

ASymmetric information

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

CONTENTS

	page
Profiles:	2
• Rolf Cremer	
• John Yeabsley	
Special feature: an original paper by Martin Richardson	4
Research in progress	
• the Marsden fund projects: Paul Dalziel	8
NZAE Scholarship for Maori students: Rawinia Lewis	9
Publishing: news from the NZEP editor's desk	10
Professional development: courses & conferences	10
Web-sites for economists: review by Frances Gamble	11
Jobs	12
Obituary: Noel Ruth by Robert Bowie	13
NZAE membership info. and Council news	14

WE INVITE your contributions to any section of this newsletter,
and/or your comments and suggestions.
please contact: Nancy Devlin (ndevlin@commerce.otago.ac.nz)

profiles

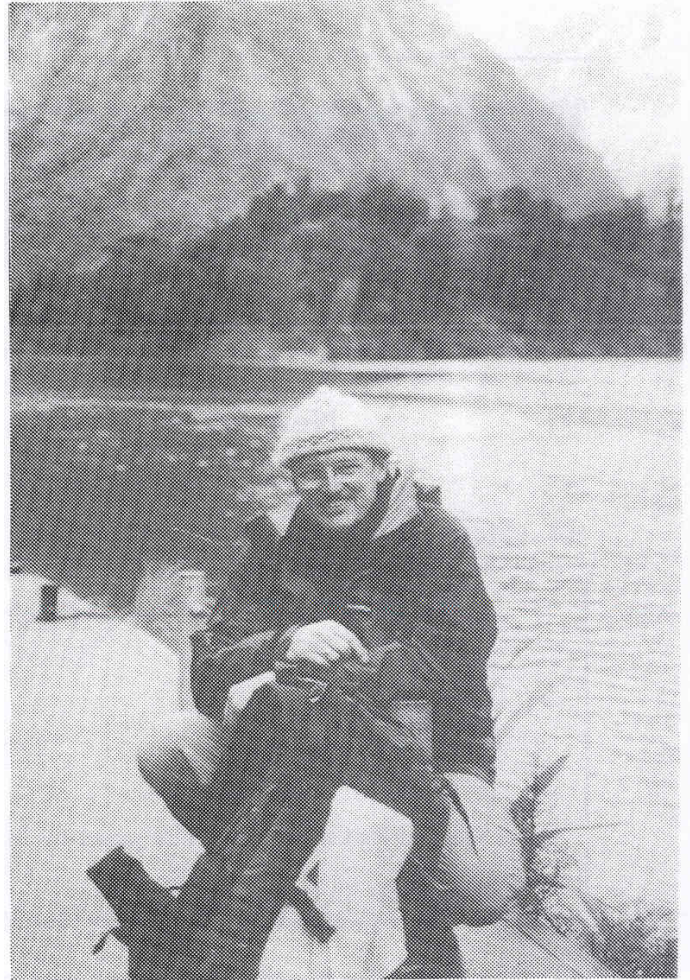
key appointments - who's who in NZ economics, and where they are...

Rolf D Cremer
Pro Vice-Chancellor
College of Business - Massey
University

Since early 1997, Rolf Cremer has headed the largest business and economics faculty in New Zealand. Previously, he held the Chair in Economics, and was the head of the School of Applied and International Economics, also at Massey University. He came to New Zealand in late 1992, after almost a decade at universities in China, Hong Kong and Macau, and with an education in economics, management, and engineering in Germany, his home country. He has been on the Council of the New Zealand Association of Economists since 1993.

"Business", Rolf says, "is the most powerful force in modern society. Whether we succeed or not as a society, as an economy, or as individuals, depends to a large extent on business. There is no bigger challenge than to prepare the generation of tomorrow to take their place in business, and to help understanding and shaping the economy and business organisations through the research we do. Our success as a society depends on this."

A big attraction of the new position is that the new position has made him part of the executive of Massey University. "It's great to be involved in leading a university, and to make sure that they keep the important function that only they can provide."



John Yeabsley

President
New Zealand Association of Economists

John Yeabsley has been a working economist for the best part of thirty years. He sees himself as "a general problem solver who relies on the specific techniques of economics to approach the complexities of the real world".

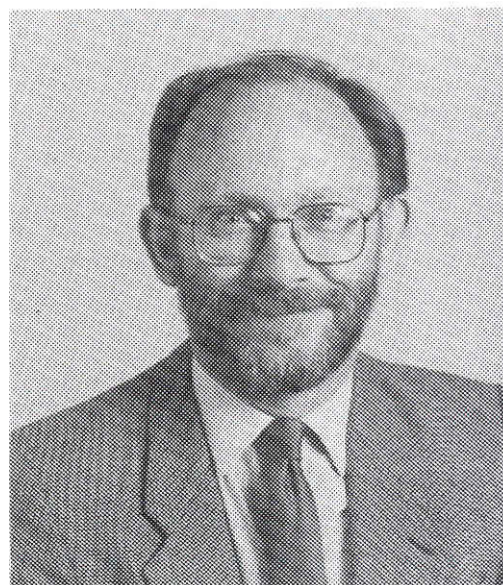
John's first degrees were in mathematics and philosophy from the University of Canterbury, where he continued on to obtain a degree in economics. John writes, "It was the high water of economics classes at Canterbury, in quantity at least. Bert Brownlie was in the chair; the staff included Frank Tay and Wolf Rosenberg. Over twenty graduates received honours degrees in economics at the end of 1970, including Geoff Lewis, David Teece, Rod Falvey, Bill Foster, Bryce Wilkinson, Don Turkington, and Warwick Tuck. Joy it was to be alive: economics was emerging from pages of text books and taking centre stage in policy -

making - a period Samuelson captured when he described economists as 'well trained athletes whonever run a race'." After graduating, John took up a position in the Department of Industries and Commerce in Wellington.

The award of a Mulholland Fellowship allowed John to go the University of Essex to complete a PhD in microeconomics where he found "the discussion vigorous and the company exciting": Tony Atkinson was a full professor at 25, Rex Bergstrom was teaching the toughest advanced econometrics course and Joe Stiglitz was on hand to serve as an examiner.

On his return to New Zealand John worked at the Department of Trade and Industry, including several years as assistant secretary, then at the Department of Labour, where he set up and headed the Labour Market Analysis Unit. His work there on immigration policy led to a position as General Manager of the New Zealand Immigration Service, which included the development and introduction of the points system, and subsequently to Victoria's Institute of Policy Studies.

John joined the NZIER and became Director in 1994. Directing NZIER was demanding during a time which saw the rewriting of the Constitution, building new systems and revamping all products. In 1997 John moved on from the directorship to his current position of Senior Fellow, enabling him to concentrate on client work. As well as his involvement with NZAE, John is on the executive of the New Zealand Law and Economics Association.



John was elected President of the New Zealand Association of Economists in March 1998. He sees his principal aim in this role as being "to improve the ability of the Association to meet the interests of its various members". Part of this involves a re-think of the range of services and products NZAE offers to its members (an example of this being the introduction of *Asymmetric Information*). Other key objectives include ensuring that NZAE as an organisation is effective, accountable and responsive to the needs and interests of its members, and to improve NZAE's "profile" within the economics community.

John is married with three grown up children. He lives on the fringe of Wellington central city and enjoys the delights of its lively urban life. He reads widely and listens to jazz.

are you connected to e-mail?
would you be happy to receive NZAE mail and newsletters by e-mail rather than
hard-copy?

e-mail = quick + cheaper for NZAE

contact ndevlin@commerce.otago.ac.nz

We invite members to submit a brief article on any issue of interest to NZAE members, one of which will be published in each issue. Views and opinions expressed in these articles are those of the authors, and do not represent the views of the New Zealand Association of Economists. Articles should be sent to: Nancy Devlin, Economics Department, University of Otago, PO Box 56, Dunedin.

In this issue, the NZAE is pleased to present, in place of our usual “viewpoint” article, an original paper by Associate Professor **Martin Richardson** of the Economics Department, University of Otago.

A Significant Heuristic Example of Erroneous Policy: the Determinants Of Growth Martin Richardson¹

Introduction

While economists have flocked to the study of growth theory in recent years, determining the historical sources of growth in New Zealand has been a rather less productive pasture. Indeed, economists have been almost sheepish in addressing this important question. The present paper is an attempt to muster attention to one extremely important explanator in NZ that has been overlooked to date.

The Model

In an effort to derive a parsimonious explanation of NZ's recent growth history and at the risk of butchering our theory we have shorn many details from our explanatory model. We posit that output in a period is a function of two types of input: clovenhooved ruminant animals (pastoral) – hereinafter sheep – and a non-sheep input. But the non-sheep input is simply aggregate output less sheep production. Thus, where subscripts denote time periods, S denotes sheep, Y denotes output and $r, a, m > 0$ are constants,

$$Y_t = rS_{t-1}^a (Y_{t-1} - S_{t-1})^m \quad (1)$$

Defining the growth in output as $1+g$ we have,

$$\frac{Y_t}{Y_{t-1}} = 1 + g = rS_{t-1}^a (Y_{t-1} - S_{t-1})^m Y_{t-1}^{-1} \quad (2)$$

From (2) it is straightforward to show that

$$\frac{dg}{dS_{t-1}} = rS_{t-1}^{a-1} (Y_{t-1} - S_{t-1})^m Y_{t-1}^{-1} [aS_{t-1}^{-1} - m(Y_{t-1} - S_{t-1})^{-1}] \quad (3)$$

and setting this expression to zero (the first-order condition for the optimal number of sheep) gives

$$S_t = \frac{a}{a+m} Y_t \quad (4)$$

The second-order conditions for this problem require that the principal minors of the Bordered Leicester alternate in sign, a condition that is easily checked. Note also that

¹ Department of Economics, University of Otago. I am grateful to Eugene Rush for the fundamental insight of this paper.

Shepherd's Lemma is not required in the formal derivation of this result.

Following the literature we assume constant returns to scale so that $a+m=1$; thus the optimal sheep/real output ratio is given by a . With collinearity between our regressors S_{t-1} and $(Y_{t-1}-S_{t-1})$ we chose to divide (2) through by $(Y_{t-1}-S_{t-1})$ which, in combination with the observation that $m=1-a$, gives the following equation:

$$\frac{1+g}{Y_{t-1}-S_{t-1}} = r S_{t-1}^a (Y_{t-1}-S_{t-1})^{-a} Y_{t-1}^{-1} \quad (5)$$

We thus wish to estimate the following log-linear version where we expect $b=-1$:

$$\ln\left(\frac{1+g}{Y_{t-1}-S_{t-1}}\right) = \ln r + a \ln\left(\frac{S_{t-1}}{Y_{t-1}-S_{t-1}}\right) + b \ln Y_{t-1} \quad (6)$$

Empirical Modelling

Scouring through a range of data sources, we settled on annual data on NZ total sheep numbers from assorted NZ Yearbooks and a real GDP series from a source who, mysteriously, did not wish to be associated with this work. Optimal data selection limits us to the post-1951 period.

We have estimated this model by OLS and the results are reported below.

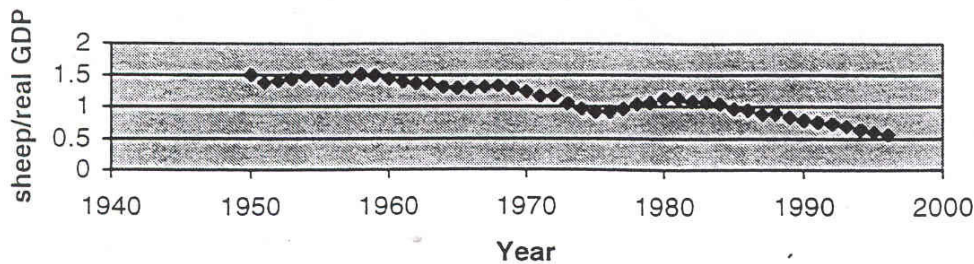
Sample: 1952-1996	Parameter	b	a	$\ln r$
Dependent Variable: $\ln((1+g)/(Y_{t-1}-S_{t-1}))$	Estimate	-1.042449252	0.082015837	0.778418
	Standard error	0.0214	0.0296	0.1791
	R^2	0.99640731		

All of these estimates are significant at the 1% level.

Interpretation

To get in behind these numbers to the underlying economics, these results suggest that the optimal ratio of sheep to real output in NZ is a little over eight percent. Yet the following chart shows that this ratio has always been far too high in NZ:

Actual sheep/real GDP ratio 1952-1996

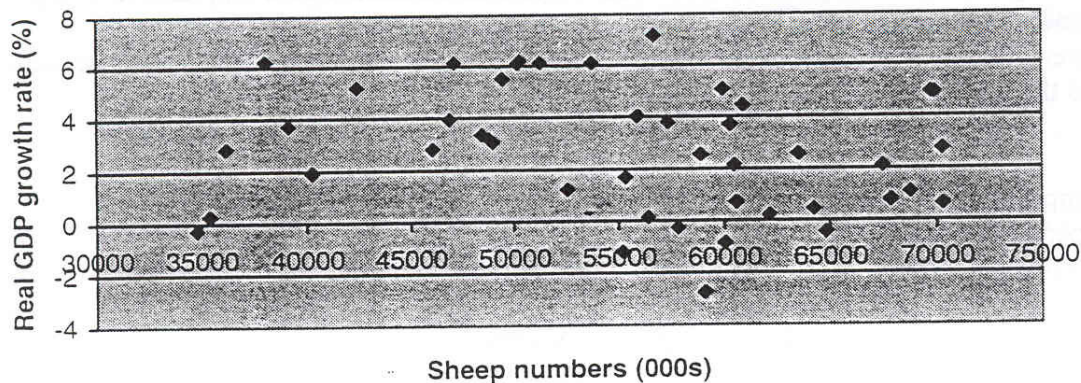


Clearly NZ has been fleeced of considerable growth potential by failure to maintain optimal sheep numbers. Indeed, it is straightforward to show from (2) (and with $a+m=1$ still) that, denoting the optimal sheep/output ratio by α :

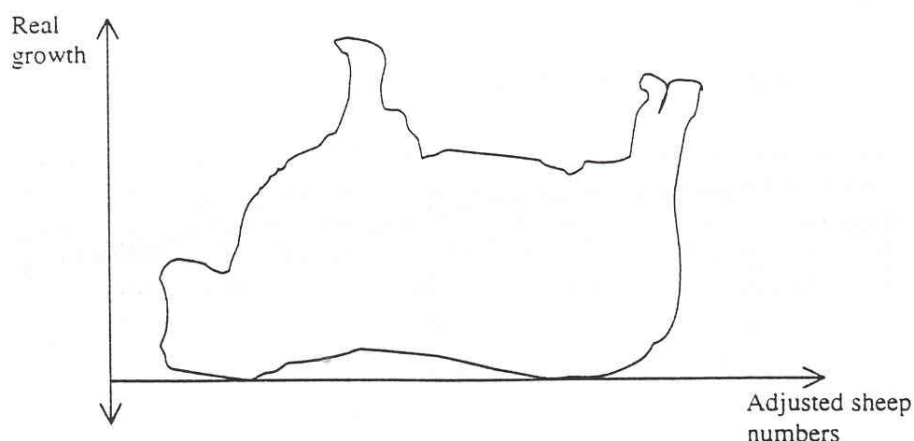
$$g|_{optimum} = r\alpha^a (1-\alpha)^{1-a} - 1 \quad (7)$$

In this case our estimate of r is $\text{antilog}(0.778) = 2.178$ and our estimate of α is just that of a or 0.082, so the maximum growth rate obtainable, if sheep numbers were chosen optimally, is $g=0.64$ or 64% p.a.. Had New Zealand chosen sheep numbers optimally throughout our sample, real GDP would now be some 2 billion times greater than it currently stands. So the costs of ignoring this aspect of growth determination have been staggering and one must wonder if previous analysts have pulled the wool over the eyes of policy makers in focussing earlier attention on other less significant determinants of growth in NZ.

A simple scatter plot of growth rates against raw sheep numbers gives the following pattern and an Optical Regression shows a clear negative relationship:



However, graphing growth rates against appropriately adjusted sheep numbers generates the familiar inverted-ewe pattern shown below (see Ram 1993). Again our results are clear and incontrovertible.



References

- Lamb, R., 1983, The extent and form of exurban sprawl. *Growth and Change* Jan. 1983 40-47.
- Merino, C., 1988, Compromising immigration reform: the creation of a vulnerable subclass. *Yale Law Journal* 98(2) 409-26.
- Paddock, J., 1991, Extent of nationalization of Republican party positions in the post-New Deal era. *Social Science Quarterly* 72(1) 163-71.
- Ram, R., 1993, Kuznet's inverted-U hypothesis: reply. *Southern Economic Journal* 59(3) 528-32.
- Shearer, R., 1978, Proposals for the revision of banking legislation: review article. *Canadian Journal of Economics* Feb. 1978 121-36.
- Shepherd, W., 1991, Market dominance under U.S. antitrust. *Review of Industrial Organization* 6(2) 161-76.
- Slaughter, S., 1980, The danger zone: academic freedom and civil liberties. *Annals of the American Academy of Political and Social Science* 448 46-61.
- Wool, H., 1981, Coal industry resurgence attracts variety of new workers. *Monthly Labor Review* Jan. 1981 3-8.

“top-up” courses in economics: are you interested?

Would you or your colleagues be interested in brief, intensive “hands-on” courses on specific topics in economics or econometrics? These courses could be tailored to your needs, and designed to extend and update your knowledge in areas of your choice.

The NZAE is looking at the possibility of coordinating one-off or series of courses for groups of its members, in conjunction with education providers. Participation would not be restricted to members, although discounted fees would apply for members. The costs would depend on numbers enrolled and topic lengths, but should be able to be kept realistic through NZAE coordination.

Before we start doing too much work with possible providers, we need to know:

- whether you would be interested in courses of this nature
- what topics you would like covered
- any thoughts you have on location (correspondent or otherwise?) timing, and length of courses.

please contact:

John Yeabsley, NZIER, PO Box 3479, Wellington. ph: (04)472 1880

research in progress

This is the second in our series of profiles on research projects being undertaken by economists funded by the prestigious Marsden Fund administered by the Royal Society of New Zealand. This second profile is of a project being undertaken by **Paul Dalziel** at Lincoln University.

Credit-Money and Inflation

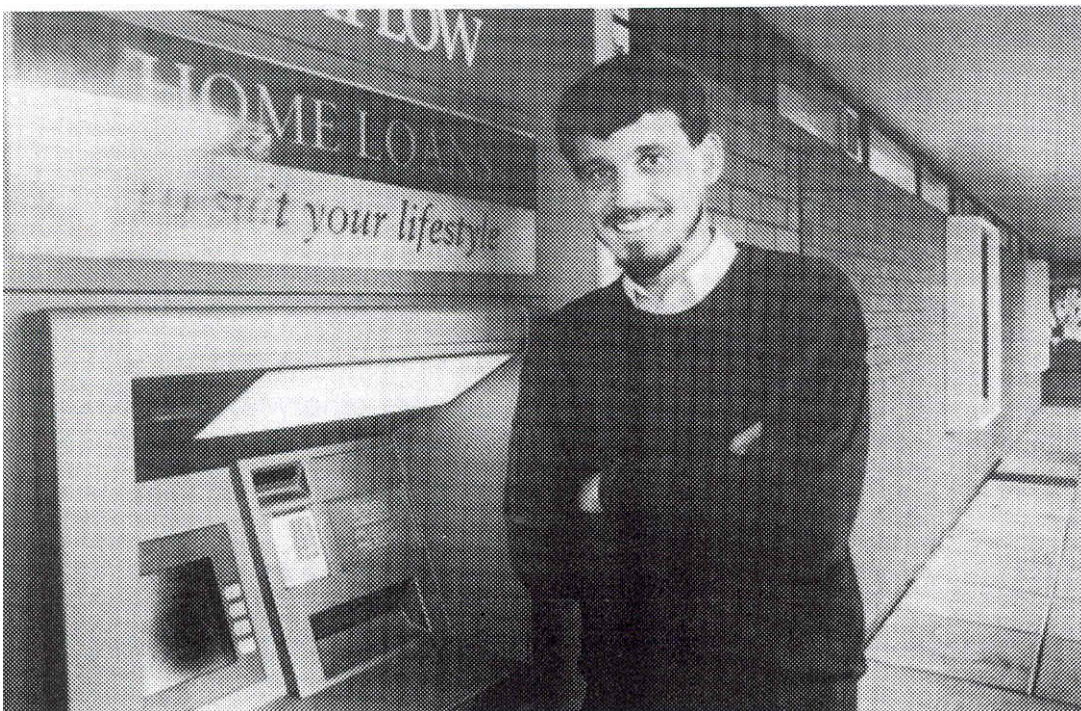
After years of high and variable inflation, the 1989 reform of the Reserve Bank Act has successfully brought inflation in New Zealand under control. Inflationary pressures, however, have occasionally required strong monetary policy responses from the Reserve Bank, which have produced sharp fluctuations in the exchange rate. Paul Dalziel's Marsden Fund project explores one possible source of such inflationary pressures; namely, the way in which a banking system can create credit-money that is potentially as inflationary as a government-induced monetary expansion.

'In 1994,' explains Dalziel, 'I spent eight months at Cambridge University in the U.K. at the invitation of Dr Geoff Harcourt. During that time, I studied the British Keynesian literature, and constructed a Wicksellian-Keynesian model of credit-money and inflation that seemed to provide some insight into the issue. I presented a paper on my work at the Royal Economic Society's Annual Meetings in Swansea in 1996. Later comments suggested that the model would benefit from considering the United States literature on inside money, which is what this project is all about.'

The Marsden Fund grant has allowed Paul Dalziel to buy himself out of half his teaching for 1998, and he has spent the first semester reading more than 500 articles and books on monetary economics published over the last forty years. Dalziel says that there is an enormous breadth in that literature, ranging from views that inside money makes no difference as long as the central bank controls the monetary base to proposals that banks should be permitted to create their own institutions for maintaining price stability (such as direct or indirect convertibility) without any government involvement.

'There are a number of links between this literature and my earlier work,' says Dalziel, 'but perhaps the theory that is closest to mine is the suggestion by Thomas J. Sargent and Neil Wallace that the value of money is determined by the real value of the assets backing it. This has obvious relevance for credit-money created by financial intermediaries, but has been reasonably controversial in the United States.'

The project has three objectives to achieve over the rest of the year: to produce a survey article on the American literature; to revise Dalziel's original model in the light of that literature; and to complete a book-length manuscript on credit-money and inflation.



Paul Dalziel contemplates adjusting his portfolio of inside and outside money.

*Photo:
David
Hollander.*

Rawinia Lewis

Winner of the New Zealand Association of Economists Scholarship for Maori Students, 1998.

NZAE congratulates Rawinia Lewis, who was awarded the 1998 NZAE scholarship for Maori students. The objective of this scholarship is to enable a Maori student, who has shown ability in economics, to pursue further study of economics in New Zealand. Rawinia has an outstanding record of academic achievement in the fields of economics and finance. She is currently in her third year of study at Massey University, completing a Bachelor of Applied Economics, majoring in Finance, and intends to go on to postgraduate study at Massey next year.

Rawinia's iwi is Ngati Raukawa (Otaki) and her hapu (sub-tribe) is Ngati-Tukorehe (Ohau). Although her whanau are mostly from the Levin area, she grew up in Waipukurau, Central Hawkes Bay and attended Central Hawkes Bay College.

"The main reason I enjoy studying economics is because of its application to just about everything that happens in the world. I am interested in the research behind economics, and how the results of these theories and research has fared when applied to the real world through policies."



The NZAE Scholarship for Maori students is administered through the New Zealand Vice-Chancellors Committee. Applications are welcome from students who are continuing their study of economics, are permanent residents of New Zealand and are of Maori descent. The deadline for applications for the 1999 scholarship is October 1st, 1998. Application forms are available from the Scholarships officer at any University, or from the Scholarships Officer of the NZ Vice Chancellors Committee (PO Box 11-915, Wellington; e-mail: schols@nzvcc.ac.nz).

publishing

news from the NZEP editor's desk

The Editor is keen to receive submissions relating to

- **the Auckland Electricity Crisis**

and

- **the Asian Economic Crisis**

for the policy perspectives section of NZEP. Submissions will need to be in by **September 15** to have a chance of publication in the December issue. Intending contributors should check the 'notes to authors' in previous issues. Papers submitted on these topics will, of course, be subject to the usual refereeing processes.

Frank Scrimgeour

Editor, NZEP

e-mail: scrim@mgmt.waikato.ac.nz

professional development

courses, conferences & contacts

NZAE 1998 conference

“Economic policy in an Open Economy”

- the interaction between fiscal and monetary policy

keynote speaker:

Professor Maxwell Fry

(University of Birmingham and The Bank of England)

other topics will include:

- macroeconomics • decisions under uncertainty • collective decision making
- economic development, technological change and growth • industrial organisation • monetary policy • social policies and health economics • trade • income distribution and social policy • income and consumption • public finance • applied economics and quantitative methods • labour • interest rates • financial economics

dates: Wednesday 2nd September - Friday 4th September

venue: Government Buildings, Lambton Quay, Wellington

for more information & registration forms, please contact :

Ian Jones, Business Manager, NZAE

ph: (04) 384 7057

closing date for registrations: Friday 14th August

web-sites

for economists

As the Librarian in an economic research organisation, a site I find particularly useful is Uncover uncweb.carl.org. This Denver based current awareness and document delivery company provides a range of services including free searching of their journal database. No payment is necessary unless you decide to order an item on-line. UnCover is a database of current article information taken from over 17,000 multidisciplinary journals. A journal title list, by subject, is available on-line so you can check if your favourites are there. The emphasis is on US journals but there are lots of titles from New Zealand and Australia. It is not full text but contains brief descriptive information, sometimes with abstracts, for over 7,000,000 articles, which have appeared since Autumn 1988. It indexes all the major economics journals.

The disadvantage is that there's not much earlier than 1988, so you will not pick up early classics. However there are often references to these in later work. Searching is easy but primitive. The search types are "keyword", "name or author" or "journal title browse" and the search fields are the titles and abstracts. The articles have not been classified so there is no subject access, but often there will be key terms in the title. (Authors of journal articles might note that as more and more searching is done this way it is important to have key terms in titles you publish.)

More often than not the references retrieved will be available from your Library, but if not, the items can be ordered on-line and will be faxed within 24 hours - often much less. This part of the service requires registration and payment, either by credit card or by setting up an account. Another service offered is UnCover Reveal which is an automated alerting service that, at a small cost, delivers the table of contents of your favourite periodicals directly to your e-mail box. UnCover is a regular part of my search strategy when a new topic, or even an old one, arises.

Although the Internet is not usually the first port of call for searching it is increasingly becoming an essential part of most search strategies and can sometimes provide the best results. Recently one of our economists needed the distances between Wellington and 30 capital cities around the world. After spending some time following the expected channels such as atlases, flight timetables etc, I found a web page <http://www.indo.com/distance> which used the latitude and longitude of any two cities and calculated the distance between them. This was much more accurate than any other source.

Recently I started to subscribe to an on-line publication of the Internet Scout Project, Computer Sciences Department, University of Wisconsin. This group selects and reviews Internet resources and

web-sites for economists: continued next page....

web-sites for economists (continued)

produces weekly reports in three subject areas - Business and Economics, Science and Engineering and Social Sciences. The Scout Report for Business and Economics has been available since September 1997. It is divided into 6 sections, Research, Current Awareness, Learning Resources, New Data, General Interest and In the News. Each section has a 50-100 word review and a direct link to sites of interest to "the target audience: faculty, students, staff and librarians in business and economics."

There is a strong US bias, especially in the New Data area, where there are lots of US statistical sites. Many international organisations, such as IMF, World Bank and OECD are represented. It can be accessed at

www.scout.cs.wisc.edu/scout/report and already it has introduced me to several sites that I've added to my bookmarks. In the Research section I found the World Competitiveness Report and in the Learning Resources there are course outlines lecture notes and books such as David Friedman's "Price theory: an intermediate text". In the Current Awareness area, as well as reviews of on-line periodicals, books and journals there are sections listing conferences and job openings. The In the News section chooses a different topic each week and brings together sites that have dealt with that topic. Recent issues have looked at the antitrust case against Microsoft and the arms race in India and Pakistan. It's hard not to find something useful at this site.

web-site review by Frances Gamble
francesg@nzier.org.nz

jobs

Any firm or organisation with vacancies of potential interest to members of NZAE are welcome to submit these for publication in this newsletter. Contact ndevlin@commerce.otago.ac.nz

The **New Zealand Institute of Economic Research** has opportunities for experienced, high quality micro economists able to meet the joint challenges of a demanding intellectual culture and of a competitive consulting environment.

We are interested in people who can generate ideas, focus on problem-solving and communicate the results of their research to non-economists.

If interested, please call Alex Sundakov on (04) 472-1880.

OBITUARY

NOEL T. RUTH 1921 - 1997

BY ROBERT BOWIE

Noel Ruth died of cancer on 9 August 1997 at his home in Martinborough. He was an original member of the New Zealand Association of Economists and served as a honorary auditor from 1984 - 1988.

Noel was born and grew up in Dunedin and, after a period with the Department of Labour, followed by army service in the Pacific during the war, attended the University of Otago - graduating initially with a Bachelor of Commerce. His interests were in accountancy as well as economics and he was later to become ACA and ACIS. As a student of Professor Geoffrey Billing (1898-1959), he completed a Master of Arts with first class honours in economics. His thesis was entitled 'The Labour Force and Employment in New Zealand from 1926 - 1945' (Ruth, 1949), and he was awarded the Robert Stout Scholarship (Ruth, 1952).

The labour market was to remain an interest and Noel is credited with having made the earliest attempt to explain New Zealand's post-depression unemployment performance (Chapple, 1996). A notable paper argued that full employment was achieved through government manipulation of the supply and demand for labour: in essence, he contended that full employment was the outcome of three pieces of legislation: the Social Security Act, the Education Act and the 40 hour week - enacted by the first Labour Government (Ruth, 1950).

Noel lectured in economics at Canberra University College during 1952-1954, returning to New Zealand to take up a position with the Public Trust Office. In 1963 he was appointed to Wellington polytechnic where he was to remain as the senior economist until his retirement in 1986. While at Wellington Polytechnic, he also contributed to teaching at Victoria University of Wellington. He is remembered as a lively, provocative teacher and one who was adamant that economics students needed strong intellectual challenging from their very first lecture. Well able to provide them with stimulation, he was also committed to providing opportunities for budding economists to embark on teaching careers, lecturing to evening classes at Wellington Polytechnic. Numerous young economists - including from the NZIER and Reserve Bank - engaged in their first teaching experience under Noel's guiding eye.

Always a market proponent, by the early 1980s Noel had become very concerned with the path which the New Zealand economy was taking. He contributed a series of papers to *The Accountants Journal* where graphic explanations demonstrate his frustration - tempered with wit - at that time. He wrote, "Like an alcoholic with withdrawal symptoms who goes back to the booze, the New Zealand economy has shrunk from the task of making the necessary sacrifice either to bring down inflation or to make restructuring really effective..." He despaired that the nation had "balked at the ordeal of the self-sacrifice needed to regain free competition" and argued cogently for a free exchange rate and "freedom of production" (Ruth, 1981).

In his retirement, Noel moved to Martinborough where he gave a great deal of service, with characteristic energy, to the community. Though a pakeha, he was made a kaumatua of the local marae for the financial services he gave to Maori. Never one for formality or bureaucratic convention, his friendly, eccentric nature endeared him to many and he will be greatly missed by his family, his many friends and colleagues.

Ruth, N.T. (1949) 'The labour force and employment in New Zealand 1926-1945', MA thesis, University of Otago.

Ruth, N.T. (1952), 'The economic background of strikes and lockouts: an introductory analysis embodying work done for the Robert Stout Scholarship', thesis, University of Otago.

Chapple, S. (1996), 'Full employment: whence it came and where it went', Research Monograph 66, 43-46, NZIER.

Ruth, N.T. (1950) 'Full employment in New Zealand' *Economic Record*, 26, 98-103.

Ruth, N.T. (1981) 'Restructuring or just shuffling the pack?', *The Accountants Journal*, 60, 190-194.

[Note: there is no complete record of Noel Ruth's written work. Further items will be gratefully received by Robert Bowie, e-mail: rob.bowie@moc.govt.nz]

...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.

membership fees: full member: \$90
graduate student: \$45

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

Ian Jones
Business Manager, NZAE
PO Box 568
Wellington
phone: (04) 802 5310
fax: (04) 3847 853

NZAE Council news

The AGM of the New Zealand Association of Economists will be held during the forthcoming conference in Wellington. We'd like to encourage our members to come. All the NZAE Council positions are filled & duties assigned, so there's no danger of getting landed with something to do!

The NZAE Council members are: **John Yeabsley** (President) [johny@nzier.org.nz], **Dorian Owen** (Deputy President) [dowen@commerce.otago.ac.nz], **Alan Bollard** [alan.bollard@treasury.govt.nz], **Rolf Cremer** [r.d.cremer@massey.ac.nz] **Weshah Razzak** [razzakw@rbnz.govt.nz] **Tim Hazledine** [t.hazledine@auckland.ac.nz] **Caroline Saunders** [saunders@lincoln.ac.nz] **Nancy Devlin** [ndevlin@commerce.otago.ac.nz] **Dawn Gorman** (Treasurer) and **Ian Jones** (Secretary/Business Manager).

W*elcome!* to the following people who joined NZAE early '98...

Ron Sheppard (Lecturer in Economics, Christchurch Polytechnic), **Jenny Darroch** (Lecturer in Marketing, Massey University) & **Mark Thomas** (Economist, Price Waterhouse).