

**Centre for Economic Policy Research**  
Australian National University

and

**Economic Research Centre**  
University of Western Australia

**Report of the 1996**

**PhD Conference in**

**Economics and Business**



**7-8 November**

**ANU Canberra**

**Centre for Economic Policy Research**  
Australian National University

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University of Western Australia

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**ANU Canberra**

**Conference Convener:            Stephen King, ANU**

**Conference Coordinator:        Rae Carson, ANU**

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## **The Report**

The 1996 Conference in Economics and Business was held at the Australian National University in Canberra from 6 to 8 November 1996. It was the ninth in this series of conferences which are jointly organised by the Economic Research Centre, University of Western Australia and the Centre for Economic Policy Research (CEPR) at the Australian National University (ANU).

The conference has three distinct aims. First, it provides PhD students in economics, business and related areas with an opportunity to present their work in front of a world-class group of students and academics. Each student has a discussant who is familiar with the relevant area of research but who has not had formal interaction with the student during the previous stages of their research. Discussants are drawn from both academia and relevant parts of the public sector and business communities. It is not uncommon for students presenting their work at the conference to commence ongoing dialogue with other students, academics and researchers with similar interests. These contacts may feed into an improved dissertation and longer term research work.

Secondly, the conference brings together students and faculty with a wide range of backgrounds, interests and expectations. Graduate study in Australia can be an isolating experience. Students often have limited access to academic staff and senior researchers outside their 'home' institution, and also have limited contact with other research students. The PhD conference helps to overcome this isolation.

Finally, the conference helps students and employers identify each other in a relaxed atmosphere. While the conference does not act as a formal job market, it helps students to identify and talk to senior people in a variety of institutions. In this way, the conference often acts as a first point of contact between students and their future employers.

In 1996, twenty-three students from major universities in Australia and New Zealand presented their research. Papers covered a diverse range of topics including international trade, microeconomic reform, finance, monetary policy, development, labour economics, industrial economics, CGE modelling, theoretical econometrics, organisational structure and bankruptcy. For the first time, a student from the UK also attended the conference, presenting a paper on the European Union.

The PhD conference prides itself on finding the best possible discussants for each student's presentation. Each discussant not only reads the student's paper in advance and prepares a short response, but also prepares and distributes a formal set of comments on the paper. Discussants and session chairs were drawn from a wide range of Australian universities as well as Boston University, the Reserve Bank of Australia, the Department of Employment, Education, Training and Youth Affairs, and the Australian Competition and Consumer Commission. We would like to thank all of these organisations for providing their staff with the time to attend the conference.

In keeping with the tradition set by previous Canberra PhD conferences, the weather was miserably cold and wet, ensuring an attentive audience. The conference began with a welcoming bar-b-que on the Wednesday night, and was officially opened by Professor Bob Gregory of the ANU.

The Bankers Trust lecture was given by Professor Bruce Chapman from CEPR, ANU. Professor Chapman presented a stimulating and entertaining talk on the economics of research and public policy making, focussing on his experience with the HECS scheme for higher education funding. A clear message from the talk was that economic ideas can have a powerful policy impact, but this impact can only be achieved by a substantial amount of argument and 'leg-work'. Some of today's strongest proponents of HECS were initially opposed to the scheme. The support of these groups could only be gained through both theoretical and empirical economic argument.

Professor Ian Harper of the Melbourne Business School delivered the speech at the conference dinner. By focussing on the three elements of academic life - research, teaching and interaction with the broader community - Professor Harper showed both the relevance and importance of economics as a discipline. Not all PhD researchers will continue in academia. Of those that do move on to positions in higher education, some will concentrate on one aspect of academic life more than the others. However, as Professor Harper argued in his lively talk, the key to academic life, both as a student and as a staff member, is to achieve a correct balance between these different activities. Each activity can be immensely rewarding in its own right, and as a portfolio they provide the potential for a professional career that is matched by few others.

Following the lead given by the 1995 PhD conference at the University of Western Australia, this year's conference concluded with the presentation of a number of awards. Monash University's Associate Professor Keith McLaren received the prize for the best discussant. The student presentations at the 1996 conference was felt to be of such a uniformly high standard that it would not be appropriate to single out an individual student. However, the award for the most innovative research topic was awarded to Mark Picton of Monash University, while Fiona Muckle of the University of Nottingham received a special award in recognition of her being our first student participant from outside Australia and New Zealand. Professor Simon Grant of ANU and Dr Graeme Woodbridge of the Australian Competition and Consumer Commission were also recognised for their special contributions to the conference.

The PhD conference fills a unique and very important role in economic research in Australia. Special thanks go to Rae Carson for her superb effort in organising this year's conference and making it run smoothly.

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 institutions:

Australia & New Zealand Banking Group Limited  
Australian Bureau of Statistics  
Australian Finance Conference  
Bankers Trust Australia Limited  
Bureau of Transport and Communications Economics  
Centre for International Economics, Canberra  
Economic Planning Advisory Council \*  
Economic Society of Australia  
Department of Finance  
Industry Commission\*  
Reserve Bank of Australia  
SUNCORP Investment Management  
The Treasury  
The University of Western Australia

\* The Commonwealth Government, as part of its broader macroeconomic reform agenda, is merging the Bureau of Industry Economics, the Economic Planning Advisory Commission and the Industry Commission to form the Productivity Commission.

**Stephen King**  
**Convener**

## The Program

**Session 1:** Thursday, 7 November, 9.10-10.50am

Chairperson: Steve Dowrick, Department of Economics, The Faculties, ANU

- (i) **Kieron Meagher**, Economics Program, Research School of Social Sciences, ANU  
*How to chase the market*
- (ii) **Alison Vicary**, School of Economics and Financial Studies, Macquarie University  
*Individual labour contracts and the employment advocate: a new institutional approach*

Discussants: (i) Peter Bardsley, Department of Economics  
University of Melbourne

(ii) Jeff Borland, Centre for Economic Policy Research  
Research School of Social Sciences, ANU

**Session 2:** Thursday, 7 November, 9.10-10.50am

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

- (i) **Somsachee Siksamat**, Centre of Policy Studies, Monash University  
*A multiregional model of the Thai economy: a computable general equilibrium approach*
- (ii) **Ganesh Nana**, Economics Group, Victoria University of Wellington  
*Taxes, debt and the labour-leisure choice in a dynamic CGE model*

Discussants: (i) Peter Waif, Department of Economics  
Research School of Pacific & Asian Studies, ANU

(ii) Michael Malakellis, Centre of Policy Studies  
Monash University

**Session 3:** Thursday, 7 November, 11.20-1.00pm

Chairperson: Trevor Breusch, Department of Statistics, The Faculties, ANU

- (i) **Ranjani Atukorala**, Department of Econometrics, Monash University

*The Program*

*Assessing the accuracy of asymptotic approximations using Kullback-Leibler information*

- (ii) **Rabiul Beg**, Department of Economics, La Trobe University  
*One-sided testing for the presence of conditional heteroskedasticity in the ARCH-M framework*

Discussants: (i) Stephen Donald, Department of Econometrics  
University of New South Wales

(ii) Michael McAleer, Department of Economics  
University of Western Australia

**Session 4:** Thursday, 7 November, 11.20-1.00pm

Chairperson: Neil Vousden, National Centre for Development Studies, ANU

- (i) **Alexander Robson**, Department of Economics, University of Queensland  
*Comparing capital and trade weighted measures of Australia's effective exchange rate*

- (ii) **Nikki Muckle**, Department of Economics, University of Nottingham  
*Factor price equalization in the European Union*

Discussants: (i) Ron Duncan, National Centre for Development Studies  
Research School of Pacific & Asian Studies, ANU

(ii) Jonathan Eaton, Department of Economics, Boston University  
(visiting Department of Economics, Research School of Pacific & Asian Studies, ANU)

**Session 5:** Thursday, 7 November, 2.50-4.30pm

Chairperson: Rod Maddock, Department of Economics, La Trobe University

- (i) **Nadira Barkatullah**, Department of Economics, University of Sydney  
*Water pricing: demand analysis and simulation*

- (ii) **Judith McNeill**, Department of Economics, University of New England  
*The economics of developer charges*

Discussants: (i) Ken Clements, Department of Economics  
University of Western Australia

- (ii) Joshua Gans, Melbourne Business School  
University of Melbourne

**Session 6:** Thursday, 7 November, 2.50-4.30pm

Chairperson: Ian Harper, Melbourne Business School, University of Melbourne

- (i) **Sachi Purcal**, School of Economics, University of New South Wales  
*Optimal portfolio selection and financial planning*
- (ii) **John Sequeira**, Department of Economics, University of Western Australia  
*Testing the risk premium and cost-of-carry hypotheses for currency futures contracts*

- Discussants:
- (i) Keith McLaren, Department of Econometrics  
Monash University
  - (ii) Ron Bewley, School of Economics  
University of New South Wales

**The Bankers Trust Lecture** Thursday, 7 November, 5.00-6.30pm

Chairperson: Ken Clements, Department of Economics, University of Western Australia

Speaker: **Bruce Chapman**, Centre for Economic Policy Research, ANU  
**Economics research and public policy making. HECS as a case study**

**Session 7:** Friday, 8 November, 9.00-10.40am

Chairperson: John Logan, Department of Economics, The Faculties, ANU

- (i) **Ramya Hewarathna**, School of Economics, La Trobe University  
*An empirical investigation of linkages between real monetary and financial variables in Australia using a VAR*
- (ii) **Peter Vujanovic**, School of Economics, University of New South Wales  
*Consumption habits and the dynamics of growth*

- Discussants:
- (i) Ellis Tallman, Reserve Bank of Australia
  - (ii) Daniel Leonard, Department of Economics  
Flinders University of South Australia

*The Program*

**Session 8:** Friday, 8 November, 9.00-10.40am

Chairperson: Rod Tyers, Department of Economics, The Faculties, ANU

- (i) **Manir Hossain**, National Centre for Development Studies, ANU  
*Welfare effects of a discriminatory trading area in South Asia*
- (ii) **Kishor Sharma**, School of Management, Charles Sturt/La Trobe University  
*Trade liberalisation and structural change in manufacturing: evidence from Nepal*

Discussants: (i) Jayant Menon, Centre of Policy Studies, Monash University  
(ii) Neil Vousden, National Centre for Development Studies, ANU

**Session 9:** Friday, 8 November, 11.00-12.40pm

Chairperson: Billy Jack, Centre for Economic Policy Research, ANU

- (i) **Mark Picton**, Department of Economics, Monash University  
*Blood, information and virtue*
- (ii) **Buly Cardak**, Department of Economics, University of Melbourne  
*Public and private education and luxury goods*

Discussants: (i) Jonathan Pincus, Department of Economics  
University of Adelaide  
(ii) Paul Chen, Faculty of Economics & Commerce, ANU

**Session 10:** Friday, 8 November, 11.00-12.40pm

Chairperson: Raja Junankar, Public Policy Program, ANU

- (i) **Lillian Cheung**, Department of Economics, University of Wollongong  
*An integrative and dynamic analysis of business bankruptcy and stability in Australia*
- (ii) **Louise Will**, Economics Program Research School of Social Sciences, ANU  
*Experience-income profiles of Australian immigrants*

Discussants: (i) Chris Worswick, Department of Economics  
University of Melbourne

- (ii) Greg Connolly, Department of Employment, Education,  
Training & Youth Affairs

**Session 11:** Friday, 8 November, 2.00-4.30pm

Chairperson: Stephen King, Economics Program, RSSS, ANU

- (i) **Sinclair Davidson**, Department of Economics & Finance Royal Melbourne Institute  
of Technology  
*How do large shareholders monitor? The structure of ownership and banking  
relationships in South Africa*
- (ii) **Tina Chen**, Australia-Japan Research Centre  
Research School of Pacific & Asian Studies, ANU  
*Comparison of adjust costs: inter- versus intra- industry trade*
- (iii) **Sarath Delpachitra**, Faculty of Business, University of Southern Queensland  
*Pricing behaviour of the petroleum product market: an empirical analysis based on  
New Zealand market*

- Discussants:
- (i) Luke Gower, Australia-Japan Research Centre  
Research School of Pacific & Asian Studies, ANU
  - (ii) Graham Woodbridge, Australian Competition &  
Consumer Commission
  - (iii) Charles Hyde, Department of Economics,  
University of Melbourne

## **The Abstracts**

### **Assessing the Accuracy of Asymptotic Approximations Using Kullback-Leibler Information**

**Ranjani Atukorala and Maxwell L. King**  
**Monash University**

Often in econometrics, inference is based on asymptotic approximations to the sampling distributions. This paper uses the Kullback-Leibler Information (KLI) measure for assessing the accuracy of asymptotic approximations to an unknown true distribution from which we can obtain simple random drawings. As an illustration, we investigate how close a true distribution is to an approximating distribution in the context of investigating how different population distributions affect convergence in the central limit theorem. Using Monte Carlo simulation experiments, we estimate the KLI measure of the difference between the true distribution of the means of random observations and the approximating normal distribution. In this case, the density function of the true distribution is estimated using non-parametric density estimation methods.

### **Water Pricing: Demand Analysis and Simulation**

**Nadira Barkatullah**  
**University Sydney**

A residential demand model for potable water is developed using a longitudinal data set constructed for the analysis. The data set comprises of 964 households from the Sydney Metropolitan and Wollongong areas, covering twenty three quarters from 1990 to 1996. The purpose of developing the demand model is to test water demand changes in response to changes in the tariff structure. The empirical results show that consumers do respond to the marginal price while faced with the multipart tariff structure. Therefore price can be considered as an influential tool in the implementation of demand management strategies. However the magnitude of price elasticity suggests that substantial increases in price would be required to influence demand.

OLS and Instrumental Variable/Maximum Likelihood estimation techniques are employed to conduct the analysis. The results support both — theory and past research, which states that IV/ML estimation technique tends to produce unbiased and consistent estimates than OLS, when price depends on quantity consumed. The Taylor/Nordin theory is also tested and the results are supportive of the theory.

The estimates of the demand model are then used in a simulation model to evaluate efficiency and distribution effects of various price reforms.

### **One-Sided Testing for the Presence of Conditional Heteroskedasticity in the ARCH-M Framework**

**A.B.M. Rabiul Alam Beg**  
**La Trobe University**

Dealing with a nuisance parameter in econometrics becomes more complex when the nuisance parameter in the testing problem is unidentified under the null hypothesis. This problem arises in many situations, however our aim is to test the null hypothesis of no ARCH in the ARCH-M model with an intercept. In this testing problem the ARCH-M and the intercept parameters are unidentified under the null hypothesis. Classical tests are not directly applicable in this situation because they do not have the usual asymptotic distributions. We employed a series of one-sided tests including Watson and Engle (1985), King and Wu (1990), and Silvapulle and Silvapulle (1995). Our simulation results show that a variant of the score-type test of Silvapulle and Silvapulle (1995) performs better than the other tests.

### **Public and Private Education and Luxury Goods**

**Buly A. Cardak**  
**University of Melbourne**

The distributional implications of different forms of financing investment in human capital are investigated. Two extreme cases are compared: one where education is privately funded and the other where education is publicly funded through taxes which are decided by majority vote. Using a generalised CES utility function, it is shown that for the case where education is treated as a luxury good, per capita income is higher for the public education system than in the private education economy. This result is in contrast with the work of Glomm and Ravikumar (1992) where private education was found to deliver higher per capita income than public education.

### **Comparison of Adjustment Costs: Inter- versus Intra-Industry Trade**

**Tina Y. Chen**  
**Australian National University**

This paper analyses the relative adjustment costs in the context of resource reallocation associated with inter versus intra-industry trade under the condition of trade liberalization.

Concerning the lack of systematic analysis in existing studies, this paper conceptualises the idea of adjustment cost and provides a systematic theoretical analysis and shed some lights to future empirical analysis based on survey of existing studies. Following that it established an analytical framework looking at the adjustment implications of trade

liberalization under different trade patterns and puts forward the central hypothesis that adjustment costs of intra industry trade is lower than that of inter-industry trade.

### **An Integrative and Dynamic Analysis of Business Bankruptcy and Stability in Australia**

**Lillian Cheung**  
**University of Wollongong**

This study develops an integrative and dynamic approach for assessing the effects of linkages across industries, industry-specific conditions, aggregate domestic economic conditions and international economic conditions on the rates of bankruptcy in six of Australia's major industries. These industries include primary production, mining and quarrying, manufacturing, building and construction, transport, storage and communication and finance and property. The estimation results for all industries studied have lent support to the survival of the fittest hypothesis and inter-industry linkages. Other economic variables most often found to be associated with the industry bankruptcy rates include state per-capita income, federal government spending, personal income tax rate, money supply and Japan's GDP, and among these variables, government policy instruments have been found to have relatively more substantial effects on the rates of bankruptcy.

### **How do Large Shareholders Monitor? The Structure of Ownership and Banking Relationships in South Africa**

**Sinclair Davidson**  
**Royal Melbourne Institute of Technology**

Corporate governance has become very topical in both the lay-press and academic literature. The mechanisms whereby firm's are controlled and relative strengths of those mechanisms has generated intense interest. It is immediately apparent that different countries relay on different mechanisms to achieve "good" corporate governance. Prowse (1995) argues that legal regimes play an important role in corporate governance mechanism selection. South Africa has a legal system similar to that of the UK (and US), yet it has a system of corporate governance similar to that of Japan.

This paper investigates some similarities and differences between governance mechanisms in the US and Japan and those in South Africa. It appears that large South African shareholders are able to monitor by demanding high dividend payments (consistent with the Easterbrook 1984) model, they do not use debt as a monitoring devise (inconsistent with Jensen 1986) and probably do not employ main bank' relationships in the manner employed in Japan.

**Pricing Behaviour of the Petroleum Product Market:  
An Empirical Analysis Based on New Zealand Market**

**Sarath Delpathitra**  
**University of Southern Queensland**

The main purpose of this paper is to examine how the retail and wholesale prices of major petroleum based products (Gasoline and Distillate) rate to the changes in world market especially world crude oil prices. The study is based on monthly data for the period from 1988 to 1994. An error correction model is employed to separate long run equilibrium relations and short run adjustment process. The preliminary results suggest that the relationship between world crude oil prices and domestic petroleum prices are very weak and that price adjustment between international and domestic markets are very slow. Furthermore there are some evidence to suggest that New Zealand companies adjust their domestic prices more slowly in a situation of a price decline than a price increase.

**An Empirical Investigation of Linkages Between Real,  
Monetary and Financial Variables in Australia using a VAR**

**Ramya Hewarathna**  
**La Trobe University**

In this study we investigate the relationships among real, monetary and financial variables using Australian monthly data for the period from January 1978 to June 1994. Industrial production, M3 and Australian All Ordinaries Index represent real, monetary and financial variables respectively. In addition to these variables two interest rates i.e. 13-week Treasury bill rate and 90-day Commercial bill rate are also used. Testing for cointegration under Johansen's procedure in the presence of structural breaks shows that these variables are cointegrated with only one cointegrating vector. Under Gregory and Hansen's cointegration tests results suggest structural breaks are significant in all variables except in interest rates. We employed Toda and Phillips' sequential testing procedure in a VAR and Toda and Yamamoto's MWALD procedure to test causal relations between these variables. Further error correction models are used to test causal relations in the presence of structural breaks which are found under Gregory and Hansen's cointegration tests.

The results suggest that money neutrality hypothesis can not be rejected in Australia during the sample period. Further, we find that stock prices and production have bivariate relations. Some tests suggest causality runs from money to interest rates and others suggest the opposite. After the 1980s financial market deregulation, the Toda and Phillips tests suggest that interest rates cause stock prices and this indirectly indicates that money influences stock prices via interest rates.

## **Welfare Effects of a Discriminatory Trading Area in South Asia**

**M. Manir Hossain**  
**Australian National University**

This paper examines the welfare implications of the proposed discriminatory trading area in South Asia comprising Bangladesh, India, Pakistan and Sri Lanka. Using an increasing costs model (in contrast to the usual constant costs model), it is shown that a member loses in import trade if the external tariff is not reduced, but gains unambiguously in export trade. Values of import effects represented by trade creation and trade diversion and the export effects represented by the terms of trade gains are calculated by using area variation measures. The gains and losses are calculated for disaggregated commodities. Preliminary results yield gains for the region as a whole. However, the small partners - Bangladesh and Sri Lanka suffer, while the bigger partners - Pakistan and India gain from the formation of a Customs Union.

## **The Economics of Developer Charges**

**Judith McNeill**  
**University of New England**

This paper explores economic theory in an attempt to find guidance as to the setting of economically efficient developer charges. It forms part of a wider examination of the economics of developer charges which will also examine the equity effects of charges, survey the literature on their probable incidence, and consider whether there are better alternatives. All this is a prelude to an empirical examination of current real world practice in NSW.

The relevant theory to examine for the purposes of the paper depends on whether one views developer charges as a tax, to raise general revenues, or as a price, to pay for services rendered. It is argued that, in NSW at least, the legislative intention is that developer charges should be regarded as a price, or user charge. That being the case, the paper explores efficient pricing theory.

## **How to Chase the Market**

**Kieron J. Meagher**  
**Australian National University**

This paper presents a model of a firm preparing to launch a product into a market where consumer preferences change over time and cannot be directly observed. Market research is used in order to determine what type of product to produce. The employees making decisions based on the market research data are boundedly rational, hence organizational structure plays a key role in the analysis of decision making. The implications for profits

of the interactions of organizational structure and the stochastic environment are analyzed. Particular attention is paid to the choice of organizational size and profitability for niche appeal products and mass appeal products.

### **Factor Price Equalization in the European Union**

**Nikki Muckle**

**University of Nottingham**

The Factor Price Equalization (FPE) theorem of international trade predicts that increased trade between countries will lead to equalization of goods prices and consequently equalization of factor rewards between countries. There has been a considerable amount of work on the basic Heckscher-Ohlin theory of FPE and its many extensions — the theory rests on a number of restrictive assumptions, not the least of which is free trade. Since a customs union is created specifically to remove trade barriers between its members, the EU should prove a good test case for the attainment of FPE in practice.

However, little empirical work on FPE at a worldwide level has been undertaken to date, with even less work on FPE in the EU. It is argued here that these previous empirical studies use inappropriate methodologies, and that this may explain the contradictory and inconclusive results obtained. This paper suggests a more appropriate methodology for studying the relationship between trade liberalization and wage convergence in a FPE context, and presents preliminary evidence on the extent of any such equalization.

### **Taxes, Debt and the Labour—Leisure Choice in a Dynamic CGE Model**

**Ganesh Nana**

**Victoria University, Wellington**

A multi-industry, computable general equilibrium (CGE) model with dynamic investment, consumer and labour supply behaviour is presented. Explicit income, expenditure and debt relationships between the government, household, private and foreign sectors ensure consistency with an aggregate budget constraint.

A base-case steady-state is generated where relative prices are constant, real output grows at an exogenous steady-state rate and each sector's debt is a stable proportion of GDP. Three comparative fiscal policies — a labour tax, a capital tax and a consumer tax — are imposed on this base. The largest output change is recorded in the capital tax shock as this most influences investment decisions — consistent with the absence of 'human capital' effects from the model.

## **Blood, Information and Virtue**

**Mark Picton**  
**Monash University**

A key feature of blood banking is that the quality of blood (crucially whether it is tainted with disease) is not directly observable, and that the most important method of screening is the honesty of donors. This paper uses blood as a vehicle for examining the general need for welfare economics to inform positive economics as well as vice versa. In particular it is argued that social and/or ethical considerations may affect the behaviour of individuals, at least outside the boundaries of what has traditionally been considered economics. This leads to a need to consider the interactions of individuals with different motivations in order to understand the functioning of different institutional structures.

## **Optimal Portfolio Selection and Financial Planning**

**T. Sachi Purcal**  
**University of New South Wales**

This paper examines the question of lifetime personal financial planning— how should individuals determine their optimal consumption, portfolio selection and life insurance needs? Although Richard (1975) provides the theoretical basis for such a model, no numerical results from this model have been produced. The paper uses the Markov chain approximation method of Kushner (1977) to determine numerical results for Richard's model. This approximation method is general and handles constraints to the model; solutions are developed with positive life insurance and borrowing constraints. The results are also interpreted in light of a financial planners' traditional rules of thumb for life insurance purchases.

## **Comparing Capital and Trade Weighted Measures of Australia's Effective Exchange Rate**

**A.R.W. Robson and A.J. Makin**  
**University of Queensland**

Changes in summary measures of the value of a country's currency have important implications for international investment decisions and other macroeconomic phenomena. Existing measures of nominal and real effective exchange rates (EERs), including Australia's Trade Weighted Index (TWI), focus on international trade in goods, but neglect the importance of international trade in assets. The use of capital flows or stocks as a basis for weights may, under certain circumstances, lead to different estimates of summary measures of the dollar's value. This paper constructs a number of effective exchange rate indices for Australia which are based on the significance of capital stocks and flows, and examines their behaviour in comparison to the traditional trade weighted

measures. The paper uses simple correlation and cointegration analysis to show that, whilst in the short run there is a strong positive correlation between trade and capital weighted measures, the series tend to diverge in the long run. Hence, a complete set of summary measures of the exchange rate should include those based on the capital account, as well as traditional goods and services based measures.

### **Testing the Risk Premium and Cost-of-Carry Hypotheses for Currency Futures Contracts**

**John M. Sequeira**  
**University of Western Australia**

The Risk Premium and Cost-of-Carry hypothesis regarding the pricing of futures contracts are tested using nested and non-nested procedures. Cointegrating relationships among the Australian dollar spot and futures prices, and US and Australian risk free rates of interest, suggest an error-correction representation for the Risk Premium model, and two alternative error-correction formulations for the Cost-of-Carry hypothesis. Two significant structural breaks in the futures price series permit a testing of appropriate models for the full sample in the presence of these breaks, for the full sample without explicitly modelling the breaks, and for various sub-samples created by these structural breaks. Unit root and cointegration tests yield alternative non-tested formulations of the Cost-of-Carry model for three different sub-samples, thereby leading to the use of nested and non-nested tests. The outcomes of these tests provide substantial support for the Cost-of-Carry hypotheses in the pricing of Australian dollar futures contracts.

### **Trade Liberalisation and Structural Change in Manufacturing: Evidence from Nepal**

**Kishor Sharma**  
**Charles Sturt/La Trobe University**

The paper examines the link between trade-orientation and total factor productivity (TFP) growth in the Nepalese manufacturing sector. Our analysis indicates an improvement in productivity growth following liberalisation. On the whole, TFP improved in the import-substitute industries (ISIs), but fell in the export-oriented industries (EOIs). The econometric analysis indicates that in the earlier period, productivity growth was higher in those industries which had an easy access to imported inputs. In the latter period, however, higher productivity growth was experienced in those industries which used nation's abundant resources intensively, had a lower level of import intensity and a higher level of nominal protection. With regard to export intensity, we observed a positive link between export growth and export incentives in both periods. In the latter period, besides export incentives, industries with a lower level of protection and involvement of MNCs were the industries with higher export intensity. Regarding the level of import intensity, we observed that in both periods, import-intensity was higher in

those industries which were offered a lower level of protection, dominated by the public sector and had involvement of MNCs. The nature of the market orientation (domestic vs export) was the only determinant of interindustry variations in protection in the earlier period. Industries which were export-oriented received a lower level of protection during this period. While in the latter period, export-oriented industries, public sector dominated industries and industries which were using the nation's abundant resources (ie, labour) intensively received a lower level of protection.

**A Multiregional Model of the Thai Economy:  
A computable general equilibrium approach**

**Somsachee Siksamat  
Monash University**

The model has a national part and a regional disaggregation. The national part produces results for macro and economy-wide industry variables, which are then disaggregated to regions. Two sets of results are presented on the effects of increased capital inflow in Thailand. In the first, the capital is not directed at any particular sector. It generates an appreciation of the real exchange rate and a reallocation of resources from trade exposed to non trading sectors. Bangkok, the main exporting region, suffers reduced growth relative to other regions. In the second simulation, the capital surge is associated with infrastructure development in Bangkok. This leads to more realistic regional results with Bangkok being the main benefiting region.

**Individual Labour Contracts and the Employment Advocate:  
A New Institutional Approach**

**Alison Vicary  
Macquarie University**

Despite the free market and anti institutional rhetoric of many politicians and economists, labour markets in Australia are not being deregulated. Labour markets are instead being re-regulated with new legislation, creating new institutional structures coupled with the removal and remodelling of existing structures. There is emerging a growing and divergent economic literature which analyses the role of institutions in a market economy (Arrow 1974; North 1990; Solow 1990; Williamson 1975, 1985). In the spirit of this new research, my paper analyses the role of institutional structures in the enforcement of individual contracts in the Australian labour market.

## **Consumption Habits and the Dynamics of Growth**

**Petar Declan Vujanovic**  
**University of New South Wales**

Using the Solow-Swan growth model we derive the expression for consumption behaviour required for endogenous growth. This implies consumption behaviour such that the savings rate accelerates at a rate proportional to the rate of income growth less the rate of exogenous technical progress. We then examine the stylised facts of growth for a set of East Asian economies (Hong Kong, Japan, Korea, Singapore and Japan). In doing so we confirm a humped shaped profile of growth as well as the rapid acceleration in the gross national savings rate at the early and most dynamic phase of development. The stylised facts suggest a saving function that is similar to that required for endogenous growth. We then interpret the derived saving function as one in which consumption habits dictate agent behaviour. Moreover we show that at low rates of savings the empirical savings function can satisfy the conditions for endogenous growth. As a result we are able to explain the profile of growth and savings in the East Asian Tiger economies when the savings function is incorporated into the Solow-Swan framework.

## **Experience-Income Profiles of Australian Immigrants**

**Lou Will**  
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A large body of literature examines the labour market outcomes of immigrants in Australia. Many of these studies utilise human capital earnings equations, but most adopt an ad hoc approach to formulating the earnings equation for immigrants. This paper formalises an approach to specifying an equation from the underlying theory, and tests whether or not specification matters for conclusions on how immigrants' earnings change relative to those of Australian-born workers as time in the Australian labour market increases.

Some interesting insights into the relationship between pre and post-migration post-school training arise. Initial investment in Australian is found to be lower as pre-migration experience is higher.

It is shown that ad hoc earnings equation specifications common in the literature, and a functional form derived from the underlying theory, tell a similar story on immigrant earnings change with period of residence. In comparing immigrant and Australian-born workers however, conclusions on income catch up are sensitive to the functional form adopted for Australian-born workers, suggesting that previous findings in this area are open to question.

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