

NZIER Economics Award

Motu Senior Research Associate Arthur Grimes received the 2005 NZIER Economics Award. This recognises excellence in economics of benefit to New Zealand. He joins two Motu trustees, Roderick Deane and Grant Scobie, as a recipient of the award. Here is an abridged copy of his acceptance remarks.



Arthur Grimes

My teachers at the University of Waikato taught economics as a social science. Complemented by insights gained from other social sciences, I came to the realisation that there are no 'right' answers in economics or policy.

Appropriate policy responses are case-specific: there is always some degree of subjectivity, and some

trade-offs, in what we do. In this respect, I appreciate the observations of the American writer, Ralph Waldo Emerson:

"A foolish consistency is the hobgoblin of little minds ... With consistency, a great soul has simply nothing to do."

Much of my early research at the Reserve Bank of New Zealand from 1979 was in the field of labour economics, examining issues of wage determination and determinants of labour demand and supply. I also researched aspects of the real exchange rate. Each of these contributions was used as evidence in Arbitration Court hearings into general wage orders evidence—by competing sides!

The Reserve Bank supported my study for a PhD at the London School of Economics. At LSE I had some special teachers, including Charles Goodhart and Mervyn King (currently Bank of England Governor). Shortly before my return to New Zealand, the Bank received an instruction from Roger Douglas to revise the Reserve Bank's Act in order to "Muldoon-proof" monetary policy. One of the novel theoretical ideas that had influenced me at LSE was 'time consistency': how could one design a policy framework setting out desirable long-term goals, while ensuring that officials and politicians would stick with those goals rather than subordinating them for short-term gain? The time consistency insights were reflected in the Reserve Bank of New Zealand Act 1989.

We warmly congratulate Arthur on receiving this prestigious award, which reflects the high calibre of his research work and his extensive contribution to the public policy debate in New Zealand over many years. - **Motu Board of Trustees**

We set long-term goals ("stability in the general level of prices"), short-term accountabilities ("policy targets agreement"), public transparency ("monetary policy statements"), and delegated monitoring (board of directors). These aspects have stood the tests of the last 15 years, and have been emulated in many countries.

I joined Motu in 2002, having had prior spells at the National Bank of New Zealand and as Director of the Institute of Policy Studies at Victoria University. What issues am I currently researching through Motu?

With the assistance of a Royal Society Marsden Fund grant, I have examined New Zealand's economic relationships with Australia. The research shows that New Zealand cannot be regarded as a 'core' region of Australasia. However, we are similar (in structure and cycles) to a number of peripheral states, and so may fare as well as they do under a trans-Tasman economic union.

Another research focus is housing markets, funded by CHRANZ and FRST. Our latest work examines why Nelson-Tasman-Marlborough housing markets have behaved as they have in recent years, and to ascertain the implications for affordable housing. Housing supply responsiveness is another key research interest.

An area of prospective research is to use new methods to investigate whether large-scale infrastructure investments (road, rail, telecommunications, hospitals, schools, and irrigation) contribute net positive economic benefits. Appropriate infrastructure underlies economic development, and is one area in which government expenditure can be highly productive, although that is not always the case. Consistent with the NZIER Economics Award aims, this research should contribute valuable insights "of benefit to the economic welfare of New Zealand".

In this issue

Letter from the Director.....	02	Why are Māori less wealthy?.....	03
Motu people.....	02	The benefits of being wrong.....	04
Publications.....	06	The bunching of economic activity.....	05
Seminars.....	07	The geographical mobility of Māori.....	08

Letter from the Director

Motu is now five years old. As chairman Dr Grant Scobie observes, it has now successfully graduated from infancy: no mean feat when so many new businesses fail in their first few years of life. In fact Motu has thrived, and could be likened to a very healthy, self-confident young adult.

Motu's founders had a remarkably clear vision of what the organisation should be. They saw Motu's four main objectives as: complete objectivity; the highest-quality research; enhancing public debate around important public policy issues; and enhancing New Zealand's research capacity.

Motu has not compromised any of these goals during its formative years. On the contrary, they are being reinforced continually by new activities. Just two examples illustrate the organisation's dynamic nature:

First, to enhance Motu's contribution to well-informed public debate on key policy issues, we introduced our Public Policy Seminar series two years ago. The seminars aim to disseminate Motu's research findings (and those of its affiliates) to a wide range of people, including those with relatively little economic training.

A second recent innovation has been offering a summer internship to a Maori student as one way to enhance the research capacity of Maori.

Pursuing rigorous economic and social research will remain a prime Motu objective. Recent research findings illustrate Motu's role in providing a good basis for sound policy outcomes.

Research by Dr Arthur Grimes has helped remove the

public perception that New Zealand would be economically 'swamped' by a closer economic relationship with Australia. The research findings demonstrate that the New Zealand economy is not significantly different to most of Australia's 'peripheral' states (i.e. all the states other than New South Wales and Victoria).

Arthur's work does not attempt to suggest whether some form of closer economic relationship would be a good thing. This is a political issue for the New Zealand community to determine. However, the research findings will help public debate to focus on the wider political ramifications, rather than on whether New Zealand could 'foot it' economically as part of a larger Australasian economic group.

New Zealand has limited natural resources. Over the next few years it will have to deal with increasing and often strongly competing demands on these resources—water (quality and quantity), fish stocks, and biodiversity. Motu's Dr Suzi Kerr is a world authority on the use of economic instruments to assist with the allocation of scarce resources. Under her direction Motu has assembled a national and international team of well-qualified academics, practitioners and data experts to tackle this issue.

During its first five years Motu has established a very sound base. From here it can move forward confidently.



Rob McLagan (Acting Director)

Motu people

Board of Trustees Grant Scobie (Chair), Roderick Deane, Colin James, Apryll Parata, Steve Thompson, Rob McLagan, Steve Stillman.

International Advisors Denny Ellerman, Edward Glaeser, Stephen Jenkins, John McMillan, Wally Oates, Paul Portney.

Affiliates Andrew Coleman, Deborah Cobb-Clark, Viv Hall, Dean Hyslop, Sholeh Maani, Tim Maloney, John Mc Dermott, Richard Newell, James Sanchirico.

Staff Andrew Aitken, Sylvia Dixon, Loren Evans, John Gibson, Arthur Grimes, Jo Hendy, Pauline Hornblow, Suzi Kerr, Yun Liang, Dave Maré, Rob McLagan (Acting Director), Steve Stillman, Linda Townsend, Maxine Watene.



Some founding members celebrating Motu's 5th birthday. From left to right: Suzi Kerr, Gina Straker, Grant Scobie, Jason Timmins, and William Power.

Why are Māori less wealthy?

In a forthcoming Motu Working Paper, John Gibson and Grant Scobie use data from the 2001 Household Savings Survey to examine wealth differences between ethnic groups in New Zealand.

The gap in wealth between ethnic groups is much greater than the widely studied income gap. For example, at the 90th percentile of the wealth distribution for Pakeha couples, net worth is approximately \$800,000 (in 2001 values). For the 90th percentile for Māori couples (where both partners affiliate as Māori), the recorded net worth is just over \$200,000, giving a wealth gap of almost \$600,000. At the median (50th percentile), Pakeha couples have wealth of about \$200,000 while Māori couples have less than \$20,000 of net worth (see Figure 1 for more details).

One interesting feature that may be disguised by these large wealth gaps between Māori and Pakeha is that the distribution of wealth is considerably more skewed for Māori than for Pakeha. Wealth at the 90th percentile is four times median wealth for Pakeha but eight times the median for Māori. In other words, wealthy Māori are proportionally closer to the wealth of Pakeha than are poor Māori relative to poor Pakeha.

There are at least two reasons why these ethnic differences in wealth are of interest. First, wealth can be distributed quite differently from income, so an over-emphasis on income differences may disguise some of the disparities that exist in wealth. Wealth is also of interest because differences in wealth may contribute to the intergenerational transmission of disadvantage. Almost all New Zealand studies find the poorer outcomes for Māori due to lower levels of productive characteristics (as opposed to differences in the returns to characteristics, due perhaps to discrimination). One of the key characteristics is educational attainment, which then shifts the question to why, on average, Māori do not accumulate as much schooling as Pakeha? Differences in wealth are likely to be key determinants of investment in education. Indeed, several New Zealand studies suggest that Māori children leave school early because of the low levels of wealth in their families.

Gibson and Scobie use regression methods to sort out how much of the gap in mean net worth is due to differences in characteristics, and how much is due to differences in the returns to characteristics. About 90% of the gap for single people and 80% of the gap for couples can be explained by differences in the average characteristics of Māori and Pakeha. Most importantly, the younger age of the Māori population

accounts for approximately half of the wealth gap, depending on the sample and method used.

Of course, differences in the mean may not be the same as the differences at various points in the distribution of wealth. So the authors also use a semi-parametric decomposition approach to study the wealth gaps at each decile of the wealth distribution. Age differences explain more than 60% of the wealth gap for the bottom third of the wealth distribution, but only about a quarter of the gap for the top third.

It could be possible to reach optimistic conclusions from these results. They suggest that much of the ethnic difference in wealth may eventually disappear as sub-populations in New Zealand reach an equilibrium age. However, of potential concern in the interim is the possibility that low current wealth imposes substantial costs on future generations by limiting investments in education. This is a topic for further research.

Funded by: The New Zealand Treasury

For more information refer to: Scobie, Grant M.; John Gibson and Trinh Le. 2005. *Household Wealth in New Zealand*, Forthcoming December 6, Wellington: Institute of Policy Studies, Victoria University.

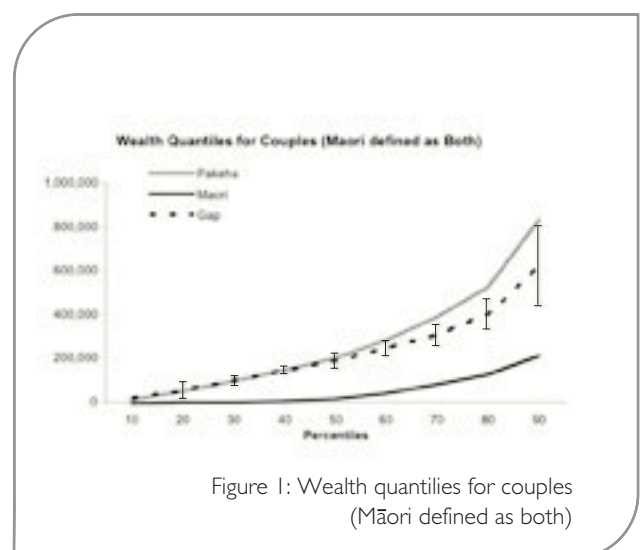


Figure 1: Wealth quantiles for couples (Māori defined as both)

The benefits of being wrong: monitoring environmental compliance

We must monitor compliance with environmental regulations to ensure that they produce real benefit. But how accurate should we be? This is a key issue in the design of policies to address two current issues: Environment Waikato's nitrate trading programme in the Taupo catchment; and design of a carbon credit system for carbon sequestration in plantation forests.

Monitoring is critical for any environmental regime, whether or not it includes trading. The first gain from more accurate monitoring is improved environmental integrity. In particular, this means avoiding measurement bias that prevents aggregate environmental goals being achieved. Second, it targets incentives more tightly because environmentally beneficial behaviours are rewarded in proportion to their true benefit. Therefore landowners incorporate society's interests in their decisions. Third, it reduces equity concerns that can arise where landowners who provide identical environmental benefit could be rewarded differently.

However, the costs of accuracy can be significant, so improved accuracy is not always better. First, complex monitoring requires more data, which is expensive for landowners to collect and for government to audit. Second, more complex monitoring is also less transparent and cannot be replicated by watchdog groups who doubt its accuracy. Complexity can reward those who are less than honest, by allowing them to manipulate reporting in their favour. This could induce overall bias in environmental outcomes relative to those desired. Third, it may not be possible to support a complex rule with strong science, so it could be more contentious. Complexity may make a programme unpopular and could actually reduce environmental integrity.

A good monitoring system must balance these considerations. In the nitrate case it makes sense to use a specific version

of 'Overseer', a farm-level model of nitrogen flows, to assess compliance and authorise trades. Legal challenges to the accuracy of Overseer on a day-to-day basis should not be allowed, even if they may be scientifically justified. In the carbon sequestration case, a default monitoring system could combine satellite monitoring for forest area and age classes with regional tables of modelled carbon sequestration. Forest measurement could be enhanced by requiring audited records of forest extent and age-class for larger properties. Small landowners could be allowed to voluntarily provide audited records where the satellite monitoring is particularly inaccurate.

As science advances, new mitigation opportunities arise, and the marginal value of environmental improvements (e.g. the carbon price) changes. The monitoring rules should then be updated. This need should be anticipated when the initial rules are created, with regular opportunities to review the monitoring rules. As updating occurs, there should be no retrospective change in rewards, penalties or trades. Retrospective changes would mean that landowners face scientific and regulatory uncertainty over which they have no control.

Funded by: Foundation for Research Science and Technology and the Ministry for the Environment.

For more information go to:
http://www.motu.org.nz/land_use_nz.htm

News in brief

GHG emissions factors

Motu and its natural-science collaborators have produced a set of dynamic greenhouse gas emissions factors. They are based on public information; can be readily applied to models of economic activity; and are consistent with the National Inventory. See Motu Working Paper 05-10 and http://www.motu.org.nz/land_use_changedatabase.htm

Access to Motu datasets

Motu has launched a new website. It allows users to find out about what data we have worked with (and hence cleaned up and documented), and how it can be accessed. We hope that this will be useful to New Zealand researchers, including graduate students who are seeking data or ideas for empirical research. See <http://www.motu.org.nz/dataset.htm>

Farewell and welcome

Farewell to Jason Timmins, a valued staff member. Jason has moved to the Department of Labour as a Senior Researcher and we wish him well.

Welcome to Deborah Cobb-Clark, Director at the Social Policy Evaluation Analysis and Research Centre, Canberra. We are pleased to announce that Deborah has joined Motu as an Affiliate.

The bunching of economic activity

Economic activity is very unevenly spread across the country. In Central Auckland there are, on average, 2,300 people per square kilometre, compared with just 14 for New Zealand as a whole. But is economic activity in New Zealand particularly concentrated, and does New Zealand differ in which industries are most concentrated?

In recent work with the Ministry of Economic Development, we measure the degree of geographic concentration of employment in New Zealand. We also investigate which industries are most concentrated and which sets of industries tend to locate together. Although such studies exist for a number of other countries, ours is the first to look at the issue for New Zealand. Describing the extent and nature of geographic concentration of employment is the first step in uncovering the links between location patterns and firm performance.

For each of over 400 industries, we show how bunched the industry's employment is across 58 local labour market areas. We group industries that tend to locate together, and summarise patterns for seven sets of industries. Many of the results are unsurprising. Resource-based industries such as mining, fishing, and agriculture are predictably clustered around the resources on which they depend. Manufacturing, however, contains two different subsets—one set of industries that is spread out fairly much in proportion to total employment and population, and a second that is relatively highly concentrated. Similarly, service industries can be split into a 'local services' subset that is spread out more or less in proportion to total employment and population, and a smaller subset of mainly business services that is more concentrated.

Overall, about 30% of employment is in industries that are relatively highly concentrated, and around 60% is in industries whose location patterns reflect those of total employment. Although it is difficult to make fair comparisons across countries, the patterns that we uncover suggest that employment in New Zealand has a relatively high degree of geographic concentration. New Zealand also has an unusually high proportion of very concentrated and very dispersed industries, perhaps because many New Zealand industries are very small by international standards. We notice that many New Zealand industries have high levels of *industrial* concentration as well, in the sense of being dominated by a fairly small number of firms.

We look at changes in the degree of geographic concentration between 1987 and 2003, and find that there has been a slight but steady increase in geographic

concentration. This increase is primarily a result of industries changing their degree of concentration, and not a result of more concentrated industries growing faster.

We are currently extending this work to look at whether firms' labour productivity depends on how bunched their industry is, or on the industrial diversity of local employment. Early results suggest that workers in larger labour markets are more productive, but that this advantage is not strongly related to the degree of clustering of their industries, or the local industry mix.

This work has been supported with funding from the Ministry of Economic Development and from Motu's FRST-funded research programme on "Understanding Adjustment and Inequality". Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975.

For more information go to: Maré, David C., "Concentration, Specialisation and Agglomeration of Firms in New Zealand", *Motu Working Paper 05-12* at http://www.motu.org.nz/motu_wp_2005_12.htm



The central business district in Auckland

Working papers

- 05-13 Coleman, Andrew; Sylvia Dixon and David C. Maré, "Maori Economic Development - Glimpses from Statistical Sources."
- 05-12 Maré, David C., "Concentration, Specialisation and Agglomeration of Firms in New Zealand."
- 05-11 Holmes, Mark J. and Arthur Grimes, "Is There Long-Run Convergence of Regional House Prices in the UK?"
- 05-10 Hendy, Joanna and Suzi Kerr, "Greenhouse Gas Emission Factor Module: Land Use in Rural New Zealand – Climate Version 1."
- 05-09 Maré, David C. and Michelle Poland, "Defining Geographic Communities."
- 05-08 Sin, Isabelle; Emma Brunton, Joanna Hendy and Suzi Kerr, "The Likely Regional Impacts of an Agricultural Emissions Policy in New Zealand: Preliminary Analysis."
- 05-07 Stillman, Steven, "Examining Changes in the Value of Rural Land in New Zealand from 1989-2003."
- 05-06 Dixon, Sylvia and David C. Maré, "Changes in the Māori Income Distribution: Evidence from the Population Census."
- 05-05 Sin, Isabelle and Steven Stillman, "The Geographical Mobility of Māori in New Zealand."

Other publications

- Allen, Bryant; R. Michael Bourke and John Gibson. 2005. "Poor Rural Places in Papua New Guinea," *Asia-Pacific Viewpoint*, 46:2, pp.201-17.
- Crichton, Sarah; Steven Stillman and Dean Hyslop. 2005. "Returning to Work from Injury: Longitudinal Evidence on Employment and Earnings (update)," LEED Project Research Paper, Statistics New Zealand, Wellington.
- Fabling, Richard and Arthur Grimes. 2005. "Insolvency and Economic Development: Regional Variation and Adjustment," *Journal of Economics and Business*, 57:4, pp.339-59.
- Gibson, John. 2005. "Prices and Unit Values in Poverty Measurement and Tax Reform Analysis," *World Bank Economic Review*, 19:1, pp. 69-97.
- Gibson, John; Gaurav Datt, Bryant Allen, Vicky Hwang, R. Michael Bourke and Dilip Parajuli. 2005. "Mapping Poverty in Rural Papua New Guinea," *Pacific Economic Bulletin*, 20:1, pp. 14-29.
- Grimes, Arthur. 2005. "New Zealand: A Typical Australasian Economy?" in *The Visible Hand: The Changing Role of the State in New Zealand's Development*, Andrew Ladley and John Martin (Eds.) Wellington: Institute of Policy Studies.
- Grimes, Arthur. 2005. "Regional and Industry Cycles in Australasia: Implications for a Common Currency," *Journal of Asian Economics*, 16:3, pp.380-97.
- Le, Trinh; John Gibson and Les Oxley. 2005. "Measuring the Stock of Human Capital in New Zealand," *Mathematics and Computers in Simulation*, 68:5-6, pp. 485-498.
- Newell, Richard G.; James Sanchirico and Suzi Kerr. 2005. "Fishing Quota Markets," *Journal of Environmental Economics and Management*, 49, pp.437-62.
- Olivia, Susan and John Gibson. 2005. "Unit Value Biases in Price Elasticities of Demand for Meat in Indonesia," *Australasian Agribusiness Review*, 13:12, pp. 1-17.
- Singleton, John; Arthur Grimes, Gary Hawke and Frank Holmes. 2005. "Twenty Years of Modernisation: The Reserve Bank of New Zealand," in *Central Bank Modernisation*, P. Nicholl and N. Courtis (Eds.) London: Central Bank Publications, pp. 167-82.

Public policy seminars

Motu Seminars are free and open to all those interested. No registration is required, simply turn up on the day. If you would like to be included on the mailing list for these seminars please contact:
Loren Evans: 04 939 4250 or email loren.evans@motu.org.nz

Next seminar

December

Forests, cows and sheep: land use and climate change

Presenter: Suzi Kerr, Director and Senior Fellow, Motu Economic and Public Policy Research

Date/Time: Thursday, 1 December, 12.30 - 2pm

Venue: Lecture Theatre 1, Victoria Law School, Old Government Buildings, Lambton Quay, Wellington



The Seminar series will be taking a break over the holiday season but will resume in February.

Recent seminars

November

Recent Developments in the Theory and Practice of Utility Price Regulation

Presenter: Lew Evans, Professor of Economics, Victoria University of Wellington.

October

Academic Performance, Childhood Economic Resources, and the Choice to Leave School at Age Sixteen

Presenter: Sholeh Maani, Motu Affiliate and Associate Professor, University of Auckland Business School.

September

Environmental Policy in Open Economies

Presenter: Brian Copeland, Erskine Fellow, Canterbury University.

August

Performance Based Mechanisms for Improving Water Quality

Presenter: Suzi Greenhalgh, Senior Economist, World Resources Institute.

July

The Impact of Minimum Wages on the New Zealand Labour Market: Lessons From the 2001 Youth Minimum Wage Reform

Presenter: Steve Stillman, Motu Senior Fellow.

To download presentations go to Motu Public Policy Seminar Series: http://www.motu.org.nz/motu_pps_series.htm

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The geographical mobility of Māori in New Zealand

It is often suggested that Māori are less mobile than other ethnic groups because of attachment to particular geographical locations. If this is true, Māori may be disadvantaged because they are less likely to pursue employment opportunities outside areas where they currently live.

A recent Motu Working Paper, written by former Motu Research Analyst Isabelle Sin and Motu Senior Fellow Steven Stillman, examines the geographical location and internal mobility of Māori in New Zealand between 1991 and 2001. Unlike previous research, this paper compares the mobility of Māori in particular locations to the mobility of similar Europeans in those *same* locations. This approach controls for variations in the underlying mobility of the population in different areas in New Zealand, and for the impact of local economic shocks.

Focusing on moves between economically distinct geographical areas, the researchers find that Māori are actually more mobile on average than Europeans in New Zealand and, in general, have become more mobile relative to Europeans in the second half of the 1990s. They also find that mobility differences between Māori and Europeans are roughly constant across all working ages, but that Māori with vocational and university qualifications are even more mobile than similarly qualified Europeans.

The researchers also examine the importance of iwi affiliation in determining where Māori live. They find that Māori who live in an area local to an iwi with which they are affiliated are 1-3% less mobile than comparable Europeans in that same area, but that Māori with non-local iwi affiliations are 3-8% more mobile than comparable Europeans. These groups are of similar size, with roughly 40% of Māori in each.



Results are also presented comparing the relative importance of land-based attachment (measured by traditional iwi boundaries) versus social ties (measured by the current location of individuals with the same iwi affiliation) in determining the mobility of Māori. These results suggest that social ties are more important than land-based attachment in explaining why Māori who live in areas local to their iwi are less mobile than Europeans. This may indicate that attachment to 'local' areas has a broader meaning to Māori than is often attributed. It also suggests that Europeans may display similar attachment to places where their peers live.

Overall, the results in this paper indicate that on average Māori are slightly more mobile than Europeans. This suggests that Māori are as responsive as Europeans to opportunities that exist outside areas where they currently live. However, Māori who live in areas where they have strong iwi-based social ties may be less responsive to outside opportunities than Europeans in those same areas.

Funded by: Motu's FRST-funded research programme on "Understanding Adjustment and Inequality".

For more information go to: http://www.motu.org.nz/motu_wp_2005_05.htm

Patrons

