

Centre for Economic Policy Research
Australian National University

Economic Research Centre
University of Western Australia

Report of the 1994
PhD Conference in
Economics and Business



7-9 December

ANU Canberra

Centre for Economic Policy Research
Australian National University

and

Economic Research Centre
University of Western Australia

Report of the 1994

PhD Conference in

Economics and Business

7-9 December, ANU Canberra

Conference Convener: Adrian Pagan ANU
Conference Coordinator: Rae Carson ANU

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The Report

The 1994 PhD Conference in Economics and Business, organised under the auspices of the Centre for Economic Policy Research, Australian National University and the Economic Research Centre of the University of Western Australia, was held in Canberra on 7-9 December. Twenty- four PhD students presented papers on a wide range of topics and these papers were discussed by invited experts.

The aim of the Conference is three fold. First, it gives some outside comment upon work done on dissertations before the submission of that work. Sometimes it enables a student to meet someone in their area who is particularly well qualified to comment upon the work. If the student requests a specific person we will try to accede to that request. Second, it enables PhD students to meet other students and faculty in their area of expertise. In many large conferences one rarely finds that students have as much access to senior people as this conference provides. Finally, it acts as an early job market in which students can demonstrate their abilities and attract attention to their prospects.

These conferences have always been distinguished by the fact that the discussants put quite a lot of work into their remarks and are much more detailed than is common in more general conferences. This year was no exception. Seeing how a discussant reacts to a piece of research is always a valuable experience for anyone doing research but I think it is most valuable when one is writing a doctoral dissertation, as one is frequently very nervous and concerned that the work is 'trivial'. Generally, the discussants are very sensitive to this problem and aim to balance vigorous criticism with encouragement.

The conferences have always been successful in ensuring that there is a good interchange between the junior and senior members of the profession, and I think the small dinners have been instrumental in creating the right environment for this. Inclement weather, which has marked both the Canberra conferences, has certainly ensured that no one goes off 'sight seeing'. We decided to switch the conference from November to December so as to maximise our probability of good weather. But the old dates witnessed glorious weather and the new ones the only rain for about three months.

As well as the presentation of PhD research the Conference featured an address by Warwick McKibbin of the Australian National University. Warwick spoke on the use of models for policy analysis. In particular, he outlined his G^3 model and presented some results from simulations of a carbon tax. Models such as these possess a strong theoretical base with the parameters being calibrated from actual data, and they therefore form a natural bridge between the theoretical and quantitative dimensions of the conference.

Everyone agreed that the major reason the conference functioned as smoothly as it did was due to superb organisational skills of Rae Carson and Robyn Savory. Special thanks go to Rae for all her efforts and for undertaking the compilation of this Report.

The conference would not have been possible without the generous financial support of a number of sponsors. On behalf of the organisers I would like to acknowledge the assistance of the following:

Australian Bureau of Statistics
Bureau of Transport and Communications Economics
Economic Planning Advisory Council
Industry Commission
Macquarie Bank Limited
Reserve Bank of Australia
The Treasury
The University of Western Australia

Adrian Pagan
Convener

December 1994

The Program

Thursday, 8 December 1994

Opening Session:

Professor RG Gregory, Division of Economics and Politics,
Research School of Social Sciences, ANU

Session 1:

Chairperson: Alison Booth, Birkbeck College, UK and (visiting) ANU

- (i) Bruce Bradbury, School of Economics & Social Policy Research Centre,
University of New South Wales
Household Semi-Public Goods and Consumer Equivalence Scales: Modelling the Black Box
- (ii) Jane Murray, Department of Econometrics, University of Sydney
Modelling the Labour Supply of Australian Sole Parents: a Sensitivity Analysis

Discussants: (i) Patricia Apps, Faculty of Law, University of Sydney
(ii) Michael Kidd, Department of Economics, University of Tasmania
and (visiting) ANU

Session 2:

Chairperson: Adrian Pagan, Economics Program, RSSS, ANU

- (i) Sebastian Diessel, Department of Economics, University of Newcastle
Building Bridges - Ludwig Lachmann 's 'Radical' Extension of Subjectivism
- (ii) Suk-Joong Kim, Department of Economics, University of Sydney
Inflation News in Australia: Its Effects on Exchange Rates and Interest Rates

Discussants: (i) Jeremy Shearmur, Department of Political Science, The Faculties,
Australian National University
(ii) David Gruen, Reserve Bank of Australia

Session 3:

Chairperson: John Quiggin, Centre for Economic Policy Research, ANU

- (i) Luke Wilson, School of Agriculture, La Trobe University
Property Rights: Fundamental Theory and the Non-Robust Guide
- (ii) Gillis Maclean, Department of Economics, University of Auckland
Three Methodological Programs: Fritz Machlup's 'The Problem of Verification in Economics' Revisited

- Discussants: (i) Joshua Gans, School of Economics, University of New South Wales
(ii) Jonathan Pincus, Department of Economics, University of Adelaide

Session 4:

- Chairperson: George Fane, Economics Department, Research School of Pacific and Asian Studies, ANU
- (i) Satish Chand, Department of Economics, Faculty of Economics and Commerce, ANU
Trade and Endogenous Growth with Ricardo-Viner Production Technology
- (ii) Siang Ng, Department of Economics, Monash University
Specialization and the Gain from Trade: An Internationalization of the Yang-Ng Model

- Discussants: (i) Ross Melbourne, School of Economics, University of New South Wales
(ii) Jeff Borland, Department of Economics, University of Melbourne

Session 5:

- Chairperson: Steve Dowrick, Centre for Economic Policy Research, ANU
- (i) Sarah Lumley, Faculty of Social Sciences, La Trobe University
Experimental Findings on the Interest and Discount Rates of Philippines Upland Farmers
- (ii) Wirat Krasachat, Department of Agricultural and Resource Economics, University of New England
A Dynamic Model of Labour Demand in Thai Agricultural Production

- Discussants: (i) Ron Duncan, National Centre for Development Studies, ANU
(ii) Kaliappa Kalirajan, Department of Economics, Research School of Pacific & Asian Studies, ANU

Session 6:

- Chairperson: Russell Cooper, University of Western Sydney, Nepean and (visiting) ANU
- (i) Chris Lock, Department of Economics, University of Tasmania
A General Equilibrium Approach to Examining Forestry Issues in the Tasmanian Economy
- (ii) Jae Hyung Lee, Department of Economics, University of Wollongong

The Multiple Inter-Relationships among Health Status, Education, Income and Lifestyle Factor: Evidence from Australia

Discussants: (i) John Kennedy, Department of Economics, La Trobe University
(ii) Phil Lewis, Department of Economics, Murdoch University

Special Lecture:

Professor Warwick McKibbin
Department of Economics
Research School of Pacific and Asian Studies, ANU

Chairperson: Ken Clements, Economic Research Centre, UWA

Friday, 9 December 1994

Session 7:

Chairperson: Barry Oliver, Department of Commerce, Faculty of Economics & Commerce, ANU

- (i) David Robinson, Faculty of Commerce, University of Southern Qld
Market Volatility Prediction: Non-Linearity in Implied Volatility
- (ii) Hazel Bateman, School of Economics, University of New South Wales
Risk Management Issues for Mandatory Private Retirement Provision: Roles for Options

Discussants: (i) Ron Bewley, School of Economics, University of New South Wales
(ii) Bob Officer, Melbourne Business School, University of Melbourne

Session 8:

Chairperson: Colin Hargreaves, National Centre for Development Studies, ANU

- (i) Haryo Aswicahyono, Department of Economics, Research School of Pacific & Asian Studies, Australian National University
Total Factor Productivity in Indonesian Manufacturing
- (ii) U-Primo Rodriguez, National Centre for Development Studies, Australian National University
The Construction of a Macroeconomic Model of the Philippines

Discussants: (i) Russell Cooper, Department of Economics, University of Western Sydney, Nepean and (visiting) ANU
(ii) Peter Dixon, Centre of Policy Studies, Monash University

Session 9:

Chairperson: Simon Grant, Economics Program, Research School of Social Sciences, ANU

- (i) Rabee Tourky, Department of Economics, University of Queensland
Remarks on Extended Price Equilibria: Without Ordered or Monotone Preferences
- (ii) Peter Tisato, Department of Economics, University of Adelaide
The Impact of Service Unreliability on Public Transport Subsidy Using a Two-Mode User Behaviour Model

- Discussants: (i) Peter Bardsley, Department of Economics, La Trobe University
(ii) Cohn Cannon, Department of Economics, Monash University

Session 10:

Chairperson: John Robertson, Statistics Department, Faculty of Economics & Commerce, ANU

- (i) Sarath Divisekera, School of Economics, La Trobe University
A Model of Demand for International Tourism: A Multi-Country Demand System
- (ii) Jae Kim, Department of Econometrics, University of Sydney
Bootstrapping Prediction Intervals in Vector Autoregressions

- Discussants: (i) Ken Clements, Economic Research Centre, University of Western Australia
(ii) Trevor Breusch, Department of Econometrics, Faculty of Economics and Commerce, ANU

Session 11:

Chairperson: Stephen King, Economics Program, Research School of Social Sciences, ANU

- (i) Adrian Bull, Faculty of Commerce & Administration, Griffith University
The Effects of Location and Other Characteristics on the Price of Products which are Place Sensitive in Demand
- (ii) Bart Dowling, Department of Economics, University of Melbourne
Is the Long Wave Getting Shorter?

- Discussants: (i) Charles Hyde, Department of Economics, University of Melbourne
(ii) Steve Dowrick, Economics Program, RSSS, ANU

Session 12:

Chairperson: Neil Vousden, Department of Economics, Faculty of Economics and Commerce, ANU

- (i) Christopher Locke, Department of Agricultural Economics, University of Sydney
The Implications of the Debt Overhang for International Agricultural Trade
- (ii) Nuray Sarpturk, School of Economics, Deakin University
Innovation and the Product Cycle in North-South Trade

- Discussants: (i) Geoff Kingston, School of Economics, University of New South Wales
(ii) Richard Pomfret, Department of Economics, University of Adelaide

The Abstracts

Total Factor Productivity In Indonesian Manufacturing

H. Haryo Aswicahyono

Research School of Pacific & Asian Studies, ANU

This paper evaluates the TFP growth of 28 manufacturing industries in Indonesia during 1976-1991. The average TFP growth for the overall manufacturing sector was 1.8 percent (15 percent of output growth) per annum during the period. TFP growth was the third major source of growth after the growth of material and capital inputs. There was also an improvement in TFP performance between the oil boom period and the post oil boom period. Structural change had been found to be an unimportant element of TFP growth. Several hypotheses are suggested as the determinant of TFP growth.

Risk Management Issues For Mandatory Private Retirement Provision: Roles For Options

Hazel Bateman

University of New South Wales

Under Australia's recently introduced superannuation guarantee most Australian workers will receive retirement benefits of the defined contribution variety. In contrast to the traditional means of retirement income provision, investment risk is borne solely by fund members. This, in conjunction with particular design features of the superannuation guarantee, fosters a short-term approach to superannuation asset allocations and risk management practices.

This paper uses stochastic simulations to investigate the risk management issues raised by the Australian superannuation guarantee. Particular emphasis is given to the role of options strategies (such as the purchase of put options on the fund's underlying portfolio) as a means of both risk management and addressing the short term focus of superannuation industry participants. These strategies are discussed in the light of the prescription of economic theory that your exposure to risky assets should decrease with your age.

Household Semi-Public Goods And Consumer Equivalence Scales: Modelling The Black Box

Bruce Bradbury

University of New South Wales

Models of household consumption used to estimate the relative needs of people living in different family types need to take account of economies of household size, price- like substitution effects and the allocation of consumption among the individuals of the household. No existing estimation method tackles all three of these issues

simultaneously. Partly because of this, consumption-based estimates of consumer equivalence scales have had little direct application in social and economic policies.

This paper uses a household production model introduced by Lau to develop a consumption model which is both general and amenable to the incorporation (and testing) of a range of additional identifying information. The latter can include ‘expert judgements’ of the technology of household production (the scale economies) of different goods. A simplified version of this model (incorporating both the Rothbarth and Barten models) is used to estimate equivalence scales and intra-household allocations for aged couples and singles.

The Effects Of Location And Other Characteristics On The Price Of Products Which Are Place-Sensitive In Demand

Adrian O. Bull

Griffith University

Location analysis is mostly applied to find optimum production points or distribution points for products. For some products, however, location is an intrinsic characteristic, such as with housing or tourist accommodation, and is usually the most significant fixed characteristic.

This research investigates the role, within a differentiated oligopoly model of location as a fixed differentiating characteristic or ‘primitive good’ within a composite good. Hedonic analysis is used to identify the implicit prices of location and other characteristics of accommodation in international-standard hotels within a single destination area (market). Are hoteliers then setting market-clearing location-prices? If not, there will be a need for them to re-examine pricing policies.

Trade And Endogenous Growth With Ricardo-Viner Production Technology

Satish Chand

Faculty of Economics & Commerce, ANU

This paper derives three main results. First, learning by doing is sufficient to generate endogenous growth under Ricardo-Viner production technology. One implication of this result is that policy has a role given agents do not internalise the dynamic gains from learning. Second, trade is advantageous for a small country and in the case of domestic goods having low elasticity of substitution in final consumption, high human capital content and/or a high learning rate. Third, border distortions in the form of import tariffs can impact on pattern of specialisation and long run growth but only for large economies. Numerical simulations are used to illustrate the above results.

Building Bridges - Ludwig Lachmann's 'Radical' Extension Of Subjectivism

Sebastian A. Diessel

University of Newcastle

In 'building bridges' to different types of subjectivism for the purpose of extending the radical subjectivist viewpoint into the traditional Austrian economic framework, Lachmann traces the evolution of subjectivism showing how the original Mengerian feature of Austrian subjectivism has been extended now from one of preferences, through one of expectations to that of the active mind. The evolution in the concept of subjectivism is seen by Lachmann as vital for the continuing development of Austrian market process theory. Yet, where Mises and Hayek failed to lead the subjectivist program forward, Shackle and Lachmann rose to the challenge. This paper argues that by subsuming the Shacklean insights into uncertainty, imagination and the creativity of choice into a dynamic interpretation of market processes, Lachmann arrived at a different understanding of market process phenomena. The 'radical' extension of subjectivism, therefore, emphasises not only the diversity of preferences but also the divergence and volatility of expectations i.e., it conceives of the combined influence of equilibrating and disequilibrating forces shaping market processes. In so doing it challenges the presumption of equilibration in spontaneous market orders. Not surprisingly, most Austrians are reluctant to cross Lachmann's 'bridge' to the uncertain shores of Shackle's 'Kaleidic society', for fear of compromising their own model of market reality. Hence, Lachmann's and Shackle's relationship, i.e. the parallelism of their thought, is of specific relevance to the issue of subjectivism in the revival of Austrian economics. In contrast to the traditional Austrian focus, radical subjectivism allows Lachmann to come closest to elucidating what might be considered the empirical reality of spontaneous market-ordering processes.

A Model Of Demand For International Tourism: A Multi-Country Demand System

Sarath Divisekera

La Trobe University

A model of demand for international tourism is developed in a consistent utility maximising framework. This model is applied to the demand for Australian tourism from its major markets—the USA, UK, Japan and New Zealand. Australia faces both expenditure and price-elastic demands internationally. Japanese demands are most expenditure and price elastic, followed by US and UK demands. The least elastic are New Zealand demands. Cross price elasticities reveal the US as a strong substitute for Australian tourism and New Zealand as a complementary destination.

Is The Long Wave Getting Shorter?

Bart Dowling

University of Melbourne

This paper presents an endogenous growth, endogenous cycle model explaining how entrepreneurial choice between invention and innovation contributes to the existence of long-run cycles. A major contribution of the model is that with time, the periodicity of long-run cycles will, on average, become progressively shorter. The intuition behind this shortening of the long-run cycle is simple; if an endogenous growth approach is adopted, and knowledge accumulation results in the increasing productivity of resources in the R&D sector, then a faster pace of innovation and invention is an implied result of the higher economic growth outcome. As the pace of invention/innovation rises, the exploitation of any given technology also becomes more rapid, causing a shortening of the long-run innovative wave.

Bootstrapping Prediction Intervals In Vector Autoregressions

Jae H. Kim

University of Sydney

This paper considers the use of the bootstrap as a means of constructing prediction intervals for vector autoregressive (VAR) models. A comparison of the bootstrap and conventional asymptotic prediction intervals is made. Robustness to non-normality is also investigated. Prediction intervals for VAR models are ellipsoids, but their construction is quite demanding and they are rarely used. In practice, they are supplanted by a cubic approximation to the ellipsoid. But these approximations can seriously over-estimate forecast uncertainty on occasions and this paper also gives details of an improved prediction cube obtained by transforming the original forecasts. The case of unknown order is also dealt with.

Inflation News In Australia: Its Effects On Exchange Rates And Interest Rates

Suk-Joong Kim

University of Sydney

This paper investigates the effects of the Australian quarterly inflation news on \$A exchange rates and interest rates for the period June Quarter 1984/85 to December Quarter 1992/93. The results indicate that the Australian dollar depreciated and interest rates rose as a result of an announcement of a higher than expected Consumer Price Index inflation before April 1988, and the dollar appreciated and interest rates rose thereafter. This difference in market response to the news is due to the different market perceptions regarding the role of monetary policy by the Reserve Bank of Australia (RBA). Prior to April 1988, an unexpected inflation caused markets to expect further future inflation and caused a rise in the risk premium on domestic assets. Post April 1988, an unexpected inflation was regarded as a signal for an impending tight monetary response by the RBA. The evidence is consistent with the belief that market participants had the Portfolio

Balance Model of exchange rate determination in mind when they responded to the inflation news.

A Dynamic Model Of Labour Demand In Thai Agricultural Production

Wirat Krasachat

University of New England

The main purpose of this study is to analyse the dynamic nature of farm production in Thailand and, in particular, the demand for agricultural labour taking account of the quasi-fixed nature of operator and unpaid family labour. A dynamic model of labour demand in agricultural production is formulated in which all inputs are not forced to adjust fully to desired levels in the short run. In many past studies, a labour demand equation system incorporating dynamic processes has been derived from ad hoc lag structures into otherwise static models, with little theoretical justification. In this study, a dynamic dual NL3SLS model, a theoretically more consistent approach, is used to estimate a labour demand system associated with output supply and other input demands derived from an inter temporal modified generalised Leontief. The system is applied to a panel of 80 observations, comprising annual data from 1971 to 1990 for four regions in Thailand. The results provide valuable information on the nature of demand for hired labour, speed and independence of adjustment of quasi-fixed labour inputs, short-run and long-run price elasticity estimates of output and inputs and also the effects of technical change in Thai agriculture.

The Multiple Inter-Relationships Among Health Status, Education, Income And Lifestyle Factor: Evidence From Australia

Jae Hyung Lee

University of Wollongong

Health can be viewed as the outcome of a production process involving inputs such as education, income and lifestyle factors, as well as medical care. In this paper we formulate and estimate a full simultaneous model which recognises the inter relationships among health, education, income and lifestyle variables. The model is estimated using cross-sectional data from Australia's 61 statistical regions in 1989-90. The results indicate significant multiple causal relationships among health, education and income. Increase in each of these variables causes increases in the other two. This implies, for example, that health status may be improved directly by increased expenditure on medical care or indirectly through increased expenditure on education. The regression results suggest that the instrument choice should be based upon stability analyses among the target variables. Diagnostic-double checkings are adopted to evaluate all the models.

A General Equilibrium Approach To Examining Forestry Issues In The Tasmanian Economy

Christopher J. Lock
University of Tasmania

A general equilibrium model of the Tasmanian economy, TASFOR, has been constructed to examine the industry-level effects and state-wide effects of state forestry policies. The theoretical structure of TASFOR is based on the ORANI model (Dixon et al. 1982) and ORANI-NT (Parmenter and Meagher 1990). Data are mostly obtained from Tasmanian Input-Output tables. The paper reports the results of an illustrative application: an increase in the price of output of the forestry sector. It illustrates the extent to which previously reported results from the national ORANI models are not applicable for Tasmania.

The Implications Of The Debt Overhang For International Agricultural Trade

Christopher G. Locke
University of Sydney

Previous studies have approached the issues of how debt ‘overhang’ can influence economic performance in developing nations and how the subsequent downturn can affect creditors through trade and financial linkages, independently. A model synthesising these approaches and encompassing supply and demand behaviour in indebted countries is proposed. The results suggest that the price elasticities estimated in the absence of the debt overhang may have been biased. Additionally, a partial equilibrium trade model is employed to explore the implications for international agricultural trade. It is argued that reducing the debt level in highly indebted countries could increase the value of world trade in agricultural commodities. The study is expected to help settle the thorny issue of debt forgiveness.

Experimental Findings On The Interest And Discount Rates Of Philippines Upland Farmers

Sarah Lumley
La Trobe University

Over the past few years there has been a growing interest in the sustainability of natural resource use throughout the world. In 1991 a typhoon triggered floods and landslides in Leyte, Philippines, which killed 8,000 people. This paper focuses on land degradation in Leyte, and, in particular, on the reasons for the non-adoption of known soil conservation technologies by upland farmers on Leyte. Several factors which may influence decision making by farmers are considered, with special reference to the role of the rate of interest paid on debt, and its relationship to farmers’ individual discount rates.

Three Methodological Programs: Fritz Machiup's 'the Problem Of Verification In Economics' Revisited

Gillis Maclean, University of Auckland

Machlup landmark paper of 1955 contrasted A Priorism and Ultra-empiricism, now staples in the history of methodology. He defended neoclassical theory against Ultra-empiricism while appealing to A Priorist orthodoxy to support his own logical empiricist program, the Machlup-Friedman 'middle of the road'.

Because of his own agenda and rhetorical strategies, these constructions cannot be taken at face value. Methodological programs are multi-dimensional; Machiup compared these three programs in one dimension only. I characterise these programs in several methodological dimensions. On many dimensions the Machiup-Friedman program is closely related to the Ultra-empiricism Machiup rejects and antithetical to the Apriorism he defends. Despite the superficial similarities his defence of neoclassical theory is actually a radical re-interpretation of the Keynes-Robbins program.

Modelling The Labour Supply Of Australian Sole Parents: A Sensitivity Analysis

Jane Murray, University of Sydney

Two major considerations in the empirical modelling of labour supply are the representation of preferences and the treatment of unobserved wages. The sensitivity of the estimated parameters and elasticities to the framework adopted in regard to these aspects is an issue which has generally received little attention by researchers.

This paper presents the results of several models of the labour supply behaviour of Australian sole parents. Two utility functions embodying different behavioural assumptions are considered, namely the CES and quadratic. Two approaches are also undertaken in regard to the handling of wages for non workers: the Heckman procedure and a simultaneous labour supply wages framework. While the former has been commonly used in the literature it does not yield consistent estimates of the labour supply model in the presence of non linear budget constraints. The solution, which is incorporated in the simultaneous framework, is to integrate the probability of choosing the observed hours of work over all values of the wage.

The analysis is based on unit record data from the 1986 Income Distribution Survey.

***Specialisation And The Gain From Trade:
An Internationalisation Of The Yang-Ng Model***

Siang Ng

Monash University

In a Contributions to Economic Analysis series monograph, Yang and Ng (Specialisation and Economic Organisation, 1993) presents a novel approach of economic analysis to tackle the classical problems of economies of specialisation, division of labour, and the structured of economic organisation. Tackling economies of specialisation requires the

comparison of different corner solutions. The method developed by Yang and Ng to analyse the trade-off between economies of specialisation and transaction costs may explain the emergence of the firm, regional and international trade, incr in productivities, trade dependence, production concentration, etc.. In this paper, I concentrate on their inference on the emergence and desirability of international trade to capture more economies of specialisation as transaction efficiency improves by internationalising the Yang-Ng model explicitly.

Non-Linear Modelling Of Volatility And Risk Premia Applied To Pricing Options On Futures

David Robinson

University of Southern Queensland

Keynes (1930) and Hicks (1946) argued that the difference between the theoretical futures price and the expected future spot is a risk premium used to encourage speculators into future markets. Yoo and Maddala (1991) find support for the hypothesis that the risk premium paid by hedgers is positively related to the volatility of the underlying futures price.

The futures options pricing literature can be categorised into three areas of study - studies of market efficiency which assess the arbitrage boundary conditions of options prices, studies which seek to develop alternative model specifications and those studies which attempt to model volatility.

In modelling volatility, attempts are usually made to forecast the expected variance of the futures prices between the date the futures options contract is initiated until the expiration of the futures options contract. This is generally done via either fundamental modelling of volatility or alternatively using time series techniques. In time series models, the variance is usually proxied as either a historical volatility based on past innovations in the futures price or an implied volatility backed out of some pre determined option pricing model. These approaches both assume that the correctly specified option pricing model has been applied and that the calculated volatility will give a deterministic outcome to the price. Several issues complicate this view—is the futures pricing model correctly specified, the data generation properties of the underlying futures price and its volatility in levels are generally unknown. In recent studies, futures prices and volatility have generally been found to be time varying, non- stationary and non-normal. A very significant limitation of these approaches is that the one step ahead forecast of volatility applied in determining whether options are under or over valued generally assumes that market efficient exists and that the data generation process follows an AR(1) process.

This study will seek to empirically link two streams of literature—the risk premium and volatility modelling literature as it applies to the pricing of futures options. In doing so, the thesis will empirically calculate the risk premium and volatility applicable to futures and futures options. Once the behaviour of this relationship is empirically established, the data generation properties of both will be examined. Both linear and non-linear time series techniques will be applied to calculate one step ahead

forecasts of each. The forecast volatility and risk premium are then applied to an appropriate option pricing model to assess the applicability of the relationship.

The Construction Of A Macroeconomic Model Of The Philippines

U-Primo E. Rodriguez

National Centre for Development Studies, ANU

This paper provides a brief overview of the theoretical framework and preliminary results for a macroeconomic model of the Philippine economy. The model has a Keynesian short run where output is demand determined, prices are sticky, and capital is inflexible. In the long run, the model is both monetarist and neo-classical. It is monetarist in the sense that money supply is growing at a fixed and exogenous rate. Neoclassical elements are reflected in the optimising behaviour of economic agents. In estimating the stochastic equations of the model, careful attention is given to the issues of integration and cointegration and, where suitable, error correction models are used.

Innovation And The Product Cycle In North-South Trade

Nuray Sarpturk

Deakin University

This paper analyses the short run and long run effects of the North-South trade by using the product cycle theory. In this model, the South is considered as a high growth region. It has been shown that in the long run factor price equalisation occurs, when the South begins to innovate. The innovation rate of the North is linked to the northern labour force. This leads to a magnification effect in the fall of the North's terms of trade. That capital flows only to a growing region has been highlighted, by making capital movement a function of the number of goods produced in the South.

The Impact Of Service Unreliability On Public Transport Subsidy Using A Two-Mode User Behaviour Model

Peter Tisato

University of Adelaide

Conventional public transport models assume that users do not use timetables, thus arriving at a loading point in a random fashion. This simple model is replaced with a theoretical logit model where users choose between two modes of behaviour: random vs planned (i.e. use timetables). Service unreliability, a variable in the model, is shown to be strongly related to optimal subsidy. However, this link also raises difficulties from a policy making perspective. Optimal route cross-subsidy under a break even constraint is then analysed. The conventional monotonically negative relationship between cross-subsidy between routes and their demand difference is considerably weakened, and even reversed in some cases, when the two-mode model is used.

Remarks On Extended Price Equilibria: Without Ordered Or Monotone Preferences
Rabee Tourky
University of Queensland

Economies with infinitely many commodities fail to pass the standard equilibrium existence test with linear price systems. On the other hand, Peleg-Yaari, Aliprantis-Brown-Burkinshaw, and Araujo-Monteiro show that the existence of equilibrium in economies with infinitely many commodities is obtainable, under standard assumptions, with extended price systems (functions to the extended real line). All, however, assume that preferences are complete preorderings and satisfy some strict monotonicity assumption. We show that the same conclusion holds when preferences are neither monotone nor transitive. Our commodity spaces are L_p , $1 \leq p \leq \infty$, and price systems are measurable functions. We, also, consider the space $ca(S, \Sigma)$ (finite measures on (S, Σ)) and extend the results to economies with commodity differentiation. Finally, we show that under the assumptions of Aliprantis-Brown-Burkinshaw their equilibrium extended price systems coincide with ours.

Property Rights: Fundamental Theory And The Non-Robust Guide
Luke Wilson
La Trobe University

The examination of incentives in an economic system is fundamental to understanding behaviour, to predicting behaviour and to modifying behaviour. Property rights theory is used in such examinations as it gives a fundamental basis to incentive analysis. However, the concept of property is not well understood in much analysis, leading to continual distortions of the theory. The current framework lacks sufficient definition to give robust guidance to analysts, examples from complex, multiple-use systems such as forests offer clues as to how a robust framework may be defined.

The Participants

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Satish Chand	Economics Department, Faculty of Economics and Commerce, ANU
Ken Clements	Economic Research Centre, University of Western Australia
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Sebastian Diessel	Department of Economics, University of Newcastle
Sarath Divisekera	School of Economics, La Trobe University
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Bart Dowling	Department of Economics, University of Melbourne
Steve Dowrick	Economics Program, RSSS, ANU
Ron Duncan	National Centre for Development Studies, ANU

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Bob Gregory	Economics Program, RSSS, ANU
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Geoff Kingston	School of Economics, University of New South Wales
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