ins, me and Andrea Menclova, knew better than to deviate from the programme that Seamus had established.

Nearly every one of the 50 to 100 students annually taking the calculus-based intermediate microeconomics course was taught by Seamus, and Seamus knew each of them by name. He was more than generous with his time, offering near-compulsory office hours and extensive course and programme advice in addition to lectures and tutorials. Nobody could better help a student best navigate the intricacies of double-degree or double major programmes. And he actively supported the Economic Students' Association.

Seamus complemented his intermediate microeconomics offering with a graduate-level course in welfare economics which produced a disproportionate number of the junior economists later hired on at the Reserve Bank and Treasury. His graduate elective course was taken by almost every honours student during the years it was offered. Some especially perspicacious honours-bound students who anticipated Seamus's sabbatical leave would take his graduate offering while in their third year to avoid missing out.

Seamus's courses embodied what seemed to be at the core of Canterbury economics. It combined a rigorous technical approach with a focus on the economic intuitions underpinning the modelling decisions. That, together with a strong appreciation for the institutions within which markets operate and the moral presuppositions underpinning welfare analysis, built a cohort of students of which Canterbury can be exceedingly proud.

Seamus's enthusiasm for the students was irrepressible, and was reflected in a College teaching award in 2011. It also played a role in his promotion to Associate Professor. But it is better reflected in the tributes paid him by his students at the memorial website established by his family.[1]

Seamus loved economics and loved teaching economics to others, whether students or colleagues. His interests were broad-ranging. Despite the department's rather disparate research interests, we all could, and did, seek Seamus's advice on our papers. Seamus's

1 http://www.heavenaddress.co.nz/Dr-Seamus-Davie-Hogan/1080833/

lectures invited students to join in the fun inherent in economics. It was impossible to know him and not share in it. When Seamus provided us copies of his exams for proofreading, he was not really looking for error correction – his errors were few. He was inviting us to share in the fun he had created for the students. It was play.

When the external review committee established to re-assess the Department in light of post-earthquake budgetary pressures deemed, in 2014, that Seamus's intermediate microeconomic offerings were surplus to requirements, it hit Seamus, me, our students, and many of our colleagues very hard. In prior eras, budget constraints were accommodated by restricting course offerings to the core theory fundamental to the training of new economists. This review instead cut core theory while maintaining the less rigorous intermediate path. The resulting programme is perhaps not weaker than those on offer elsewhere in New Zealand, but it is an abandoning of the Department's prior standards.

Seamus's last year at Canterbury was not a happy one. I left the Department in July of 2014 to join the New Zealand Initiative, a Wellington-based think-tank. Seamus left the Department at the end of the year and joined me in Wellington, taking up a position as Senior Lecturer in the School of Government. The Economics side of the Department of Economics and Finance at Canterbury currently stands at nine, including two teaching fellows. Before the earthquakes, we were twenty.

It is particularly tragic that Seamus's death came so soon after his family moved to Wellington. Family was always especially important to Seamus, and that he had imposed such a cost on them did not sit well with him. But it is difficult to imagine Seamus existing far from the lecture whiteboard. Seamus's death came just as the Hogans had re-established themselves after a particularly difficult year.

In policy circles, Seamus was best known for his work in electricity market regulation and for his blogging at Offsetting Behaviour, where he co-blogged with me.[2] Outside of academia, Seamus was best known for his work with his doctoral student Scott Brooker in creating the Winning and Score Predictor, the WASP now well familiar to cricket fans around the world. The WASP emerged from work Seamus and Scott undertook for New Zealand Cricket to improve batting performance.

Seamus was also well known in Christchurch music circles. While a student, Seamus played with the Christchurch Symphony, as both of his parents had. He played violin with the Resonance Ensemble under conductor Mark Hodgkinson. He also served on the board of the Christchurch School of Music to assist during the difficult post-earthquake period.

The economics community will miss Seamus's commitment to service, to scholarship and to students. The Association has lost its President. And many of us have also lost someone whose quiet advice made us better economists.

2 A compendium of Seamus's posts is available here http://offsettingbehaviour.blogspot.co.nz/2015/07/a-hogan-compendium.html

INTERVIEW WITH JOHN YEABSLEY

By David Galt

Q You started life in Christchurch and first turned your mind to Mathematics at Canterbury University. What led to your interest in Economics?

A. It was not a subject I considered initially – I took subjects I had done at school. I was doing chemistry, physics, pure and applied maths – so I did chemistry, physics, pure and applied maths. Then, after I while, I realised that there was more to life than that, and in my final year of mathematics, I did philosophy and decided that I wanted to do more than just mathematics. So I started a BA, and by that stage I was 19, and starting to worry about getting a job. Even though the economy had not been freed up, jobs were easy to find; my father was in the public service and he brought me home a book which showed opportunities for graduates in the public service. It had every department setting out what types of graduates it was trying to recruit. And what I noticed was that almost every place was looking for economics. So I thought, 'Well, let's have a look at this, might be a useful thing to do'. I started and wham! It was interesting, exciting, different and stunningly well put together at Canterbury at that stage. I was lucky in that sense, the Economics Department had had one of those moments that happen infrequently where it had 3 or 4 people who were excited and interested and good at it all at the same time.

Q Canterbury University had a strong Economics Department in the 1960s and 70s. What was the influence of people there such as Bert Brownlie and Tony Rayner on you?

A. Their strong influence on all of us, (other people have spoken about this at different times) was through their interest in the subject itself, Bert a fair bit, but Tony a lot, of practical thinking about the philosophy of economics; how economics works as a modelling tool. And what makes it a real social science that creates ways of thinking about the world, tests them and alters the world by doing so. There was some nice work going on at that time.

The 60s were full of high degrees of certainty, in fact, at that time we could easily remodel the world – the people in it were malleable and able to be turned into what we wanted. There was lots of straight forward mathematical optimisation; it was just getting you everywhere. You solved out, bingo – know the answer to this problem, it's just a matter of assuming away a number of the real life complexities. But for all that, there was a very strong philosophy of science approach where it was about models, having strong intellectual frameworks, applying those to the real world, recognising the difference between descriptive and prescriptive analysis, being able to tell the difference and keep that in your mind at all times.

As the wash of neo-classicism got stronger and stronger, many of the people that went through Canterbury were able to see that for what it was – almost religious revival. It had some good sides to it, because of the strength and enthusiasm of those who went with it and it was counteracting another religion that had been there before – a fairly weird left wing New Zealand version of socialism/popularism culminating in Peter Fraser and similar people, who did a lot of good for the country; but it was very unclear what they were doing, how they were doing it and how it was going to keep going. Canterbury also had a strong emphasis on keeping up to date with the literature. Bert was great. He unleashed us in a final year on a freelance seminar programme where everybody that was in his class – having worked through Debreu's "The Theory of Value" - had to read a relatively recent economics paper, present it at a seminar, defend their viewpoint and be examined on that final thing. So it wasn't just some textbooks and some notes from the teacher, it was what the literature actually looks like, here's how you keep up to date.

Q. Do you want to say anything about Tony Rayner?

A. The only thing I would like to say about him, apart from the fact that he was a fantastic loss to us well before his time, is this: He had done fascinating things, before he had gone back to work at Oxford. He had tutored the Japanese Crown Prince in Japan, and was just a fantastically capable, sensible, likeable chap who was also very able. I remember him coming to class one day and saying to us, (all of the lectures for third year classes were in the afternoons, 3-4) "I have just finished a paper that is going straight into Econometrica, it's only taken me the morning". It was a comment on somebody else who had missed something – he had found it and was pointing it out. He had written it in a morning and it was classic Tony – it was thoughtful, it was smart, he had done it and moved on to the next thing. He also taught us out of Malinvaud's book – which was a real stretch. Later on when I worked in Wellington, we used him as an advisor. He had gone to Lincoln by that stage, and particularly when Ralph Lattimore was there, they were a very powerful combination. They turned out good students and did good work personally.

Q. You went on to study with Tony Atkinson in the UK. Tell us him and about that experience.

A. Well, Tony was something else. Essex was his first chair. He was a very smart guy, extremely able with a work rate that was unbelievable. Essex had only been going 6 or 7 years as a university, so the department was relatively young. It had just been cleaned out from being a relatively macro-orientated department with Laidlaw and Parkin following on from Lipsey and Archibald. They had come down from LSE to start the place. They were all macro economists, and they moved out and were replaced by this eclectic trio of Tony, Chris Bliss of putty-clay fame, and New Zealander Rex Bergstrom, so there was an extremely well rounded set of horrifically powerful teachers and researchers. Tony taught more courses and supervised more research students than anybody else on the staff. Nobody else on the staff had any independent research funding. He had three projects funded through Social Science Research Fund (SSRFC) when he arrived and he also was running the Child Poverty Action Group in the weekends. God knows how he did it. He was turning out books and publishing flat out. And yet, he was the best supervisor there. Twelve started doing a PhD the year I did. Four of us finished, three foreigners and a local. All of them had Tony as a supervisor. There were me, a Sudanese guy, Ali Abdul Gadir Ali a Canadian chap, Sam Wilson, and Allan Harrison, who was Tony's research assistant on one of his projects. He finished, went to Canada straight away and is now Queen's University's senior academic, budget and operating officer.

Q. One of your PhD Examiners was Joe Stiglitz, later to become Chief Economist at the World Bank. What was his contribution then and his influence on your development?

A. I had seen Joe as a whizz kid with his PhD at 21 if I remember rightly at Canterbury when I was in second year economics about 1968. He was on his honeymoon. He gave a series of seminars, as the Erskine Fellows did. I saw those and was most impressed by them. By the time I got to Essex, he was writing his public finance textbook with Tony. In fact, Tony was teaching a course on public finance where he was trying out the chapters of the textbook on us students doing public finance. At the end of the first year I was there, in June 1972 when I sat my last exam in advanced econometrics and Tony asked me to give him a hand to organise a public finance workshop. We applied for and got a small grant from the Social Science Research Fund, and used that to bring over Tony's friends from America. So Joe Stiglitz came, a couple of Canadian guys including Robin Boadway, and some other Americans including Al Klevorac, who was later on, the editor of the Rand Journal (Bell Journal before that). Al introduced me, and I think a lot of English guys, to Law and Economics. He was a world expert on regulation, terrifically capable, and a fantastic combination of smart, smart economics and shrewd policy making stuff. He was a real first class person. Joe was there in the background all the time presenting seminars on signalling theory. That was where I first saw him and heard the ideas for which he got the Nobel prize with Spence and Akerlof many years later. He was publishing and writing about, how education doesn't necessarily do any good in skills training, and it just sorts you out. And he had some really nice papers.

Tony was editing the Journal of Public Economics in those days and had a number of graduate students refereeing papers flat out. I remember declining papers from well-established professors of economics at Harvard and Yale. It was a new journal; this was the great explosion of journals as the baby boomers were expanding the number of universities in North America and Europe. Smart money, like Robert Maxwell's Pergamon Press realised expanding numbers, bigger universities, bigger budgets and libraries got more money, and so whack in some more journals – they will pay for them. The number of journals doubled and trebled in the 70s. If you have a look at every area, it happened. It didn't save Maxwell [Maxwell was an influential British publisher, who died in 1991 and was later found to have stolen funds from his companies' pension funds in an unsuccessful attempt to stave off bankruptcy.], but it did get a lot more stuff published. But that was Joe, and Joe was in the background and later on by the time I submitted, he was on sabbatical at one of the Oxford Colleges. He came over by train for the examination, and he spent the whole way over on the train reading my dissertation, he said. So it was about an hour from Oxford to London, and an hour from London up to Colchester, so he must have spent more than two hours on me.

Q. Your professional career started in the Department of Industries and Commerce and then the Department of Trade and Industry. Can you describe what it was

like to start work in those institutions as a young economist and describe the working environment for Government economists at that time?

A. When I started, it was in Christchurch because I was on a two-year bursary. So, at the end of the first year, during the university break, I worked in the Christchurch office. It meant that I wasn't really working as an economist, I was supernumerary, and they didn't really know what to do with me. It was a bog standard public service operation; quite nice. It was in, the Government Life building in the square in Christchurch, which used to have Vance Vivian's along the bottom floor. We were on floors one and two, I was on floor two. Floor one was full of import licensing. Floor two had exports and price control; they were the three things that were done in Christchurch as part of the Department of Industries and Commerce. There was a district officer, an interesting chap, Phil Harland, who had just come back from being Trade Commissioner in New York, so he had a bit more than traditional public service experience. He had been in the Navy right at the end of the war. The assistant was another chap who had also been in the army during the war, so then for the next five to ten years the social atmosphere was really formed by the people who had been through the war. It was one of the social attitudes/cultural things that swept through the whole national psyche and only went out as those people moved off the stage.

Looking back now, you can't believe what it was like; it was extremely rigid. They weren't bad people, given what they had been through. I suppose my parents had too. The twenties in New Zealand had been ok, but as the Metropole fell down economically so New Zealand went with it. The English economy stuttered in the twenties and then went into a dive in the thirties. New Zealand went with it. We tried various things to break away, but until we basically cut ourselves off we were hopeless. Just as the economic recovery started in 37-38-39, along came the war and it was just as bad, my parents had had 20 years of bad times and then it was a long cool recovery after that.

It never happened to me, I've lived my life in soft times.

Back to Industries and Commerce, the overwhelming thing you noticed was focus. People came in and started at 8 o'clock, they worked to 4.30 - 5.00, they did their jobs, there were lots of rules, everything was lino, not carpet, paper was foolscap, and copying was done onto pages that were like grease proof paper, which, if they had been in the files for more than about a year broke up into shreds. I remember Dad having material copied, and because they were in the science world, they would actually photograph and develop, because they were a lab. So if he had a book that had been 'photocopied,' it had actually been photographed and reproduced on photographic paper. But at I&C there were a lot of good things that were taught; people were helpful to me; I was encouraged. I heard war stories; and saw the whole way arbitrary, discretionary money grants were done was pretty poor. People in classic economic terms did not have enough information to make the decisions that they were taking, and the objective function was poorly specified. How do you decide between the options that you have got in such situations, with no way of getting around the basic lacks?

Coming back to your question as to how I started as an economist, in late1970 I came to Wellington and I started work alongside another 10 or so economists and we worked on issues that were a lot more economic, although some of what was termed 'economic' was basically arithmetic. We had the only decent calculator in the whole building so we would be rung up by people asking us to work out a percentage. But for all of that, I was put onto a working party and I spent 6 months estimating effective rates of protection for New Zealand industries, and was encouraged to use as much of my imagination and creativity as I possibly could. And, seeing the data was weak, I used all kinds of techniques for that report. I also had the chance to set the wheat price for New Zealand based on three or four previous observations, and I set out what the new policy was going to be - self-sufficiency in wheat - and I guessed what the price would have to be given some elasticity estimates based on those four observations. People worked hard. Industries and Commerce was not the worst – the hard work was done by a subset of the people that were in the place, those that were keen. I have to say, it was a fair meritocracy, the workers got the rewards and the glittering prizes. Those people worked hard, very hard and long hours, trade people sometimes worked through the night. People doing international or other negotiations wouldn't hesitate to work the whole weekend. When I was a real junior I didn't work long hours; after that I did and I can recall watching my father work long hours every night, the public service was like that.

Q. You provided substantial leadership first as an Executive Officer for Economics and later as Director Economics in Trade and Industry. How do you think those leadership roles can be best exercised to good effect?

A. I really appreciate that, because you are one who I hope enjoyed yourself at that time. It wasn't natural for me; I increasingly think that the way to exercise leadership is to encourage people to fulfil their own capability, a Zen type thing, if you like. You have got to find ways of showing people what they can do, and then give the room to do so, and back them up and assist them like mad to do it. It wasn't my natural style. When I was made Director, I was trying to take my hands off the wheel, though my inclination was to tell everyone what to do at all times. I was deliberately saying to myself "I'm going to go into my office and not come out until lunchtime, then I am not going to come out again until afternoon tea, so I am not going to wander around and tell everyone what to do", and having to find stuff to do in my office until then, just to let you and other people that were around have room where I wasn't crowding you out, letting you go and trusting you to do the right thing, and hopefully helping, guiding and encouraging where I could. I still believe that – it is what I respond to. But it wasn't that it was bitter experience.

Q. One of the big issues of the day was heavy protection from foreign competition through import licensing and tariffs. How did Government departments tackle those issues through the 1970s and 80s and what was your part in the reform process?

A. Originally in Trade and Industry, there was a kind of heavy hand of old-school which basically reached its zenith, perhaps with the Aluminium smelter, as the key case, or the cotton mill perhaps would be a better example. But once that feeling had gone, almost to a man the thoughtful public servants in Trade and Industry stopped, looked around and said, hang on, we New Zealanders are not actually that special in economic terms, most of the rules of economics and social sciences do work here, we are just trying to self-levitate and it is not working well, to our cost. That left the really hard questions.

The dominating political question was of course – how do we get there from here. Crossing that boundary was the toughest thing to do, and to do that at the end of the day, what I would like to feel is that a number of people at Trade and Industry, the Treasury and a few other places didn't just spend their time saying, 'we've got to stop this, we've got to stop this' but instead spent their time fiddling around and showing that the world wasn't going to collapse. Civilisation wouldn't be over, politically feasible routes that would get us to a lower protection environment from a high protection environment were possible without political calamity, and that meant finding cunning tricks.

The best of the cunning tricks, one that you were heavily involved in, David, was to do with import licensing tendering. That was at the end of the day, the master stroke. The really, really exciting thing, and I regret to say I had almost nothing to do with it as I was away in Geneva when it came through, was to incorporate and use that in CER as a method to go from heavy protection against Australia to no protection against Australia, and show it could be done and adjustment could be done quite respectably. There was some transition and cost but it could be politically and economically managed. I still think we beat ourselves up because no one wants to admit what it was like, and everyone goes on about Polish ship yards. The most exciting thing about those times in manufacturing, as in agriculture, was the fantastic effort that went into the transition and the way the New Zealand economy reacted to it, which was terrific at the end of the day.

We haven't lost anything in terms of standard of living, we might want to argue about distribution, but the distribution is the outcome of other forces. It is not just about globalisation; it is about the abolition of protection. Protection didn't provide the growth of the economy that was needed to get everybody's living standard up. And that's what you saw – real living standards were stalling. One of the reasons I was keen on doing away with this was, having seen what having a mean economy could do in the UK. – The UK in the 70s was awful, the outcome of 50 years of very, very limited growth. They had no confidence, no feelings of growth. Everybody was being cut down by regulation and meanness. The big thing Mrs Thatcher did was sweep away that meanness – she may have got people knocking one another around, but coal mining in the UK wasn't competitive from the 1920s. That's what caused the general strike, so to argue it was somehow a useful economic function in the 80s was ludicrous. Underground coal mining is not an activity for well-paid miners. That's open cast mining.

Q. You later went on to work in Geneva as a New Zealand representative. Tell us about that.

A. I will put to one side Geneva itself. It was a fantastic opportunity to see the international dimension of how trade actually worked. From the GATT [General Agreement on Tariffs and Trade] to the WTO, this was where discussions were going on about what the rules should be. Superficially, the period I was there was as quiet as anything. In the first month or so, I was photographed handing the New Zealand representative a copy of the world dairy agreement to sign, because the Tokyo Round had just finished and it was all being signed up with Madame Hubert, who was secretary of the committee who produced it. The Tokyo round produced a whole lot of working committees that New Zealand was very interested in; the meat committee, the dairy committee, technical barriers to trade, tariff committee and so on. Part of my role was to sit on those committees. There was also a monthly meeting of the GATT council, and often there were issues there that we needed to deal with. Most of the time though, it was representing the international dimension of New Zealand's interests. We were still, at that stage, absolutely caught in the palm of the EU's hand. Dairy was trapped there, while I was in Geneva.

An interesting story if I can cut it down to a couple of sentences: when the Nazis took power in Germany in the 30s, to beef up the army (literally) they decided they needed to import protein in an appropriate form, so they came to New Zealand and started importing cheese, so we had a special deal on cheese with the Germans. Later on when the EU was formed, and various deals were made so that they could protect the hell out of dairy, they had to give us something in return for the dairy – they gave us a special deal on sheep meat. Then in late 1979/early 1980, they decided they wanted to protect the hell out of sheep meat – so they had to change that deal. Part of what I had to do was to sit down and negotiate how they were going to pay us off, because the GATT is a whole lot of negotiating in a mirror.

Everybody's representatives pretend that having high tariffs is an asset to them, and if they give them away they have to be compensated, so all the language is like that. It is the language of the politics of mercantilism, which still tends to rule in most political arenas, particularly domestic, and so you rehearse that language with your counterparts, all of whom know it is not like that, and the gains from trade will outweigh what you are doing, but they are helping you work out how you will sell it back home to the domestic market.

The colleagues from other countries were exciting, some of the people there were absolutely stunning, as in the other secretariats. I went to the OECD, the GATT, the UNCTAD which was more anthropological, seeing people in action, seeing incredibly competent representatives from the Arabian Gulf, with US PhDs in agricultural economics refuse to speak anything except Arabic, seeing they were allowed to in the UN system. Then someone would translate that to French, and then into English, about two minutes later you would hear what they said. They could speak in English, and 99% of the room could understand English, but they had to speak in Arabic. It was an opportunity to see the real, real world. The domestic world has a state; it is not Hobbesian in the sense of being nasty, brutish and short. We have a state, a lot of institutions, law and order, dignity and we respect one another. There is an ultimate decider of whatever goes on.

In international sovereignty there isn't anybody you can appeal to. It's all the free will of sovereign nations. The GATT had no means of enforcing anything, and a serious error of judgement we made, in my view, was to stop people being able to veto their own punishments. We were part of stopping that; it was a manoeuvre that we led. I don't know what the point of it was because countries can always veto their own punishments in practice – they can leave the institution or refuse to be punished. When you get largish countries, and the Americans of course are the largest in world trade terms, do you think they will take a punishment from us that they aren't prepared to accept? – Of course they won't. Similarly, the Europeans argue forever about it, and never do it and the Americans will just refuse to address the matter, as they have with a lot of stuff that has gone against them. So it taught us a lot about reality; about how it goes. We were kind of the old joke about the stuff between the elephant's toes.

Q. Reforms really accelerated after 1984. Tell us about how that proceeded and approaches which led to the acceptance of reform at that time.

A. As always, I think the public view of that isn't far wrong. It is that it started slowly and it built up – whatever the plans of individual politicians were (and I think there was no doubt that that government had a lot of individual plans.) They were working as a collective for the first time. They had had their hands on the lattice of power, they had different attitudes, they had different speeds at which they were prepared to go and some of them had longer plans and others had shorter plans. I think they were somewhat surprised to see how far they could actually go if they really tried. My judgement has long been that in the first term they essentially implemented well established economic reforms, that were bog standard in the OECD, and not unexpectedly, they worked as they did in the rest of the OECD. We had never in an Albanian or Russian way really stopped the market working here; we just put a lot of difficulties round it and curtailed it and curtailed international supply particularly.

When you opened the local market out, nothing magic happened. People were a bit surprised that they could get things they could previously not get, or do things they couldn't otherwise do. What was a bit surprising was how hubristic both ministers and officials became at the end of the first term. By that stage they started using some fairly simplistic tools on some very complex problems and moved into health, education and welfare with machetes, when they should have been using scalpels, experiments and pilot studies. I was saying some of this at the time. I think almost everybody that was intimately involved and has thought about it has thought, 'Gee you either had to think that burning down the building was better or you were worried about the process we went through'. Whichever one it was, by the second term of that Labour government, the idea of taking the public with you was gone. There was no sustainability in political terms, and we got to the position we are in now, which I think is actually quite bad. You can get a joke at a political meeting by saying that policy has been supported by an economist. I don't think that has been good for economics or the country, because thoughtful economists are out there with local body politicians – they are looked on as jokes, when they shouldn't be. And I think that dates from that period, and from a whole lot of things that happened, like cheap jokes from politicians at the time, and some of it from poor advice given.

Some silly, high risk strategies were put forward, that, if people had thought more about them, they would not have put them forward, or would have put them forward in other ways. I, by that stage, was turning into a bit of a heretic, only in the sense of believing in the ideas and the end point, and not believing in the methods and the means, and trying to look for ways in which you kept having public support for what you were doing. I thought we were still in a democracy and I thought it was important to go about things in a way that moved forward in progressive terms, rather than go forwards and then backwards. It was exciting to be alive, it really was. Fabulous people to work with at that time – that government had a group of people that were just fun to work with, and very stimulating to discuss and argue policy with, hardworking and dedicated.

Q. What was the role of senior public servants of the day in working with politicians to bring about change?

A. I will give you my idealised version – it is one area where I have a theory, which I call a mandarin role, most public service advice is really about it. Here's the problem, it looks a lot like a risk, there is a status quo with a problem and then there is an objective function, what are we trying to get here? And then there are some options about getting there and there is therefore a preferred solution. The hard part is to understand the objective function in a way that helps you produce and optimise over the options. Politicians are often most reluctant to tell you exactly what they want. The main role of the senior public servant in those days, 30 years ago, was very definitely to work with politicians to understand their preference functions, to establish which area of the possible action space was available and to advise about the best way ahead. I think of T&I greats such as Harry Clarke who were experts in this.

What I see at the moment is that most of that work doesn't seem to be done; or if it is it doesn't get communicated to the people that write the drafts of papers. The senior public servants spend their time managing the budgets and organising things, going to important meetings and the juniors do all the drafts, but they rarely seem to interact extensively with Ministers, and then they do the next draft. I don't agree all the way with Sir Geoffrey Palmer, but that is one of the areas that, if you untangle what he is saying, this is what he is concerned about. I do think it is a weakness and I think it is a hard road to remedy. Very few politicians find it easy to brief or commission work from public servants in a way that produces great results in an efficient manner.

Q. You experienced the Rogernomics/ Ruthenomics reform era as a central participant from some different perspectives from those often heard – from Treasury and the Reserve Bank for instance. How can we now regard the influence of the reform era from 1984 to 1993 on the New Zealand economy?

A. If we hadn't had some significant change, we would have wound up stagnating. The growth rate was stalling. New Zealanders as a race are incredibly mobile, we would have had more of the best and brightest leaving - we still have the largest and best educated diaspora going around and people can go and live in Australia and get 90% of the life they can get in New Zealand. The league may be better; but the rugby's worse. The cricket is probably generally better. It's not home, but there are groups like Ngai Tahu, who have more members in Australia than in the South Island. So we are an attractive place to live, but people have aspirations to live well, and if you can't live well here, people will go somewhere else. At the end of the day, it is people that make the country great.

Without some kind of a lancing of a boil, we would have struggled to be anything like we are now, and in anything like the position we are in now. The 90s were the period where we cropped the changes we made in the 80s. The 90s was one of the great growth decades in New Zealand. Everybody thinks it was a bad decade but macro- economically it was fantastic. Growth went mad with very, very big increases in living standards. I put them right down to those changes in the 80s which freed up the economy to shift and make up for some previous weakness, not entirely, because we are too small to make up for previous weaknesses, but we did. Individuals I would rather not comment, except that I had at different times worked for and with Rodger Douglas. I never worked for Ruth.

I saw her in action. She was not as charming or, I thought, as nimble in policy as the others, but she definitely knew what she wanted. I had a lot of time for Jim Bolger, who was an exceptionally able politician, who showed a long-sightedness that is still rare amongst New Zealand politicians.

Q. Are there any lessons from that era and the aftermath that we absolutely must remember?

A. There is one, which goes back to the pre-era, but I think it is still a gap. The Productivity Commission is doing some interesting work basically on the smell of an oily rag. They have got virtually no money yet some of what they are commissioning and producing, original work on productivity and empirical work they have done, is lifting the right stones, and rattling the right boxes. But since we abolished the Planning Council, we don't have any entity that is going "what about this wild idea, what about that wild idea?'. I don't see it in the political sphere either and I don't see it in the long-run agenda setting. I read a book the other day on the history of strategy, a stunning book, absolutely amazing (History of Strategy, Oxford University Press, 2014), and it pulls the wings off business strategy, absolutely shows what a mad craze it was. Like all strategy, 99% of it believes in magic bullets. One bold stroke will solve everything – it is all like a 30-minute television drama. You just have to come up with one thing and away you go. Most business success isn't like that, no more than it is in science or any other worthwhile area that you want to think about. Hard work, steadiness and keeping going all tend to work better than sudden flashes of brilliance; although I do like sudden flashes of brilliance.

What I would like to see is a lot more thought about the elephants that are in our room. New Zealand does face two or three. We are still, I think, painfully avoiding the demographic transition issue, which keeps being talked about as superannuation. It is wider than that; it is the whole aging of the population question; what are we going to do? It doesn't look now like we are going to go back to the kind of population structure - once the baby boomers go through - that we had in the 1940s. So what is going to emerge? Are we going to have to change a whole lot of institutions to make more use of decrepit people like me? Probably yes. And if we haven't done any hard work all of our lives, there is no reason why we shouldn't.

Q. Please describe the process of negotiating the price of electricity between the Government and New Zealand Aluminium Smelters in 1974 and what we could learn from it.

A. Two quick things to learn. This was of course, immediately following my return, I arrived back here on 1 April 1974, and the first oil shock was in 1973. The first thing that happened in the UK was that all petrol stations had been offering quadruple green stamps. The stamps went – they didn't have to offer stamps - they just offered petrol. I came back here and the real price of oil, which was the way in which all energy could be thought about because it was the marginal supplier, had gone from just over $US 2 a barrel – it had been hovering around $US 2 a barrel for 10-15 years - to $US 12.50 a barrel. Five years later, of course, it went up to $US 28 a barrel. So we were re-examining all of the assumptions about energy people had made earlier.

Now the aluminium smelter, were unlucky. Originally, they were caught up in the row about making New Zealand self-sufficient by building manufacturing capability here, and they were given rights to Lake Manapouri and building the power station. The fact that it was built by the Crown was because there were no other private power stations in New Zealand, so the bankers wouldn't lend them the money to build the station. That was why it was built by the Crown. They could borrow the money and then they agreed to sell the cost of the station back to Consolidated Zinc (not Comalco or NZAS, the deal was with Consolidated Zinc). And at full cost recovery. All of a sudden the worth of that power, 10-12 years on, had gone up four or five times. The planning assumption in those days that underlay electricity was that cheap nuclear was just around the corner, as it still is – fusion is only 20 or 30 years away. That was what people were thinking in the 50s and they were still thinking it in the 70s.

The lessons to learn are two. One, never do everlasting deals, and keep in a clause about balance of fairness or something similar. And the second one is think about complete contracts, think about all the things that will do you down. Classic was the Kapuni deal. During the Kapuni deal the petrol companies wanted to be assured that the retail price of petrol would not go down, so it was written into the contract that they would be subsidised. There was nothing put on the other side, nothing! By the time I looked at that, the price had gone from $2 a barrel to $14 a barrel, it was almost petrol, and it just about didn't need to be refined.

Those are the two lessons I took away. Ever since, whenever I look at a contract I think, 'we are worried about this side, what about the other side? And what about the time span? Are we really comfortable about this deal going on forever in these terms?' Especially the state can't afford to do those kinds of deals.

Q. The DFC was a Government owned development bank in the 1980s. Tell us about your time on the DFC (Development Finance Corporation) Board.

A. The Development Finance Corporation was a Labour initiative. This was to fill the market gap because private lenders won't lend to struggling New Zealand firms. It was given $3M and told to go away, and it didn't get anymore. There were two direct government nominees on the Board, the representative of the Minister of Finance and the representative of the Minister of Trade and Industry. I was, in truth, as was the other representative a deputy – both Ministers would put their Chief Executive up, and each Chief Executive would select a representative, so I was there on behalf of the Secretary, as was the other guy for Treasury. Part of my time it was Graham Scott and part of my time it was Richard Shallcrass. We sat on the board as ordinary board members. It was by standards of the day, and even today, a well organised board, it had good board papers, regular board meetings which were well chaired and well run. I still found some of New Zealand's best and brightest board members there. Many of them were not reading the papers, or only reading selected items. Seriously, each month the papers used to take me five hours to read, so you can imagine some people not bothering, but I felt it incumbent to go right through them, mark up all the stuff and ask the hard questions – that's what governance was to me. I learnt a lot about governance, practicalities of business and about deal making. I learnt about portfolio management and balancing. There were a whole lot of things I had to learn. I learnt that you couldn't run a $2.5 billion balance sheet on $3 million shareholders' funds – though there were some retained earnings and a few bits and pieces. I also learnt a lot about auditing and how hard it is to check. In those days, mid-late 80s, there was no proper integration of IT. It was at the worst possible time, everybody had half computerised but the systems weren't integrated so there were constant risks as you took figures and data from one data base and had to transfer them – by hand - into another one. Every time you did that you were at risk of an error. That was all it took, and I remember one case very well where a negative sign was left off a significant figure, went straight to the bottom line, and gave us an absolutely false impression of how much money we were making. That was horrendous.

Other than that, it was great; there were three operating arms, including a lending arm which was heavily into property which in a couple of years' time turned out to be a disaster. There was a ventures fund which was really exciting and interesting, I learnt a lot about venture capital and how it works and what it doesn't do. There was also a trading unit. That trading floor ran the longest commitments – they were doing deals that were well into the 21st century: USD NZD forward settlements, some of them into 2010. Sandy Maier did a great job handling all that after the 1987 Crash.

Q. High inflation around 20% is now a distant memory for many. What do you think the most important effects of it were in the New Zealand economy in the seventies and eighties? Could it ever still be a problem?

A. Other countries have shown us that it can always be a problem. The fascinating thing in New Zealand is that if you look at four quarterly running totals, I don't think we ever got above 20, and rarely got below 12 without a freeze, so we hovered around 12-15, we'd have a quarterly 3 followed by a 2.5, followed by a five. That was the way it was going. Most other countries went above 20 during that period - it was 20 years!

The damage it did, to me, was really simple. It got everybody thinking inflationary, it got everybody thinking prices were always going up, and so what you lost was the signalling effect of relative price movements. You were obsessed by the march of the prices, because typical relative price difference shifts here of 1% were trivial against 12%. I remember being shocked because during this time we moved to Geneva, and in Geneva prices were absolutely flat. On the second or third day I went to the store to buy a hammer, it had a wooden handle and the price was stamped into the handle. Where I had come from, if you went to a hardware store to buy a hammer, there would be multiple stickers on it as the price had been put up variously over the last year! It just eats away at the kind of resource allocation signals that you are trying to send at any time, coupled with the fact that, by 79, we were still in command and control. We finally got rid of most of that by the end of the 80s, but if that comes back again, you see what everybody does, people get into survival mode.

Stories from Israel, when they had terrible inflation, were that as soon as people got paid in local money they would go and buy US dollars and then they would trickle that back into the home currency to spend. All of that faffing around just occupies energy that should be used for productive economic capability. Places like the Argentine have not been able to get out of this difficulty, not in the whole of the 20th century. Since the First World War, Argentina have been there, and they are back there again, now, being misleading about their GDP, not being frank about their price changes.

Q. Cost Benefit analysis for projects became more commonly used by Government departments at this time. What do you think was achieved by the use of the technique in retrospect?

A. It probably could have been done more. I think a lot was achieved and I have got to praise the small group of people that brought it into New Zealand and promulgated it. I won't name them all because I can't bring them all to mind. MAF was a leading light in that. MAF had good people that worked hard at it, and it was picked up, of course, at Lincoln and Massey. Lincoln particularly worked really hard on it as part of the AgEcon programme and they did good things and some of the best CBAs were done in those schools or were led by people from those schools. Inside the public sector, obviously Treasury was very keen on it because it revealed a number of wants from them.

I will just mention two names. One of them is David Preston, who was very keen on the whole systemic analysis and all of that stuff, and of course, Rob Laking, who I have worked with on and off for 30 years, (and who I still see, as we have had him on one or two projects around the NZIER.) Rob was a very strong proponent of CBA, because he had done his MPA at Harvard in the 70s and came back very keen on CBA. It was bedded into the States in 1936 with the Public Works Act about the actions of the US army core of engineers who were building infrastructure. Part of the deal was they had to do a CBA.

In New Zealand we haven't had that, what went wrong with it was a failure to convince wider sets of ministers that just having a framework was better than not having one, and to show them that Treasury wasn't just saying no about everything. Somehow I think that second thing kept being overlooked. It looked like they were locked in a titanic struggle with people who seemed to want to make progress by having dams and irrigation and hydro, and people who wanted to keep the books straight. In actual fact, both sides wanted the same thing, and it was a question that should have been able to be resolved by better level debate at Cabinet, but I don't want to blame politicians for the shortcomings of experts. I think experts have to sell themselves to the decision-makers, or they are not successful.

Q. You also served in several senior management roles at Assistant Secretary level in Trade and Industry and in the Department of Labour looking after Immigration. How did you find the transition to those roles from roles with a more explicitly economics based mandate?

A. I don't know how good I was, but what I felt I could bring to each one was the stuff you always do as an economist. You think with a framework, you do some logical analysis; you try and tease out the problem. You get yourself known round the senior management table by going 'what do we know that we are trying to work on here? Have we got the information we need to help us?' and all of the same questions you would ask as part of an analytical process. It wasn't too bad in either of those places because both of the Chief Executives I worked with closely – Harry and Jas McKenzie - were economists and had a regard for it. I think that is vital in the public sector, because I'm afraid that the public sector is still grappling with resource allocation.

Q. The second half of your career has largely been based in the private sector at New Zealand Institute of Economic Research as an economist, Director and now Senior Fellow. Some of the key things that consultants such as the NZIER engage in are quite different from public sector working environments. I'd like to ask you about a number of them in turn, but first, what do you think are the key differences you've found from the inside in Government and private economic institutions?

A. I am lucky here [The NZIER] because there is a very strong focus on independence and authority, so that we are encouraged as a business. I say this as when I was Director it was the view of the board that this is what we should do, and where we should go. We spent a lot of time talking about it when I first got here. The biggest difference is that as a private business, there is a payroll to meet every month. What that means is we have got to look every month at what we cost, and what we are bringing in, and if we are not bringing in enough to cover the costs then changes have to be made. It does add something to both, you as a personal consultant, and in my previous role as director. You keep your eye on that stuff the whole time. I was a bit lucky here because there was enough of a capital endowment background that allowed us to not live hand to mouth, month to month, but I looked over my shoulder the whole time. You were always looking to make it work, and all the time you are looking – what are you doing with every hour? It just makes that difference. It is sort of the difference between a fighter and a hungry fighter. It is real and earnest.

I think a lot of people in the public service have never thought about where the resources are coming from, and we see that because we go in and we are on a fixed price contract. Every hour, every minute has an opportunity cost and people are holding an unlimited length of time meeting without thinking it through. I think you can tell them that they shouldn't, and they will get exhortations, and there will be slogans around the wall, 'Have you thought about what you are doing?", but if you are enjoying yourself, you have got the rest of the afternoon. That is the biggest difference that I noticed.

I was amazed at the wide selection of work that we managed to get to grips with. I still have a lot of projects that I started thinking about when I came here, many of which I haven't managed to get to because I can't find a paying client, but that's life. I always think of the sushi train analogy: you have a stream of issues coming at you and have to make irrevocable decisions. It's different if you are in a certain kind of work, I suppose like academics, you can define what area you want to work in. If you want to work in the public service, jobs just come to you, and you can't even decline most of them, you have got to pick them up and work on them as they come along, because they are important. Importance isn't defined by you; it is defined by somebody that you have a limited amount of say over. So that turns you into a jobbing solution maker, and I quite enjoy that. That's what my father was, that's what my mother's father, my grandfather was like that. If I go any further back I know that my uncle was like that too, we are sort of jacks of all trades, masters of none and enjoy doing different things.

It means that you don't get to be that ultimate expert. There are some areas now that I have managed to carve out a number of specialisations in that I keep coming back to. Law and Economics has developed in New Zealand massively. I came back here and there was no real market for it, no market for competition work. I had been to lots and lots of seminars on Averch-Johnson

[Wikipedia: The **Averch–Johnson effect** is the tendency of regulated companies to engage in excessive amounts of capital accumulation in order to expand the volume of their profits.

Averch, Harvey; Johnson, Leland L. (1962). "Behavior of the Firm Under Regulatory Constraint". *American Economic Review* 52 (5): 1052–1069. JSTOR 1812181.]

and rates of return regulation and all that stuff. It didn't exist in New Zealand for another 20 years. It wasn't until we sold off some SOEs that it arrived. I managed to get to work on it. Over the 20 years I have been here I have done a lot of work in regulation and rates of return and competition policy, not as much work on telecommunications as I would like to, but bits here and there. I was in the background of the 0867 case. I did find the transition strange. If you had asked me 30 years ago whether I would be in the private sector; I would have said you were joking. But at the time it looked to be the right thing to do, and I have enjoyed it, it's been an absolute ball all the way. 20 years of fun and respectable income.

Q. What have you learnt about project evaluation at NZIER?

A. One, there is no political mind. Only the opposition research unit want projects evaluated. All you can do is generate fodder for the opposition. What I am fascinated by is the amount of time those that are trying to improve project evaluation spend on reiterating stuff that I knew before I left university the first time, and nothing at all on the things that are hard, such as, the practical treatment of risk, valuation of hard to value things like law and order. The discount rate, still remains an issue where further research and advice would be useful.

My view is that the counterfactual to bad project evaluation, is not perfect project evaluation, it is little, it's almost nothing, it is pure, prejudiced decisions. Doing something with a well-defined framework, and some structure to it; and saying "Beyond this we can't go," is actually a massive contribution as far as I am concerned. Helping decision makers get their thoughts in order, and then having them say, if I go back to the 80s I remember sitting in on decisions, one that cost the New Zealand tax-payer over a billion dollars, and took less than three minutes to make, by some of the most thoughtful people I ever had anything to do with in the government. I was reminding them that they had made a commitment that they didn't have to go ahead with. They looked at it for 3 minutes and said, 'I think we will go ahead' – amazing. The first statement about politics shows why it is not being done well. All of the attempts that have been made over the last 35-40 years to do something about it, I think, have failed. We have got to keep thinking about how to do it. Shouting about it is not the way to go.

I think you have to be a lot more of a coaching type manager, all the management literature says all the managers that issue diktats aren't liked, aren't respected, and don't get results. The experts and thinkers need to encourage and persuade.

Q. Legal advocacy and testimony is an important role for many consultants. Can you describe for us what the challenges are in it and how you've managed them?

A. The real challenge is the code of practice for expert witnesses (there wasn't one when I started 20 years ago – you just wrote some stuff, got up and read it out.) Now you have to sign to show you have read the code of practice and noted it. Essentially, expert witnesses are allowed, not only to present facts (which every witness can present) but also allowed to present opinion, which other witnesses are not. It is interesting, because the trick is being able to present an opinion in such a way as it is credible. It doesn't matter who you are working for, how reasonable they are, how well you know them, how much of a friend they are, when you are an advocate, you keep pushing for expert witnesses to say more, do more, commit more. And as the expert you have to keep pushing back, because as soon as you have crossed the line to being not credible, you are a useless witness – absolutely no use at all.

The trick is to know where the line is, to know what you are saying, what the facts are, what your opinion is and why it is that, and where you won't go. Many times, and I have appeared in front of the High Court, the Commerce Commission, the Waitangi Tribunal, I have been pushed to say more than I could, more than you could. Each one you really have to be prepared to say 'Sorry? I couldn't say that, that's not what I said, I didn't say it was like that, I said it wasn't like the reverse'. That has been good, I have enjoyed the challenge.

Despite having done an early modelling paper with Peter Phillips [Peter C B Phillips, Sterling Professor of Economics & Professor of Statistics, Yale University], I had put econometrics to one side, because the available data was so bad. 40 years ago the data series in most of the areas we were looking at for policy were rubbish. I didn't have time as a working public servant to go out and start finding it and building it up so you just put that kind of thing to one side and went back to assembling anecdotes, pulling together samples, reading international literature to put international experiences in front of people. That was all of the evidence that you could bring forward. Collecting material on the New Zealand economy was hard, but eventually then we got into collecting it. When I was at Trade and Industry we did those surveys, all of it was done to build up the potential evidence base so we could answer those questions that we couldn't otherwise answer. Were we just a miniature version of everywhere else, or was there a location and size effect? Did we have different institutions or not?

Q. Looking back, what are some of the key things you learnt about managing regulation?

A. The biggest thing is Goodhart's law: as soon as you change the rules, the players change the way they play. Regulation is just a form of rules, and the players will adjust and people have all kinds of prejudicial names for it but all it means is if the rewards to what you are doing change, you are most likely to change what you are doing. Three or four lemmas drop out of that. One is, you have got to be very clear about what you are doing. You have also got to be very clear about why you are doing it, and what that sometimes means is what is the relative order of the outcomes you are looking for, what is the trade-off, which ones are you prepared to see go. You have got to say to yourself every time you do it, "There will be unanticipated consequences."

One of the things that I think about, because it was prior to CER, was quite interesting. Part of the GATT Tokyo Round NZ effort was to get cheese back into the EU. For a 9000 tonnes quota of cheese back into the EU, we had to buy off every member of the EU. Talk about stereotypes, we paid off the Italians with pasta, we paid off the French with brandy. It was the most amazing list, this was what they wanted, what their negotiators had asked for. We got to the Poms and we paid them off in beer – they were going to send Newcastle Brown or whatever. No sooner had we liberalised on beer, who ended up taking advantage of it? The Australians. You couldn't move for XXXX and all those other Australian beers which were all over New Zealand bars in months. They were here quickly, they were cheap and they were stronger. Talk about unanticipated consequences. The Poms still got a few of those Newcastle Browns in here but the Australians just swamped the market.

Q. What was the most satisfying work you've carried out at the NZIER?

A. The strange work I got into 10-12 years ago, at Treasury's behest, was on quality assessing advice papers to ministers. It was satisfying because for many of the clients that we worked with over that time, it really improved the quality of the papers – making them more understandable.

Two star examples, because they came from poor to really good results: Justice was one and Social Development was another. It was hard work. Both were big shops with lots of people, so it wasn't a few people changing what they did. And I remember having a row at the first feedback session at Justice where I said, 'Look, sorry but the experience that we have had at other places is that short papers are unambiguously better. If you are just going to do one thing to make papers better – make them shorter', and some guy started to row about it from the audience, 'No, no it's not, long papers are often better'. I said 'I'm not arguing here about content, I'm arguing about whether you want your paper to be read or not, because if you want it to be read, make it short.' Nowadays we don't get such pushback.

The satisfaction is working for long periods of time with clients. Sometimes they go away for a year or two and come back again, we look at their stuff again and try and offer advice and so on. That is changing the world. What was satisfying was that it was completely new and different. Mark Prebble called me in when he was running the Social Policy branch in the Treasury and that's where it started from. We have worked long and hard since then to try and keep the assessment of each paper right. With a decent sample you can be confident that you are pulling together your impressions and that is what you are working on. The other thing I got really excited by over the last few years is the work on regulation, which has been in cooperation with Vic Law School. That has been incredibly rewarding, particularly the international regulatory research work, because that has brought together law and economics, international trade and so on.

The other thing was, a few years ago, what turned into a best seller and sold out all the copies we printed, was a book that I wrote with Chris Nixon; a history of trade policy in New Zealand, how it works and what makes it go. Chris did a fantastic amount of work. He wrote up five separate instances of New Zealand's trade policy history and drew conclusions out of those. There is nothing else comparable available on this topic. We tried to show how things were at the coal face, so I put a lot of things in there about how negotiations actually happen and so on, and I was quite pleased with that.

Q. You've been an active member of the New Zealand Association of Economists for many years. Tell us about how you became President. What were some of the highlights and important developments during your time as President?

A. Alan Bollard asked me to stand for the executive originally. Then he got another job and had to quit as President, so I took the job. The idea was to make it an association for all economists instead of making it, as it was in danger of turning into, something that was interesting for academics. The idea was to have a wider church, attract more working economists, more people in policy, the way most New Zealand economists work, and work to widen NZAE out. The other aim, that I'm afraid I never succeeded in, was to get it on to a better financial footing. It still depends on making a good profit periodically out of its conference - a windfall gain as I saw it. We never could get round that.

I enjoyed working with many of the members of the council, great people to work with. Without singling too many of them out, I enjoyed wrestling with Weshah Razzak, I really appreciated Grant Scobie and of course Paul Dalziel. Grant and I did Fellow selections. That was an idea that Ralph Lattimore and I had together and put in place. It came out of the problems with the NZIER economist of the year. We didn't have a lifetime achievement award. There were some people that clearly had some lifetime achievements which needed saluting. I thought the Association could do it, Ralph worked up something and we put that in, and then we got the names up. I think it has been an exciting development and something that has paid off. I particularly feel it in the case of the two or three people that we gave awards to that have since passed away. John MacMillan [Then Professor of Economics in San Diego's Graduate School of Business] was one that I was so pleased to get awarded; it was down in Christchurch that year. He, of course, being a Christchurch boy really enjoyed that. There have been another couple, Conrad Blyth [Professor of Economics, Auckland] got one and he is no longer with us, and that was a really good award. We missed one or two people, and that was a bit unfortunate.

It was exciting, ramping up the association we went to. There was always a paid secretary, but we got a paid treasurer, and professionalised it. As economists, I thought we had to believe in the division of labour and the motivation of being paid to do a job, so we changed that.

Seeing the conference come together each year was exciting. I organised a couple, watching it come together, seeing it get more professional, seeing the numbers steadying up, and I am not going to get into it, the great work, prodded by Grant, putting the Phillips Conference together [the 2008 NZAE Conference in honour of AWH (Bill) Phillips, LSE Professor]. It was 3 year's work, but it was great fun.

Q. Looking back at the developments in economics over forty plus years, who do you think have been the most influential thinkers for New Zealand over the period and why?

A. It was more the institutions than individuals here. New Zealand being New Zealand, we don't have a set of Stiglitz's that everybody relies on. If you asked the average New Zealander in the street to name a prominent economist who had done good for the country, I think they would be scrambling. Seriously, I think most of the hot-shot people who have done good work have done it through a combination of influence and teaching, probably, rather than they have done it through pushing particular policy ideas or interesting ways of thinking about things. Gareth [Morgan] is probably now, far and away, the most well-known economist, and it is probably because everyone who has had anything to do with cats in New Zealand knows his name. Unfair, because Gareth has done some good work. "The Big Kahuna" is one of the most interesting books written in New Zealand in the last 25 years. It really is an exciting concept that he explored really well. He worked hard on it, he did good stuff, it's readable, yet in policy terms it almost disappeared without a trace. I thought it was really worth thinking about, the idea. He is exploring the idea – if you want to have a welfare state, fine, give everybody living and breathing money, why not? There are some problems which he doesn't solve but on the whole he thinks it through; he puts the numbers on the table. It is a really fascinating piece.

Other than that, over the years, in the early days the Reserve Bank, the modelling with Rod [Deane], pushed all the analytics. I think they made a big difference to get an evidence base for much of the work they were doing. Of course the great days in the Treasury were from the beginning of the 80s to at least the mid-90s and the name I have to single out again is Jas [McKenzie] and his efforts on the macro front. But there were exciting developments right across the board from taxes right through to education. There was some interesting work done, being commissioned, people were bubbling. There was exciting stuff going on, and I think it influenced the hell out of the rest of New Zealand. When I look at the academics, I find it really hard to think of any that have made an enormous contribution to New Zealand in the round, or to the rest of the world, for that matter. Harsanyi got his Nobel Prize for what he wrote at the University of Queensland, in between being a welder and going to Harvard, he was at University of Queensland doing game theory. There was a biochemist that got his Nobel while at the Welcome Institute in Melbourne. We haven't had anybody get a Nobel Prize for work they have done here.

Turning to economics, I think Peter Phillips is the greatest econometrician alive today. We have had some pretty good other ones, including one who taught me, Rex Bergstrom, [Universities of Auckland, Essex and LSE] who was doing dynamic modelling. Individuals haven't cut it; it has been the influence of institutions in New Zealand. Dr Sutch, if you read all of his output, he is a lot better than the crude pictures you can paint of him, and the thing about him is that he keeps changing. If you read his work, it keeps altering, and his advice is actually sound. The idea of the Switzerland of the South Pacific; he recognises the problems with economies of scale, but his answer is you just pick stuff that doesn't have economies of scale – yeah right, that sounds easy.

I think that over the last 40 years the upsurge of economists as advisors in the public and private sectors in New Zealand has made a significant difference. I think in the private sector they have made a lot of difference to cooler and better decision making. If you want a place where they were very good early on, Fletchers had a little team of very smart economists, just a small group and they just were crucial on strategy and execution. Gee they made a difference. Similarly, I think in the Public Sector you look at the numbers that were involved in the great days at the Treasury, or in the great days in the Reserve Bank, relatively small numbers, a dozen, 20 total tops. I would like to think that our small contribution at Trade and Industry over that period in the 80s was much the same. New people doing work carefully, trying to keep up, trying to think about the hard problems.

FROM THE 2B RED FILE

By Grant M. Scobie
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It seems that an increasing number of our ranks feel the urge to dispel the image of the dismal science, and make economics entertaining and above all accessible. ***Andrew Leigh,*** academic economist (who started life as a lawyer) turned Federal MP for Canberra, joins the long line of Levitts, Landsburgs, and Harfords, with another racy little volume that will convince you that incentives matter (just in case that there could possibly be any remaining poor lost souls out there who didn't actually believe this). And what's more a whole range of human behaviour is better understood when we appreciate the role of incentives. **Andrew Leigh (2014)** ***the Economics of Just about Everything (Sydney: Allen & Unwin).***

Now in case you were thinking that this will be just another economist telling the world the obvious that if the price of carrots increases shoppers will buy more parsnips… forget it. Leigh seeks out the byways of human behaviour and shows us that incentives really do matter – in fact they are a matter of life and death. In 2004 Treasurer Peter Costello introduced a baby bonus – three grand for every mum that had a sprog on or after July 1. On July 1 the number of births recorded in Australia was nearly double the average for that day and was the highest number of births ever recorded on a single day since records began.

And wait… there is more. Might incentives also matter at the other end of life? On July 1, 1979 Australia abolished federal inheritance taxes. Yes, you guessed … the number of deaths in the preceding week was significantly below the average for that week. Believe it or not, there were folks out there who were dying to avoid taxes.

One might be forgiven for thinking GDP as a measure of economic well-being is really fast falling out of favour. We are all familiar with the shortcomings of GDP – anyone who has taught first year students will have asked: What happens to the GDP if a man were to marry his housekeeper? To address these shortcomings, economists and social scientists more broadly, have busied themselves in the "GDP ain't everything" industry. They have fossicked around and dug up numbers on an endless series of indicators that purport to be proxies for what makes us happy. Sometimes these are dismissed by a few cynics as largely irrelevant as it is noted that the correlation with GDP per capita is frequently quite substantial. But this is not universally the case.

However it is not a trivial task to find a lengthy time series of indicators that are sufficiently standardised to allow meaningful comparisons across countries and through time. Enter the OECD to the rescue with ***van Zanden, J.L., et al. (eds.) (2014), How Was Life?: Global Well-being since 1820, OECD Publishing. doi: 10.1787/9789264214262-en.*** Here you will find data on ten different dimensions: per capita GDP, real wages, educational attainment, life expectancy, height, personal security, political institutions, environmental quality, income inequality and gender inequality. Better have this one in your back pocket the next time you get into a debate with a doomsayer who thinks the world has been going to hell in a hand basket.

But don't give upon economic growth. And where better to start than ***Eric Crampton and Jenesa Jeram (2015) The Case for Economic Growth (Wellington: The New Zealand Initiative).*** In a short, punchy wee volume they remind us that economic growth still matters and "helps bring the other things we care about" (p. 44). They alert us to the "need to carefully assess whether existing policies are doing as much as they can to encourage, rather than stymie, economic growth" (p.5).

The Piketty industry ***(Capital in the Twenty-First Century)*** has a long way to run still (for 2BRED's take, see ***Asymmetric Information*** #51, December 2014). The journals, working papers and blogs are loaded with adulations ("the most important economics book of the year—and maybe of the decade" Paul Krugman) - and critiques (for the most damning version of the latter see that by Deidre McCloskey who concluded "his economics is flawed from start to finish"; see www.deirdremccloskey.org/docs/pdf/PikettyReviewEssay.pdf)

Serious scholars are unpicking the analysis and some are finding it does come up short. ***Matthew Rognlie*** has written a technical piece which challenges the Piketty thesis that capital's share of income will rise, and with it inequality, as the gap between capital returns and growth widens (r-g). See: www.mit.edu/~mrognlie/piketty_diminishing_returns.pdf

Rognlie argues that diminishing returns will more likely cause a decline in net capital income.

Finally there is forthcoming piece that is a "must read." ***Ross Garnaut*** gave the 2015 Sir Frank Holmes Memorial lecture in February: ***Global Development in the Twenty First Century*** (the allusion to Picketty's title will not have escaped the more astute readers). The lecture was a masterful coverage of the big issues shaping future growth across the globe. But in doing so, Garnaut also addresses the question of the return to capital and concludes he prefers Keynes's argument of falling returns to capital – certainly interest rates have been falling now for several decades and are at unprecedented lows. So do watch out for Garnaut's lecture which is to be reproduced in ***Policy Quarterly*** (Volume 11, No. 2, May 2015) from the Institute for Governance and Policy Studies at Victoria University.

Coda

After 15 years and 47 columns, 2BRED will come to an end with this edition. Not that in any way it has been a chore – quite the reverse. I have always enjoyed reading books that took economic concepts and applied them in a Beckerian way to "just about everything." I remain enough of a neoclassicist to believe that a huge amount of human behaviour can be explained by relative prices and income – *De Gustibus non est Disputandum* (Stigler and Becker (1977) *American Economic Review* 67(2). Perhaps the single most important book that set me on this journey was one of the earliest in this genre: Harry G. Johnson and Burton A. Weisbrod (eds.) (1973*) The Daily Economist.* So I leave the readers of 2BRED, wishing them well, thanking them for some kind and supportive messages from time to time, and hoping their bedside tables will continue to groan with an endless supply of entertaining and enlightening books on the world around us, and how economics helps us to make sense of it.

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2015

FRAMES: DIRECTIONS IN ECONOMICS

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This will be my closing column. I edited Asymmetric Information from November 1999, initially jointly with Gary Buurman and then alone until four years ago when I handed over to John Creedy. Since then I have provided this column, "Frames", so my involvement has lasted for seventeen years or 51 issues in total. It is therefore perhaps time that I called it a day. I would like to take this as an opportunity to reflect on the way that, as I see it, economics has changed since I first started studying it about fifty years ago.

My interest in economics developed because it appeared to look at and be relevant for a wide range of real world economic and social issues. In my training I focused on mathematical modelling and econometrics, then considered to be the elite areas. At that time we had to write our own econometrics computer programs. Much has changed since then, including the availability of numerous computational packages and online data bases. Consequently modelling and econometrics are now considered the primary approaches to economics. Other approaches, some might even say, have relatively little economic relevance (to the extent that some refer to them as "not economics" because they use other assumptions and methods).

This is disappointing. With the large numbers of people using these methods, we have moved away from having people developing them themselves. Instead they are applying certain accepted conventions, even if, as we know, many of the conventions are of dubious of validity. It is worrying to hear people opine that, "it doesn't make much sense, but it is what we have to do in order to publish". I hear these views much more often now. A momentum has built up that is difficult to challenge.

Consequently over the years economics has become, to my mind, more and more divorced from the real world in terms of the way that it perceives the issues. We are focusing increasingly on abstract models and on dubious quantitative techniques. There is very little discussion with people from other disciplines, or with practitioners and policymakers, and very little on the ground involvement and observation of what is going on around us. It is as if the answers can come solely from the numbers and mathematical or statistical criteria applied to those numbers.

At the same time this has meant that we have moved further and further away from any recognition of the importance of politics, attitudes, ideas and social conventions, and the way in which perceptions and resulting behaviour can change for a wide variety of reasons. In several other disciplines these aspects are considered central to any analysis of society. This is not to say that economics is the exception in being dominated by a particular world view. In fact, from my own work in a cross-disciplinary environment it has been quite noticeable that people from the different disciplines often believe that their own particular perspective gives a definitive view, while different disciplines may look at the same issues in quite different ways. Each group considers itself to have a monopoly of knowledge in the area.

I see this also with various professions. Each has its own mind set and its own language. This defines the frame of reference for those working within the group and climbing up their career ladders. It specifies the relevant knowledge and the incentive structure that promotes particular perspectives.

So why do I say that economics now has gone off track?

Models are tools that can aid understanding, but they give a specific framing of the issue based on simplifying assumptions. They should be seen as, at best, a component of an analysis. They are also context specific. For policy purposes models should include variables for policy instruments and policy objectives, showing the relationship between these. As objectives and instruments change, different models are required. Many models in mainstream economics build on the common basis of utility maximising individuals and profit maximising firms, and these are often assumed to be operating under perfect competition. This may provide a poor basis for many policy objectives. Consider the Millenium Development Goals and the Sustainable Development Goals (MDGs and SDGs). These include consideration of sustainability, inequality, health, education and well-being, "decent work", etc.. It is not immediately apparent that the economic models that we use are the most suitable that could be developed to address these issues. Nor is it apparent that they reflect a world in which these issues are considered to be significant for policy purposes.

There are some areas, such as happiness research, in which economics has attempted to adapt. As with the incorporation of Keynesian thinking, this has resulted in minor modifications, such as the addition of a "happiness" variable in a model, rather than the significant shifts in form that might be required. This illustrates the existence of path dependence in the development of economic thought.

An increasing number of economists, including Sheila Dow and Ha-Joon Chang, are critical of the narrow range of techniques in the economics toolkit. There is a saying to the effect that, if all you have is a hammer, everything looks like a nail. For economics, this could relate to theory and models based on postulates, and applied work using econometrics. Our approaches may address the issues that we set for them (how to maximise utility given a certain type of utility function and a budget constraint, for example), but they are not necessarily suited to the real world decisions that people make.

Static analysis has led to a focus on structures rather than on processes. Model building, especially in static form, emphasises mechanical aspects of relationships between variables. The focus on incentives, in particular financial incentives, ignores numerous other areas of motivation, including the potential conflict between intrinsic and extrinsic rewards. The distinction between the short run and the long run has led to representations which assume that these can be analysed separately, as with short-run fluctuations around a long-run trend. This ignores the possibility of path dependence, where short-run fluctuations (in investment, education, or employment, say) have an impact on long-run outcomes.

There are other worrying simplifications. The assumption that core theory is universally applicable ignores the importance of institutions and institutional differences over time and space. The focus on producers and consumers assumes direct exchange between them. It ignores the process of distribution and the impact that this might have on choice and on market structure. There is also an artificial distinction between input costs and output prices when, for many producers, their inputs are outputs from elsewhere and their outputs serve as inputs elsewhere. One of the most concerning consequences of a dominant, narrow mainstream approach to economics is the focus on structure and atomistic individualism. Some would argue that this has created an environment conducive to a form of managerialism that has many faults and mistaken beliefs, including the detached control of individuals and disregard for social dimensions of interaction and motivation.

Changes in the environment have facilitated such developments. Significant among these is the move to shorter courses and mechanical assessment methods (see Frames, Asymmetric Information No.46). This has resulted in simplified coverage, inflated claims and limited coverage of critiques or alternative perspectives. Also many promote the view that a knowledge of economics on its own is enough to explain real world phenomena. Over a period of time the discipline becomes dominated by those who have progressed through this narrow path, and they are then further constrained by mechanical research assessment criteria. This promotes discipline-based silos and journal refereeing favouring dominant conventions. Think of Plato's allegory of the cave, where journal referees are all in the cave and the shadows represent models and data. The world is understood according to interpretations of the shadows rather than what can be observed outside. There are alternative directions that could be taken. Rather than assume a desirable 'invisible hand' (the current Panglossian interpretation, not that of Adam Smith), perhaps we should consider Veblen's imbecile institutions. Instead of considering the Pareto Optimality of universal perfect competition as a basis for real world decision making, perhaps we should at least be open to the possibility of a growing 'corporate feudalism'. Rather than consider a society based on atomistic consumption-driven individuals, thought could be given to social groups, belonging, inclusion and the processes of achieving goals rather than just the goals themselves.

If you are not sure about the need to look beyond models and data to understand the real world, consider the following:

- If you are running a coffee van, what does an equilibrium price mean? How do you know if you are charging that price?
- Do isoquants for public transport fit the textbook structure? Can you identify the technologies used at every possible capital-labour ratio?
- If people either consume or save, where does the consumption of second hand goods fit in?
- Adam Smith did not use the word 'equilibrium' in The Wealth of Nations, so why is it seen to be so central to mainstream economics today?

If there were to be a single point that I would want to make, it would be that people form groups and groups shape people. This is true of the societies we are trying to explain and also of the society that we, as economists, form amongst ourselves. It influences both the phenomena that we try to understand and the way we operate in developing whatever understanding we produce. Perhaps we should consider more of a pluralist approach to give some alternative insights into each of these phenomena and to include some political dimensions.

THE FIVE-MINUTE INTERVIEW WITH... RHEMA VAITHIANATHAN

1. When did you decide that you wanted a career in economics?

When I was in my second year of high school, I took economics and loved it. I did economics from then on – I was fascinated by the application of logic to understanding human behaviour.

2. Did any particular event or experience influence your decision to study economics?

I always had great economics teachers at high school, and they really helped me gain a good intuition for the subject. I also found that in my undergraduate degree, economics was the most challenging which is always satisfying.

3. Are there particular books which stimulated your early interest in economics?

If there was one book I really loved it was Gunnar Myrdals *Asian Drama: An Inquiry into the Poverty of Nations.* I loved how it combined a sociological and anthropological approach to understanding economic conditions. It influenced the way I study economics. For example, if I am working on specific country based research, I always try and read widely about the people including novels from that country.

4. Did any teachers, lecturers or supervisors play a significant role in your early education?

Yes, many wonderful teachers. Too many to name.

5. Do you have any favourite economists whose works you always read?

At the moment in my own area I like a lot what Amy Finkelstein is doing with data. I also like some of the work that Mullainathan is doing around mental bandwidth.

6. Do you have a favourite among your own papers or books?

Not really.

7. What do you regard as the most significant economic event in your lifetime?

That's easy – the global financial crisis. It changed the way I think about economics. As a result I started a club called MADE – making a difference with Economics to teach economics students to become more activists. They need to see that with education comes an ethical requirements to be alert to misapplication of the science. I am sure that there were many economist at the banks and funds that saw the possibility of a crisis but did nothing. Moreover, economists who were supposed to ward off the crisis did not do their job. As far as I am concerned, the GFC is the equivalent of the "Unfortunate Experiment" was for the New Zealand Medical practice.

8. What do you like to do when you are not doing economics?

I love reading novels, a mixture of literary and light. My recommendations from the last few months of reading would be *The Slap* (by a wonderful Australia novel) and of course everyone's favourite *Gone Girls*.

BLOGWATCH

By Paul Walker (paul.walker@canterbury.ac.nz)

On the international blogging scene, George Selgin, at the excellent new 'Alt-M' blog <http://www.alt-m.org/>, explains "Ten Things Every Economist Should Know about the Gold Standard": 1) The Gold Standard wasn't an instance of government price fixing. Not traditionally, anyway. 2) A gold standard isn't particularly expensive. In fact, fiat money tends to cost more. 3) Gold supply "shocks" weren't particularly shocking. 4) The deflation that the gold standard permitted wasn't such a bad thing. 5) It wasn't to blame for 19th-century American financial crises. 6) On the whole, the classical gold standard worked remarkably well (while it lasted). 7) It didn't have to be "managed" by central bankers. 8) In fact, central banking tends to throw a wrench in the works. 9) "The" Gold Standard wasn't to blame for the Great Depression. 10) It didn't manage money according to any economists' theoretical ideal. But neither has any fiat-money-issuing central bank. <http://www.alt-m.org/2015/06/04/ten-things-every-economist-should-know-about-the-gold-standard-2/>. In another posting Selgin goes on to argue that the great Austrian economist Friedrich Hayek was no free banker <http://www.alt-m.org/2015/07/18/hayek-and-free-banking/>. An argument that may surprise many.

At 'VoxEU.org' <http://www.voxeu.org/> Jeff Cisyk and Pascal Courty ask "Why it is necessary to regulate doping in sports?" Of the three major rationales for regulation – athletes' health, fairness, and audience losses – the damage to audiences is the most convincing rationale for regulation, they claim. Evidence shows that doping causes measurable economic damage. Teams and leagues competing for audience attention may not internalise all externalities associated with doping, and they face a time-inconsistency problem when they discover it <http://www.voxeu.org/article/why-it-necessary-regulate-doping-sports>.

A nice example of the law of unintended consequences is discussed at the 'Conversable Economist' blog <http://conversableeconomist.blogspot.co.nz/> where Timothy Taylor blogs on a University of Vermont plan, started in 2012, that required all campus locations selling beverages to provide 30% "healthy" beverages, and then that all locations phases out all sales of bottled water. There were two hopes for this: 1) reduced use of bottles, when bottled water was no longer available, and 2) that healthier beverages would be consumed. In a vivid demonstration of the law of unintended consequences, bottle use rose and fewer healthy beverages were consumed <http://conversableeconomist.blogspot.co.nz/2015/06/banning-bottled-water-unintended.html>. Timothy Taylor also asks "Who Will Nudge the Nudgers?" <http://conversableeconomist.blogspot.co.nz/2015/07/who-will-nudge-nudgers.html> Given that policymakers and regulators are behavioural agents themselves they are subject to the same psychological biases and limitations that all individuals suffer from. However most behavioural economics papers focus on the biases and heuristics of ordinary individuals, while seemingly ignoring that regulators are people too and thus subject to the same psychological forces.

At the 'A fine Theorem' blog <https://afinetheorem.wordpress.com/> questions are being asked "On the Economics of the Neolithic Revolution". Why would any nomadic band choose to settle down when settling made them worse off? There are only three types of answers compatible with rational choice: either the environment changed such that the nomads who adopted settlement would have been even worse off had they remained nomadic; settlement was a Pareto-dominated equilibrium; or our assumption that the nomads were maximizing something correlated with height is wrong. All might be possible <https://afinetheorem.wordpress.com/2015/07/01/on-the-economics-of-the-neolithic-revolution/>.

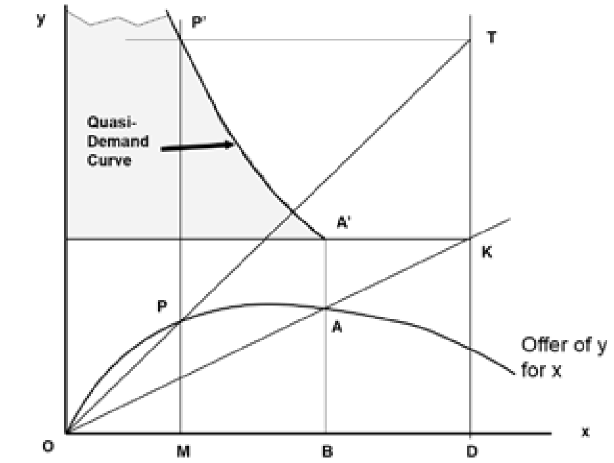
On the local blogging sense we have discussions of inequality at 'The Sand Pit' blog <http://initiativeblog.com/>. Eric Crampton looks at "Inequality in Consumption" <http://initiativeblog.com/2015/06/24/inequality-in-consumption/>. If we look at measures of inequality in real consumption we find that inequality rose a bit from the late 80s, plateaued through the mid-90s, and has eased off since then. Current inequality in consumption is *lower* than it was before the 80s reforms. At the 'Utopia - You are Standing in it!' blog <http://utopiayouarestandinginit.com/> Jim Rose looks at the relationship between inequality and economic prosperity in New Zealand since the 1970s <http://utopiayouarestandinginit.com/2014/ 10/29/the-fire-of-truth-the-relationship-between-inequality-and-economic-prosperity-in-new-zealand-since-the-1970s/>. He notes that income inequality in New Zealand is at a similar level to Australia, Canada, Italy and Japan, a little lower than the UK and a little higher than Denmark, Norway, Finland and Belgium. He also notes that there is no evidence of any sustained rise or fall in inequality in New Zealand in the last 20 years, which is very much at odds with many of the claims we commonly see in the media.

Michael Reddell discusses another current controversy at the 'Croaking Cassandra' blog <http://croakingcassandra.com/> when he looks at "The Productivity Commission on land supply". Reddell takes a look at the recent Productivity Commission draft report on improving the supply of land for housing. He notes that the current report builds from earlier work by the Commission and others identifying supply restrictions as one of the most important explanations for the high price of houses (more strictly, house plus land) in New Zealand <http://croakingcassandra.com/2015/06/18/the-productivity-commission-on-land-supply/>. Eric Crampton also discusses the Productivity Commission report at 'The Sand Pit' blog <http://initiativeblog.com/>. Crampton takes the Commission to task for their views on the use of eminent domain. Crampton notes that hold-out problems are the usual justification for use of eminent domain but asks, Is this the only way of solving hold-out problems? And are hold-out problems even the binding constraint here? He goes on the discuss option contracting as a better way around hold-out problems <http://initiativeblog.com/ 2015/06/17/eminent-domain/>.

Also at the 'Croaking Cassandra' blog <http://croakingcassandra.com/> blog Michael Reddell talks about "Housing, financial stresses, and the regulatory role of the Reserve Bank" <http://croakingcassandra.com/2015/06/26/housing-financial-stresses-and-the-regulatory-role-of-the-reserve-bank/>. He makes three main points. First, he makes the case that high house (and land) prices in Auckland are largely a predictable outcome of the interaction of supply restrictions and high target levels of non-citizen immigration. Secondly, he argues in support of the proposition that the Reserve Bank's actual and proposed LVR restrictions appear both unwarranted by, and inconsistent with, the Reserve Bank's statutory mandate to promote the soundness and efficiency of the system. Thirdly, he discusses the regulatory powers of the Bank, and its governance. He argues that the Reserve Bank Act is not consistent with the sorts of discretionary policy activities the Bank is now undertaking, with modern expectations for governance in the New Zealand public sector, or with how these things are done in other similar countries.

FINE LINES: MARSHALL, OFFER CURVES AND THE GAINS FROM TRADE

by John Creedy



As students of international trade theory know, Alfred Marshall was the first to draw offer, or reciprocal demand, curves when 'converting' into diagrams J.S. Mill's path-breaking analysis of trade. On Marshall's facility with graphs, Keynes suggested, with some justification, that 'we may justly claim him as the founder of modern diagrammatic economics'. However, this facility contrasts with his attitude towards their publication. In the *Principles* all diagrams were relegated to footnotes. In the modern atmosphere of 'publish or perish' it is astonishing to realise that Marshall developed his trade diagrams in the early 1870s but did not publish them until fifty years later, when they appeared in an appendix to his *Money, Credit and Commerce* (1923).[1]

Marshall is of course also famous for his analysis of consumers' surplus, using partial-equilibrium demand curves.[2] Nevertheless, Marshall admitted to his former student, Cunynghame, that he 'found all methods of representing the "total benefit" of foreign trade very cumbersome'. The method he devised and discussed in (1923, pp. 338-340) is illustrated in the diagram shown here. While consumers' surplus and offer curves appear in most introductory text books, this type of diagram does not seem to be well known.

For two goods, x and y, the offer curve of y for x (or the demand curve for x in terms of the amount of y supplied in return) is shown by the curve through OPA.[3] With the concept of consumers' surplus in mind, Marshall's challenge was to find a way of representing the demand for x in such a way that the surplus measure arises as an area contained by the curve above a price line.

1 Some of his early diagrams were privately printed by Sidgwick in 1879 under the heading *The Pure Theory of Foreign Trade*, but Marshall, being ill at the time, played no part in their selection. Writers in international trade have displayed much ingenuity in the use of diagrams: the names James Meade, Harry Johnson and Max Corden come immediately to mind.

2 He was not the originator of the concept or its diagrammatic expression. Precursors include especially Cournot, Dupuit and Fleeming Jenkin. But he provided the most extensive early treatment. Nevertheless Marshall's treatment seems to be unknown in the US, where reference is usually made to 'Harberger triangles'.

3 In fact, Marshall's arithmetic example gives an offer curve that is a cubic, a form that Marshall used in other contexts.

The rate of exchange, or price ratio, at any point on the offer curve is the slope of the ray through the origin to the relevant point on the curve. Marshall's approach involves 'converting' the y axis into a price per unit of good x, so that for a given x, vertical distances measure the price in terms of good y. This is achieved as follows.

Take an arbitrary point D on the x axis and draw the vertical line DK. Suppose A is the equilibrium point on the offer curve (the intersection with the other offer curve, not shown, of x for y), so that the slope of OA is price ratio (rate at which y is given up per unit of x) associated with the quantity demanded of B. Extend the line OA to where it intersects the vertical line from D, at K. Then draw a horizontal line from K, followed by the vertical line BA'

Consider the lower demand, M, arising from point P on the offer curve. This is associated with a higher price of x, given by the ray OP, which is steeper than OA. Draw a vertical line through P. Extend the ray OP to T and draw the horizontal line through T to intersect the vertical line through P at P'. The crucial feature of this type of construction is that the locus of points like P', going north-west from A', defines a quasi-demand curve for x in terms of the price (the amount of y offered per unit of x demanded). If this is extended to the vertical axis, the area to the left of this curve above A', suitably adjusted (by dividing by OD), therefore gives the Marshallian net benefit of trade.

The fact that this is closely related to the consumers' surplus concept is seen as follows. Consumers are willing to pay DK/OD for an amount B of good x. But they are willing to pay TD/OD for the smaller quantity, M, of x. Since the ratio, TD/OD, is equal to (DK/OD)+(TK/OD), the surplus on the OM*th* unit is represented by an ODth part of TK. Hence, the aggregate surplus is the area to the left of the quasi-demand curve – the light grey area in the diagram - divided by OD.

Marshall illustrated his approach using a numerical example from which the offer curves can be constructed. But his summary of how the gains were calculated was very terse. Soon after its publication, Allyn Young suggested that 'the great economist appears to have made a perplexing slip'. Young's criticism was repeated by Taussig and Loria. Even the great scholar Viner referred approvingly to Young's comment. However, these eminent economists should have thought twice before finding fault with Marshall, whose numbers can be reproduced using the approach described above.[4] It was fortunate for Young that Marshall, by then an old man, does not seem to have become aware of his criticism. As Edgeworth discovered more than once, Marshall's invective – delivered by post – could be withering.

4 See Creedy, J. (1991) Consumers' surplus in international trade: Marshall's example. *The Manchester School*, September, pp. 295-304. It can be shown that the quasi-demand curve corresponding to Marshall's cubic offer curve is quadratic. Hence the area can be calculated reasonably easily given the parameters of the cubic that Marshall assumed. He did not make these explicit, but they can be recovered by regression analysis using his table of values, and computation of the gains by appropriate integration gives a number very close to that stated by Marshall.

THE IMPACT OF R&D SUBSIDY ON INNOVATION BY NEW ZEALAND FIRMS

By Adam Jaffe and Trinh Le

Motu Economic and Public Policy Research

Innovation is considered an important source of economic growth (Romer, 1990). However, the outputs of innovation are strongly affected by problems of non-appropriability, non-divisibility and uncertainty, making it difficult for firms to fully internalise the returns to their investment. As a result, the equilibrium level of private investment in innovation tends to be socially suboptimal (Arrow, 1962).

In order to improve resource allocation for innovation, many countries have policies such as tax credits or assistance grants to support private R&D activity. These policies aim to reduce the costs of innovation to firms and hence to stimulate innovative activity. According to Eurostat (2014), the public share in R&D activities in the business sector in 2012 was 6.7% for EU28 and 11.5% for the US. In New Zealand, the corresponding share was around 8.8% (Statistics NZ, 2013).

There are no R&D tax credits in NZ; the main lever the government uses to lift business R&D investment is direct funding through R&D support programmes, which ranged from $33 million to $90 million per year during 2009–2013. In a recent Motu working paper1 funded by the Productivity Hub under the Productivity Partnership programme, we examine the impact of these R&D grants on innovation output for NZ firms.

Research of this kind must confront the issue of selection bias, which arises because government assistance is not randomly assigned: grants are made in part on the basis of characteristics such as management expertise and productivity that are observed by the granting agency but not by the econometrician. This paper addresses selection bias by drawing on a rich database, the Longitudinal Business Database (LBD). Since we are able to control for a large number of firm characteristics, selection bias due to observables can be mitigated.

The paper also provides an alternative window on the selection bias issue by testing for 'placebo' effects, i.e., the effect of R&D grants on an outcome that is not related to innovation and the effect on innovation outcomes of a government assistance programme that does not provide resources for R&D. Furthermore, the paper examines several innovation outcomes, making it possible to assess how R&D subsidy impacts on different levels of innovation.

Using the propensity score matching (PSM) approach, we find that part of the overall superior innovation performance of grant-receiving firms likely represents a selection effect. However their performance on most innovation measures exceeds that of propensity-matched firms, suggesting that there is a causal effect of grant receipt. In particular, we find that receiving an R&D grant almost doubles the probability that a firm introduces new goods and services to the world, while the effect on process innovation and any product innovation is relatively much weaker. Moreover, R&D project grants (co-funding for R&D projects, with payments averaging $326,500 per grant per year in 2012) have much larger effects on innovation outcomes than R&D capability building grants (funding to build R&D capability within a firm, averaging $14,500 in 2012). This is to be expected, given the nature of each type of grant.

There is no evidence that the effects of R&D grant receipt on these measures of innovation differ significantly between small to medium (<50 employees) and larger firms. Furthermore, we find that receipt of an R&D grant significantly increases the probability that a firm in the manufacturing and service sectors applies for a patent during 2005–2009, but no impact is found on the probability of applying for a trademark. These findings are broadly in line with recent international evidence from Japan, Canada and Italy which found positive impacts of public R&D subsidy on patenting activity and the introduction of new products.

The results are subject to the limitations in the PSM approach. This approach rests crucially on the assumption that - conditional on observables as captured by the propensity score - the assignment to treatment is purely random. This assumption is not directly testable. We use a large number of explanatory variables to predict the probability of R&D grant receipt. This helps minimise selection bias due to unobservables (since selection on unobservables tends to be strongly linked to selection on observables).

Another advantage of our data is that they come from a variety of survey and administrative sources (e.g. R&D grant receipt is from the Ministry of Business, Innovation, and Employment records, firm size is from tax records, patent and trademark applications are from the Intellectual Property Office of NZ records, measures of innovation (à la the Oslo manual) are from the Business Operation Survey (BOS), etc.). Associations between variables are therefore less likely to reflect respondent bias and more likely to reflect a meaningful statistical relationship and possibly causation. The robustness of the results to various formulations, combined with the results for the 'placebo' tests suggests that there is probably a true causal effect, particularly for the narrowest innovation measure (new product to the world). However, selection bias likely remains part of the picture.

1 Jaffe, Adam and Trinh Le. 2015. "The Impact of R&D Subsidy on Innovation: A Study of New Zealand Firms." Motu Working Paper 15-08. Wellington: Motu Economic and Policy Research. Also available at: http://www.motu.org.nz/our-work/productivity-and-innovation/firm-productivity-and-performance/the-impact-of-r-and-d-subsidy-on-innovation-a-study-of-new-zealand-firms/.

The results provide some evidence for the public policy value of R&D project grants. It is, however, important to keep in mind that innovation is an intermediate outcome of technology policy; the goal of the policy is increased productivity and sales of improved products. A previous LBD study (Ministry of Economic Development, 2011) examined whether the R&D grant programme increased receiving firms' sales, employment and productivity. That study found impact for capability-building grants, but no impact for project grants; the positive impact was limited to small firms (< 6 employees). This contrasts with our finding of much stronger innovation impacts for project grants, and no significant difference in impact across firm size categories.

How could it be that R&D project grants increase firm innovation but do not improve economic performance? Logically, there are several possibilities.

1. Project grants foster innovation and innovation fosters improved economic performance on average, but the link is so highly variable that in a small sample such as this the effect cannot be detected.

2. Project grants foster innovation and innovation fosters improved economic performance, but the lag between innovation and improved performance is so long and/or so variable that this effect cannot be detected. (The Ministry of Economic Development study considers performance outcomes up to four years after a firm first receives assistance.)

3. Project grants may foster innovation and improved economic performance, but imitations may follow innovations so quickly that the returns accrued to original innovators are not significantly higher than to imitators. This non-appropriability issue is part of the reasons why firms under-invest in R&D, and hence government subsidy is required to improve resource allocation for innovation.

4. Project grants foster innovation and true technological innovation fosters improved economic performance, but the innovation measures we are using are such poor proxies for true innovation that the link cannot be detected.

5. Project grants foster innovation, but innovation is not a sufficiently important determinant of economic performance to show up in economic performance relative to that of firms that did not get a grant (and presumably used other means to improve economic performance).

6. Project grants have no effect on true innovation (and hence no effect on economic performance), but employees of firms that receive grants consciously or unconsciously rationalise having received a grant by saying that they are innovating even if they are not.

Distinguishing among these possible explanations is important. Under explanations 1–3, the grants' ability to foster innovation implies eventual success in respect to the policy goal of improving economic performance. Explanation 4 leaves the question unresolved. Explanations 5 and 6 imply that R&D project grants are not effective public policy. Some additional insight on these issues would be provided by an analysis that looked more broadly at the relationship between innovation and economic performance for firms in the BOS data, regardless of whether or not they received government R&D support.

As Callaghan Innovation ramps up its R&D support programmes, and more time passes for the firms who have already received grant support, some of the uncertainty generated by small, short samples will also be mitigated.

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IMPROVING OUR UNDERSTANDING OF LABOUR DEMAND

By Daniel Griffiths (Statistics New Zealand)

COMPLEMENTARY VIEWS OF THE LABOUR MARKET

Statistics New Zealand produces a range of labour market statistics. Each of these statistics is designed to provide a slightly different window into the labour market and, combined, provide a comprehensive picture of the New Zealand labour market.

- Statistics NZ publishes a suite of labour market statistics:
- Household Labour Force Survey (HLFS)
- Quarterly Employment Survey (QES)
- Labour Cost Index (LCI)
- Linked Employer-Employee Data (LEED)

The HLFS and QES provide timely views of labour supplied by households and labour demand from business, respectively. LEED measures provide rich detail about jobs and people, but with a delay.

IMPROVING OUR LABOUR DEMAND MEASURES

We are currently working to improve our LEED measures, which are produced from the Inland Revenue tax data. We plan on increasing the timeliness of existing measures and introducing new ones. Increased use of such administrative data would have other benefits such as a cost reduction, greater coverage of industries and firm sizes, potential for more detailed breakdowns, and new measures to meet customer needs.

We also hope to reduce survey burden placed on respondents by the QES by using more tax data to replace survey responses. Some measures currently produced from the QES might now be produced instead from admin data or by combining survey and admin data. This is in line with the Governments goal of Improving Business Interaction with Government (Result Area 9.)

WHAT ARE THE BENEFITS OF USING TAX DATA?

Using tax data would potentially enable new outputs, as well as improvements to existing ones. We are proposing a system of outputs:

MONTHLY STATISTICS

1. Short-term estimates of jobs and earnings, released within 8 weeks after the end of the reference month.
2. Monthly or quarterly regional industry earnings and employment levels, instead of annual.

QUARTERLY STATISTICS

1. Provisional data released 6 weeks after the reference quarter, instead of 12 months.
2. Estimates with better coverage of firms and industries.
3. Better use of tax data, and other administrative data sources, to improve quality.
4. New person outputs at the quarterly level, in addition to current job level measures.

LABOUR MARKET DYNAMICS

1. Some quarterly labour dynamic estimates released earlier than 12 months after the end of the reference period (e.g. 7 months).
2. Expanding the estimates of job and worker flows e.g. quarterly job to job flows, new business employment dynamics, and annual job and worker flow outputs.
3. Quarterly outputs based on units of analysis other than 'job', such as person-level outputs, which wraps up sources of income, multiple jobs, etc.
4. Broader measure of labour market outcomes e.g. childcare, health.

WHAT ARE THE DIFFERENCES BETWEEN TAX DATA AND SURVEY DATA?

While there are significant benefits to using administrative data to compile labour demand measures, there are also limitations. Our investigations and previous consultation rounds have identified a number of key uses that can be met only by the QES. Measures that are not available in administrative data, but are available in the QES and other labour market measures, include: overtime vs ordinary time pay; full- and part-time employment, and subsequently Full Time Equivalents; and hours of work.

Introducing QES measures based on administrative data, or combinations of survey and administrative data, means that the QES measures will change.

FUTURE

We will soon be publishing the outcomes of the consultation with our key users for wider consultation.

For further information or to be kept informed of changes, please contact us at qes@stats.govt.nz

GEN UPDATE: GEN AND VUW PUBLIC FINANCE DEBATES

This year saw GEN continue its successful collaboration with the Chair in Public Finance at Victoria University of Wellington on three public finance debates – policy and intergenerational fairness, health policy evaluation and the investment approach for social policy.

To make these debates as informative and entertaining as possible the speakers were asked to push their cases as far as they could. They were allocated to sides by the debate organisers and the views and arguments expressed at these debates did not necessarily reflect either their personal views or the official position of their employers. Summaries of the points raised, along with copies of the speakers' PowerPoint slides, can be found on the Chair in Public Finance's website (www.victoria.ac.nz/sacl/about/cpf). The first debate, on intergenerational fairness, was also repeated at a well-attended event in Auckland.

On this note, GEN is keen to cater for audiences from the regions. GEN will start organising some events in Auckland this year with assistance from our new committee member, Susan Fairgray of Auckland Council. Susan replaces Haydn Hitchins who has recently decided to move to the UK. If you have any suggestions for potential GEN events for Auckland or other major cities, we would be keen to hear from you.

TRAINING COURSES

GEN organises a range of short courses for anyone who would like to get to grips with economic ideas and to understand how to apply economics and related principles in policy development. 2015 has been a busy year for GEN's training programme. Over one hundred people have attended five courses so far this year. These are: Evaluation of research investment; Productivity; Labour economics; Cost-benefit analysis and Economics of regulation. More courses are scheduled for later this year. These are:

- Introduction to microeconomics for policy analysts, 20, 21 August and 7, 8 September 2015
- Introduction to economic evaluation of policy options, 15, 16 October 2015

GEN ANNUAL CONFERENCE

The 2015 GEN conference will be held on 30 November 2015 at the Intercontinental Hotel in Wellington. The aim of this full day conference is to consider several policy issues over the next five years and to discuss the knowledge and skills needed to meet these challenges. Topics to be discussed include: the current state of economic thinking and what that means to policy making; inherent issues with changes in population demographics and the business environment and analytical tool required; policy making under uncertainty and investment approach to social policy.

The speakers and discussants include:

- Robert Wade, Professor at London School of Economics
- Warwick McKibbin, Professor at Australian National University
- Norman Gemmell, Professor at VUW
- Natalie Jackson, Professor at University of Waikato
- Murray Sherwin, Productivity Commission
- Paul Hansen, Associate Professor at University of Otago
- Shamubeel Eaqub, independent consultant
- Richard Fabling, Independent consultant
- Lilla Csorgo, Commerce Commission

In addition, a few GEN committee members will also be speaking at the conference. Registration opens in mid-August, by which a provisional programme will become available. Please keep 30 November 2015 free in your diary. We look forward to seeing you at the conference.

To find out more or to subscribe to our mailing list for regular updates on events, please visit our website www.gen.org.nz or email info@gen.org.nz.

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 at School of Economics and Finance, Victoria University of Wellington. 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.

Chia-Ying Chang

Lecturer, Ph.D (Vanderbilt University)

Chia-Ying's research focuses on theoretical work in three areas: the stability of money and banking system, international capital flows as well as various issues on economic growth and development, including labour market in macro perspective.

Brandon Chen

Lecturer, Ph.D (University of New South Wales)

Brandon Chen's current area of research is informed trading and its impact on key aspects of corporate governance, such as CEO compensation, board composition, takeover threat, etc. He is also interested in Environmental, social, and governance (ESG) investing and its impact on the investment community and firm value.

Jonathan Chiu

Associate Professor, Ph.D. (University of Western Ontario)

Jonathan is recently studying interbank overnight markets and monetary policy implementation framework. He also has projects on other topics such as credit ratings, electronic money and the market for ideas.

Yu-Wei Luke Chu

Lecturer, Ph.D (Michigan State University)

Luke's research interests are in empirical microeconomics, including health economics, labour economics, and economics of crime. He is working on projects related to i) the impact of illicit drug use, ii) the role of non-cognitive traits in labour market, and iii) economic mobility and earning correlation across generations.

Harold Cuffe

Lecturer, Ph.D. (University of Oregon)

Harold is working on empirical microeconomic projects including a number that investigate the effects of access to short term consumer credit, such as the effects of payday loans on crime and on the demand for alcohol. Harold has other ongoing work in the fields of education, sports and tourism economics.

Toby Daglish

Senior Lecturer, Ph.D (University of Toronto)

Toby is currently working on a number of projects. Principally, these lie in the areas of empirical bond pricing, and electricity retail markets.

Graeme Guthrie

Professor, Ph.D (University of Canterbury)

My current research activity has three strands: a Marsden-funded project for 2015-2017 that investigates the effects of business cycle risk on the timing and scale of investment activity by firms operating in an oligopoly setting; investigation of the role of real options embedded in developable land in explaining housing market booms and busts; development of a model explaining how activist hedge funds are able to influence boards of directors despite holding very small ownership stakes. In addition, I am currently putting the finishing touches on a book project that presents an overview of modern corporate governance to a non-specialist audience.

Viv Hall

Emeritus Professor, Ph.D. (Auckland)

Viv continues to advance work on recessions and recoveries in New Zealand's Post-Second World War business cycles, jointly with John McDermott. Viv's other work, jointly with Peter Thomson and Stuart McKelvie, is aimed at enhancing our knowledge of New Zealand's stylised business cycle facts.

Yothin Jinjarak

Associate Professor, Ph.D. (University of California, Santa Cruz)

Yothin has recently worked on empirical analyses of tax base – fiscal space, house price appreciation – credit markets, and political economy of capital flows.

Michael Keefe

Senior Lecturer, Ph.D (University of Texas at Dallas)

Michael's research focuses on the effect of asymmetrical informed agents on decisions of firm management and market participants. For example, information asymmetry between firm management and other agents distort first best decisions relative to initial public offering issuance, firm capital structure, and firm cash holdings. He empirically tests theoretically motivated hypotheses using a wide variety of econometric techniques to unravel causality and economic importance. For example, when facing a negative shock to earnings, James Tate and Michael found that small and young firms with low cash holdings reduced investment by 7% relative to small and young firms with high cash holdings. The implication is that small firms need to hold cash to maintain an investment program.

Mohammed Khaled

Senior Lecturer, Ph.D. (University of British Columbia)

Dr Khaled's current research is in two areas. One is the analysis of efficiency of dairy farms and the other is the analysis of behavioural anomalies in the stock market and IPO pricing.

Robert Kirkby

Lecturer, Ph.D. (Universidad Carlos III de Madrid)

Taxation, efficiency, and inequality are the focus of Robert's current research, specifically the Macroeconomic modelling of the interplay between them. A substantial part of this work involves developing the mathematical theory and computational tools needed to solve these models which include a large number of households. The models can then be applied to analyse the effects of potential changes in tax policy.

Jacek Krawczyk

Reader, Ph.D. (University of Technology, Warsaw)

My area comprises computational economics and applied mathematics. Specifically, I am interested in viability theory applications to macro- and environmental economics, coupled constraint equilibria, which arise in electricity generation and environmental economics, and also in dynamic portfolio optimisation with skewed payoffs.

Hai Lin

Associate Professor, Ph.D. (Xiamen University)

Hai is currently researching in two areas. One is about the fixed income market, and the other is about the informed trading on financial market.

Ingrid Lo

Associate Professor, Ph.D. (University of Western Ontario)

Ingrid studies market microstructure in fixed income and foreign exchange market. She recently conducts research on the impact of algorithmic trading on liquidity and price jumps in U.S. treasury market.

Ilan Noy

Professor, Ph.D. (University of California, Santa Cruz)

Ilan is currently focussing most of his research on two areas: disaster insurance, its efficacy and its impacts in NZ and the Pacific, and measurements of disaster vulnerabilities and disaster impacts at various time horizons.

Vladimir Petkov

Senior lecturer, Ph.D (Cornell University)

My area of research is applied microeconomics. In particular, I focus on dynamic games and their applications to problems in environmental economics and law and economics. My last several projects study the design of corrective taxes for addictive goods.

Leigh Roberts

Senior Lecturer, Ph.D. (Victoria University of Wellington)

Leigh is working on modelling funnels in stock prices and structural equation modelling of SMEs' FX risk management. He is also involved in work on mortgage rates in New Zealand and long term behaviour of returns on stocks using Hurst indices.

Yigit Saglam

Lecturer, Ph.D. (University of Iowa)

Yigit is currently doing research in three areas. The first is on optimal pricing to avoid resource shortages, specifically on water. The second is on solving simultaneous multi-unit auctions, such as spectrum auctions. The third area is on transportation economics, jointly estimating residential location, car ownership, and commuting decisions.

A. R. BERGSTROM PRIZE IN ECONOMETRICS AWARDED TO:

"FORECASTING WITH MACRO-FINANCE MODELS: APPLICATIONS TO UNITED STATES AND NEW ZEALAND"

by Michelle Lewis

Michelle Lewis's Masters Thesis employs macro-finance models, which incorporate macroeconomic and timely financial market data, to forecast macroeconomic variables and the yield curve for New Zealand and the United States. The macro-finance models use the arbitrage-free Nelson-Siegel approach to represent yield curve data with just several components, and those components are combined with the macroeconomic variables of economic activity, inflation, and policy interest rates in a joint vector autoregression to produce forecasts.

The key contribution to the literature is that Michelle's forecasting analysis is undertaken in a genuine real-time setting. That is, the model estimation and forecasts use the actual macroeconomic data that was available at each historical point in time, which realistically allows for an unavoidable uncertainty faced by practitioners. Conversely, the comparable literature to-date uses quasi-real-time macroeconomic data, which simply truncates the final available macroeconomic data series to estimate the model and produce forecasts over history. While showing promising forecasting benefits from macro-finance models, quasi-real-time analysis is unrealistic because it implicitly assumes that future revisions to historical macroeconomic data are already known at each historical point in time.

Fortunately, Michelle's results show that, even in real time, there are still substantial forecasting benefits from using macro-finance models. The forecast improvements are most significant and robust for inflation and the policy rate, and economic activity for longer horizons. Furthermore, theoretically motivated restrictions on the yield curve dynamics improve the forecast performance of macroeconomic variables, and the yield curve itself.

However, for economic activity at short-term horizons, the forecasts from macro-finance models do not outperform forecasts from a standard vector autoregression of the macroeconomic variables. This result is at odds with the analogous quasi-real-time analysis, hence illustrating that quasi-real-time analysis can overstate the forecasting benefits of macro-finance models.

In their assessment, the adjudicators Professors Alfred Haug and Les Oxley noted: "The thesis is a substantial piece of empirical research that involved constructing new data and applying sophisticated econometric techniques that were skilfully mastered. Overall, it is an excellent piece of empirical econometrics. The author needs to be congratulated on her achievements."

ABOUT NZAE

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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The NZAE web-site address is:
http://nzae.org.nz/
(list your job vacancies for economists here).

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If you would like more information about the NZAE, or would like to apply for membership, please contact:

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