



Motu Research Update

Motu Economic and Public Policy Research

www.motu.org.nz

By-products of economic change: Recent changes in the Māori income distribution

New Zealand's recent economic growth surge has helped to raise average Māori incomes, but what has happened to the distribution of income within Māoridom? A recent Motu working paper by Sylvia Dixon and Dave Maré looks at changes in Māori incomes and income inequality between 1997 and 2003. It finds that income inequality within the total working-aged Māori population declined, while income inequality among employed Māori was stable.

The distribution of income within the Māori population is a somewhat neglected issue. Past researchers have typically focused on changes in average Māori incomes or the Māori / non-Māori income gap, not on distributional issues.

The authors of this working paper examined the incomes of working-aged Māori from 1997 to 2003, using data on individuals' gross weekly incomes. The Māori employment rate increased rapidly during this period. Educational attainment levels also rose, particularly at tertiary level, and a greater proportion of Māori moved into higher-skilled managerial, professional and technical jobs. These changes could be expected to have some impact on the distribution of Māori incomes, as well as average income levels.

The authors estimate that working-aged Māori, on average, experienced a 16 % real increase in their pre-tax weekly incomes. Employed Māori gained an average real income rise of 8 %. There were notable reductions in the proportion of Māori with negative or zero weekly incomes, or incomes of around \$150 to \$200 per week (corresponding approximately to the level of income support benefits for single adults). In general, Māori moved towards income levels of \$500 a week or higher.

The areas of growth in the density of the income distribution were fairly evenly spread across lower-middle to moderately high income levels, indicating that the recent changes in Māori skills and employment patterns have not led to a new



concentration of Māori on low or lower-middle incomes. Summary measures of income inequality for working-aged Māori show a reduction of inequality.

The authors also looked at some of the key sources of change in the income distribution, and attempted to assess the relative importance of each. They conclude that a large increase in the Māori employment rate was probably the single most important factor transforming the income distribution in this period. *(continued on page 2)*

In this issue

Letter from the Director	2
Youth minimum wage reform and the labour market	3
Regional cycles across Australasia	4
Public policy seminar series	5
The impact of injuries on labour market outcomes	6
Recent publications	6
Regional business cycles in New Zealand	7
Recent Motu working papers	8

Letter from the Director

Welcome to our eighth 'Research Update'. This month I am temporarily stepping down as Motu Director and passing the baton to Rob McLagan who will be Acting Director from 1 May 2005 through December 2006. Rob was previously Chief Executive of the Forest Owners Association and CEO of Federated Farmers. We are all very pleased to have him join us and confident that Motu is in safe hands. I will continue to be a Motu Senior Fellow but will be away for considerable stretches of time on maternity and then sabbatical leave. Thank you to everyone within and outside Motu who has helped make my nearly seven years of leadership since Motu was conceived so satisfying. I'll be back!

John Gibson, Professor of Economics at Canterbury, became a Motu Senior Research Associate in December 2004. He is working with Steve Stillman and David McKenzie, a New Zealander at Stanford, on a project surveying Fijian and Tongan migrant households in New Zealand to provide information on the health and welfare effects of migration. This project is funded by the World Bank.

An exciting new development for Motu is the creation of our 'patrons' programme'. We have created this programme to provide Motu with a more secure financial base and improve our ability to promote well-informed debate on public policy issues with independent resources. Rod Deane's help has been invaluable in designing and initiating this programme.

We are grateful and pleased to announce our first patrons: • ANZ–National Bank Limited • Fletcher Building Holdings Limited • Telecom Corporation of New Zealand • Ministry of Economic Development.

Another extremely positive relationship, made possible by Apryll Parata, was initiated through a meeting with the CEOs/Chairpeople of several key Iwi. Contacts established through this meeting are already enhancing components of our research programmes that directly relate to Māori and we are working toward a strong mutually beneficial relationship.

Motu international visitor Shelly Lundberg gave a fascinating public policy seminar on how the gender of children affects men's labour market behaviour. She also gave talks at the Ministry of Social Development and the Labour Force Participation workshop and was interviewed by Linda Clark on National Radio. Closer to home, we are very proud to announce that Isabelle Sin, one of our research analysts, will be leaving in August to start a PhD in economics at Stanford after being overwhelmed with excellent offers from top universities. Good luck Izi—you know you are welcome home again anytime.



Izi off to Stanford

Suzi Kerr (ex) Director

By-products of economic change: . . . (continued from page 1)

A related Motu working paper by Isabelle Sin and Dave Maré considers the question of why income distributions differ among iwi and between iwi and Europeans, using 2001 Census data. This paper finds that qualification levels are particularly important—they account for an average of 29 % of the difference between iwi incomes and European incomes. The importance of age distribution, work and labour force status, regional council area and urban or rural location for understanding differences in income distributions varies considerably by iwi and often by gender. This research was funded by the Foundation for Research Science and Technology through the 'Adjustment and Inequality' programme. For more information go to: www.motu.org.nz/adjust_inequal_outcomes.htm and www.motu.org.nz/motu_wp_series.htm

Youth minimum wage reform and the labour market

A recent Treasury working paper written by Motu Affiliate Dean Hyslop and Motu Senior Fellow Steven Stillman examines the impact of the 2001 youth minimum-wage reform on the labour market experiences of New Zealand youth.

This reform had two components. First, it lowered the eligible age for the adult minimum wage from 20 to 18 years, resulting in a 69 % increase in the minimum wage for 18 and 19 year-olds. Second, the reform raised the youth minimum wage in two annual steps from 60 % to 80 % of the adult minimum, resulting in a 41 % increase in the minimum wage for 16 and 17 year-olds over a two-year period.

The researchers find that this large increase in minimum wages had no adverse effects on youth employment or hours worked. In fact, they find stronger evidence of positive employment responses to the changes, with 16 to 17 year-olds increasing their hours worked by 10 to 15 %. Given the absence of any adverse employment effects, they also find significant increases in labour earnings and total income of teenagers relative to young adults. However, they do find some evidence of a decline in educational enrolment, and an increase in unemployment and inactivity among teenagers after the reform, suggesting that more youth are looking for and not finding work.



One important caveat to the analysis is that there has been an increase in either real or apparent non-compliance, e.g. there has been a significant increase in the fraction of teenage workers reporting sub-minimum wages. If employers who have the most to lose from minimum wage increases do not follow the rules, increases will have lesser impacts. None-the-less, this research indicates that the 2001 youth minimum wage reform substantially increased the wages and incomes of teenagers without reducing their employment prospects. This evidence is a further confirmation that in certain situations minimum wage increases can be welfare improving for targeted groups.

The majority of this research was done while Stillman was employed at the New Zealand Department of Labour, but any views expressed do not purport to represent those of the Department of Labour or the Treasury. For more information go to: www.treasury.govt.nz/workingpapers/2004/04-03.asp.

Motu people

Board of Trustees Grant Scobie (Chair), Roderick Deane, Colin James, Apryll Parata, Steve Thompson, Suzi Kerr, Dave Maré • **International Advisors** Denny Ellerman, Edward Glaeser, Stephen Jenkins, John McMillan, Wally Oates, Paul Portney • **Affiliates** Andrew Coleman, Viv Hall, Dean Hyslop, Sholeh Maani, Tim Maloney, John McDermott, Richard Newell, James Sanchirico • **Staff** Andrew Aitken, Sylvia Dixon, Loren Evans, John Gibson, Arthur Grimes, Jo Hendy, Pauline Hornblow, Suzi Kerr, Yun Liang, Kate Mackenzie, Dave Maré, Rob McLagan, (Acting Director), Isabelle Sin, Steve Stillman, Jason Timmins, Linda Townsend, Maxine Watene.



Suzi, Yun, Charles, Kate and Manu, Motu visit to Kapiti Island

Regional cycles across Australasia

For any given adjustment mechanisms within and between economies, the greater the similarity in cycles across regions, the more suitable is a single currency across those economies. Two Motu working papers by Arthur Grimes 05–04 and 05–03 examine these issues in the context of Australasia (Australia and New Zealand).



The first paper considers New Zealand relative to the currency union already shared by Australia's six states and

two territories. It follows on from Motu Working Paper 04–11 which analyses trend economic developments across Australasia.

A frequently expressed concern relating to a possible Australasian currency union is the potentially disruptive effect of an agriculturally based economy (New Zealand) joining with a much larger economy that contains significant mineral wealth. We derive a method for decomposing regional economic cycles (e.g. the aggregate Queensland cycle) into the impacts of cycles in individual industries (e.g. manufacturing, etc). We then analyse whether cyclical differences across regions are chiefly due to differences in industry structure (the *industry structure effect*) or to differences in industry cycles across the regions (the *industry cycle effect*).

For our sample period (1985 to 2002), we separate Australasia into regions: New Zealand plus each of the Australian states and territories. In each region, we separate the aggregate cycle into the cycles of industries. We take the difference between each region's cycle and the aggregate Australasian cycle (i.e. the idiosyncratic regional cycle), and decompose that cycle into the industry structure and industry cycle effects.

We find that in all regions other than the two Australian territories, ACT and NT, the standard deviation of the industry structure effect is small both absolutely and relative to that of the region's idiosyncratic cycle. Apart from ACT and NT, each

region's industry cycle effect almost completely explains the deviation between the regional cycle and the Australasian cycle.

Only 4 % of the deviation between New Zealand's cycle and Australasia's cycle is explained by a different industry structure. By contrast, 40 % of ACT's idiosyncratic cycle is explained by industry structure differences— this result is not surprising given the huge share devoted to a single industry, government services. NT is an in-between case.

This work implies that the difference in each of the seven largest region's cycles relative to the Australasian cycle has little to do with industrial structure effects. Even though New Zealand is the most agriculturally intensive region, this has not exposed it to a materially different cyclical position relative to other regions. Similarly, Western Australia's large minerals exposure has not caused its cycle to deviate markedly from that of Australasia as a whole.

The analysis implies that sectoral differences between the two countries are not a major obstacle to consideration of an Australasian currency union. However the analysis is at the nine industry level; it is possible that greater industry disaggregation could yield a more sizeable industry structure effect. Also, if there were again a need for a major economic upheaval (in either New Zealand or Australia), New Zealand's cycle could deviate markedly from Australia's cycle, and a separate currency may be an important adjustment mechanism. In Motu Working Paper 05–04 (also forthcoming in the *Journal of Asian Economics*), we show that an independent New Zealand dollar has helped the New Zealand economy adjust to shocks that impact differently on New Zealand relative to Australia.

The research programme underlying these papers is funded by a Royal Society of New Zealand Marsden Fund grant. For more information go to: www.motu.org.nz/nz_aus.htm

Public policy seminar series

For more information go to www.motu.org.nz/motu_pps_series.htm

The seminar series aims to disseminate the results of our research and make existing knowledge more accessible for policy debates in New Zealand. Seminars are given by Motu Senior Fellows, Senior Research Associates, Affiliates and other leading New Zealand and international researchers. The seminar series is designed to be accessible to people not deeply involved in research (such as policy analysts) who want to keep up with research developments in particular areas, as well as to the wider public who may have an interest in a particular issue. Motu has a database of over 1150 people who have subscribed to the seminar series email list. Audiences of 70–120 people regularly attend the seminar series.

Recent seminars

January 05 “The Economics of Resistance to Antibiotics” Presenter: Gardner Brown Professor of Economics, University of Washington

March 05 “The Evolution of the New Zealand Business Cycle: Returning to a Golden Age?” Presenter: John McDermott Chief Economist, ANZ – National Bank Limited

April 05 “Child Gender and Men’s Labour Market Outcomes” Presenter: Shelly Lundberg Castor Professor of Economics, University of Washington

May 05 “School Choice” Presenter: Abigail Payne Associate Professor, McMaster University, Canada Research Chair in Public Economics

June 28 05 “Choices, Incentives, Accountability, Professionalism: The Latest Innovations in Education Reform”. Presenter: Caroline Hoxby, Professor of Economics, Harvard University

Upcoming seminars

July 05 “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

August 05 Presenter: Suzi Greenhalgh, Senior Economist, World Resources Institute

September 05 “Trade, Renewable Resources and the Environment” Presenter: Brian Copeland, Department of Economics and Finance, Commerce and Administration, Victoria University of Wellington

October 05 Presenter: Sholeh Maani, Motu Affiliate and Associate Professor, University of Auckland Business School.

November 05 Presenter: Lew Evans, Professor of School of Economics and Finance, Commerce and Administration, Victoria University of Wellington



Motu Research Update is the newsletter of Motu Economic & Public Policy Research
For more information about us please contact
Level 1, 93 Cuba Street, PO Box 24390 Wellington, New Zealand
Ph: 64 4 9394250 Fax: 64 4 9394251
Email: info@motu.org.nz
www.motu.org.nz

The impact of injuries on labour market outcomes

Injuries can have major long-term effects on individuals, potentially leading to a permanent loss of the ability to earn a living. A recent Statistics New Zealand working paper written by Sarah Crichton, Motu Senior Fellow Steven Stillman, and Motu Affiliate Dean Hyslop examines the impact of injuries on employment, benefit receipt, and income of workers in New Zealand.

The researchers find that injuries that result in more than three months away from work have negative effects on future labour market outcomes and that these impacts can be quite substantial. For example, individuals who are unable to work for seven to nine months are 8 to 10 % less likely to be working, 7 % more likely to be receiving benefits and have 13 to 17 % lower incomes 12 months after recovery.

This paper employs a technique more commonly used to evaluate the impact of active labour market programmes. It matches injured workers to a random sample of individuals who have similar characteristics to the workers before they were injured. This is done to estimate what each injured individual's labour market outcomes would have been had they not been hurt. This approach is necessary because this 'counterfactual' non-injured state is not actually observed for the injured population.

New Zealand has a comprehensive accident insurance system that protects individuals from earnings loss while recuperating from injuries. It does not have a permanent disability system that



compensates individuals for injuries that cause a permanent reduction in their ability to earn a living. The results in this paper indicate that serious injuries have long-term impacts on individuals and that current policies (i.e. access to ordinary benefits) do not compensate for these losses.

This research was done as part of the Statistics New Zealand / Department of Labour project, analysing 'Linked Employer–Employee Data.' For more information go to: www.motu.org.nz/leed.htm.

Recent publications

For a complete list of publications go to www.motu.org.nz/pub.htm

Kuhn, Randall and Steven Stillman. (2004) "Understanding Interhousehold Transfers in a Transition Economy: Evidence from Russia" *Economic Development and Cultural Change* 53 (October). No 1: 131-56.

Kerr, Suzi and Isabelle Sin with Joanna Hendy (2005) "Taxes vs Permits: Options for Price-Based Climate Change Regulation" *Treasury Working Paper 05/02*.

Stillman, Steven (2005) "Health and Nutrition in Eastern Europe and the Former Soviet Union During the Decade of Transition: A Review of the Literature" forthcoming in *Economic and Human Biology*.



Regional business cycles in New Zealand

The National Bank (now ANZ–National Bank Limited) releases results from its Regional Trends survey each quarter. Its commentary and data analysis features a ranking of the regions from highest to lowest growth rates over short-run horizons and discusses what factors might have been associated with those outcomes.

Every region can lay claim to either the highest or lowest growth rate at least once during the full sample period (1975 to 2002). An analysis by Motu Affiliates Viv Hall and John McDermott (Motu Working Paper 04–10) complements the National Bank of New Zealand’s (NBNZ) commentary by focusing on regional business cycle properties over a medium-term horizon. It examines the extent to which the cycles may differ and be driven by particular factors over this time frame.

The paper identifies business cycle turning points for New Zealand’s 14 regions and for aggregate New Zealand activity. Nelson, Marlborough and Tasman are treated as a single region.

Aggregate NBNZ activity cycles are similar to those obtained from Statistics New Zealand real GDP data, except for mid-1986 to mid-1991 when the NBNZ series shows less recessionary behaviour. The two measures have three contractionary phases in common, and are closely synchronised. Both series have average cycle durations and amplitudes that are noticeably greater for expansions than contractions. This behaviour is known as ‘cyclical asymmetry’.

All regions except Wellington experienced contractions in activity associated with the successive summer droughts and the Asian financial crisis of 1997–98.

Gisborne was the region worst affected by contractionary activity associated with the ‘reforms’ of the late 1980s and early 1990s. Perhaps surprisingly, the subdued 1991 to 92



Source: Venture Taranaki Trust www.taranakinz.org

activity that is clear from real GDP data is not consistently witnessed in the regional cycles.

All regions exhibit cyclical asymmetry for both the durations and the amplitudes of their cycles. Further, regional cycles tend to be contemporaneous with the aggregate New Zealand cycle. The regions most highly synchronised with the New Zealand activity cycle are Auckland, Canterbury, and Nelson – Marlborough; the least so are Gisborne and Southland. Noticeably strong co-movements between regions have been obtained for Canterbury and Nelson – Marlborough which are contiguous; Hawkes Bay, Nelson – Marlborough and Canterbury; which may have climate, horticulture and viticulture in common; and Waikato and Taranaki, which have dairying in common.

So, what factors do the authors establish as being consistent with the contemporaneous business cycle co-movements? Distance between regions matters but no correlation is found with net migration or real import prices. Unusually dry weather conditions have been associated with some business cycle phases in the Waikato and Gisborne

(continued on page 8)

Regional business cycles in New Zealand *(continued from page 7)*

regions. External price shocks (through aggregate official terms of trade movements and real milk solids prices) have been strongly associated with business cycle phases in the Waikato, Taranaki, Canterbury and Nelson – Marlborough. Milksolids price associations are also evident for Southland. Internally, regional cycle movements are not reflected in real house price cycles, even for the Auckland region; but regional cycle movements have been reflected quite rapidly in dairy land and total rural land prices in each of Taranaki, Southland, Otago, and Waikato.

The results suggest that aggregate terms of trade and dairy milksolids prices drive activity in key rural areas, and that these cyclical phases have been quite quickly reflected in rural land prices in those areas. In short, over this 28 - year period, rural business cycle activity has remained a remarkably dominant factor in key regions. For more information go to: www.motu.org.nz/motu_wp_2004_10.htm



Mt Taranaki from Eltham, New Zealand
Source: Venture Taranaki Trust www.taranakinz.org

Recent Motu working papers

For a complete list of working papers go to: www.motu.org.nz/motu_wp_series.htm

- 05–04 Grimes, Arthur, “Regional and Industry Cycles in Australasia: Implications for a Common Currency”
- 05–03 Grimes, Arthur, “Intra & Inter-Regional Industry Shocks: A New Metric with an Application to Australasian Currency Union”
- 05–02 Grimes, Arthur, Robert Sourell and Andrew Aitken “Regional Variation in Rental Costs for Larger Households”
- 05–01 Maré, David C, “Indirect Effects of Active Labour Market Policies”
- 04–12 Dixon, Sylvia and David C Maré, “Understanding Changes in Māori Incomes and Income Inequality 1997–2003”
- 04–11 Grimes, Arthur, “New Zealand: A Typical Australasian Economy?”
- 04–10 Hall, Viv B and C John McDermott, “Regional Business Cycles in New Zealand: Do They Exist? What Might Drive Them?”
- 04–09 Grimes, Arthur, Suzi Kerr and Andrew Aitken, “Bi-Directional Impacts of Economic, Social and Environmental Changes and the New Zealand Housing Markets”
- 04–06 Sin, Isabelle and David C Maré, “Māori Incomes: Investigating Differences Between Iwi”

Patrons

