

Centre for Economic Policy Research  
Australian National University

and

Economic Research Centre  
The University of Western Australia

**Report of the**  
**1992**  
**PhD Conference**  
**in**  
**Economics and Business**

3-5 November

Canberra



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

**and**

**Economic Research Centre  
Department of Economics  
The University of Western Australia**

**1992**

**PhD Conference in Economics and Business**

**3-5 November 1992  
Canberra**

**Report**

**Conference Convener: Adrian Pagan, ANU**

**Conference Coordinator: Annette Ritchie, ANU**

## Contents

	Page
<b>The Report</b>	<b>1</b>
<b>Appendix 1: Conference Program and Sessions</b>	<b>3</b>
<b>Appendix 2: Abstracts of Conference Papers</b>	<b>10</b>
<b>Appendix 3: Conference Participants</b>	<b>19</b>

## The Report

The 1992 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 3-5 November. Twenty PhD students presented papers on a wide range of topics, and these papers were discussed by invited experts. This was the first time that the Conference had been held away from the UWA. There appears to have been a sufficient increase in PhD programs to justify the Conference being held in successive years as was the case for 1987, 1988 and 1989 and now 1991 and 1992. One might well argue that it is very likely that the graduate programs in Australia will grow due both to the increasing tendency for students to take higher degrees and the restrictions being placed on scholarships funding in many North American universities.

The aim of the Conference is three fold. First, it provides an 'early warning system' to candidates by giving some outside comment upon work done on dissertations before the submission of that work. Second, it enables PhD students to meet other students and faculty in their area of expertise. In many large conferences one rarely finds student 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.

How did this Conference fare on the first two grounds? Regarding the first, I think it was generally very helpful, as evaluations from students strongly endorse the program. In some instances the discussants showed that there were a few major weaknesses in the way candidates had done the work, or that the candidates had not been sufficiently exposed to other methods of thinking. It was not always the case that the discussant was right. Nevertheless, even in those instances in which a discussant had misunderstood the argument it may be that an examiner may have exactly the same reaction, and this may indicate some re-writing is necessary.

On the second I think it was a tremendous success. Despite the fickle Canberra weather the barbecue on the first day set people talking to one another, sometimes in a most animated way, and the dinner was equally pleasant. Tony Cole, Secretary to The Treasury, gave an after-dinner speech which reflected on some of the trials of being a public servant in this day and age when the 'economic rationalist' cap was being invalidly fitted.

As well as the presentation of PhD research the Conference featured an address by John Creedy of the University of Melbourne. This was an attempt to think about income distribution within a general equilibrium framework. The paper presented a nice mix of theoretical and quantitative analysis.

There have been some excellent suggestions for improving the conference which will be acted upon. The proposal that PhD students should include an overview of their thesis in their documentation is particularly important. Criticism and suggestions for possible

modifications to the research strategy could then take into account both the stage of the thesis and where the submitted paper fitted into the framework of the thesis. It is also likely that the Conference will expand to absorb students working in finance. The program could accommodate another two sessions without being overloaded.

Everyone agreed that the major reason the conference functioned as smoothly as it did was due to Annette Ritchie's superb organisational skills. Special thanks go to Annette 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 institutions:

Australian Agricultural Economics Society  
Australian Bureau of Statistics  
Australian Bureau of Agricultural and Resource Economics  
Australian Finance Conference  
Bureau of Industry Economics  
Bureau of Transport and Communications Economics  
Business Council of Australia  
Department of Employment, Education and Training  
Office of the Economic Planning Advisory Council  
Industry Commission  
Reserve Bank of Australia  
The Treasury  
University of Western Australia

**Adrian Pagan**  
Convener

**November 1992**

## *APPENDIX I*

### **Conference Program**

#### **Tuesday, 3 November 1992**

6:00-10:00pm Welcome to participants, BBQ  
Venue: Fellows Garden, University House

#### **Wednesday, 4 November 1992**

9.00am Opening Session: Dr Des Nicholls, Dean, Faculty of Economics and  
Commerce, Australian National University  
Venue: Law Lecture Theatre, Faculty of Law

9:15am Session 1: Economic Issues in the South Pacific Economies  
Venue: Law Lecture Theatre, Faculty of Law

Session 2: Theoretical and Empirical Research into Growth  
Venue: The Ross Hohnen Room, Chancelry Building

10:45am Morning tea/coffee, Law Lecture Theatre area

11:30am Session 3: Trade and Industrial Economics  
Venue: The Ross Hohnen Room, Chancelry Building

Session 4: Exchange Rate Modelling  
Venue: Law Lecture Theatre, Faculty of Law

1:00pm Lunch: University Union

3:00-5:00pm Special Lecture: Professor John Creedy,  
Department of Economics, University of Melbourne  
Venue: Law Lecture Theatre, Faculty of Law

7:00 for 7:30pm Conference Dinner; Venue: Regatta Point Restaurant  
Speaker: Mr A. (Tony) Cole, Secretary to the Treasury  
Chair: Professor Ken Clements, University of Western Australia

#### **Thursday, 5 November 1992**

9.00am Session 5: Econometrics and Finance  
Venue: Seminar Room A, H C Coombs Building

Session 6: History of Economic Thought and Policy  
Venue: Law Lecture Theatre, Faculty of Law

- 10:30am Morning tea/coffee, Law Lecture Theatre area
- 11.00am Session 7: Labour Markets and Immigration  
Venue: Law Lecture Theatre, Faculty of Law
- Session 8: The Chinese Economy  
Venue: Seminar Room A, H C Coombs Building
- 12:30pm Lunch: University Union
- 2:00pm Session 9: Macroeconomics  
Venue: Law Lecture Theatre, Faculty of Law
- Session 10: Developments in Asian Economies  
Venue: Seminar Room A, H C Coombs Building
- 3:30pm Afternoon tea/coffee, Law Lecture Theatre area
- 4:00pm End of Conference

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## The Sessions

### 1. Economic Issues in the South Pacific Economies

Chairperson: Colin Hargreaves, National Centre for Development Studies,  
Australian National University

- (i) Sospeter Onchoke, Department of Agricultural Economics and Business  
Management, University of New England  
*Preliminary Evaluation of Export Revenues as Determinants of Economic Growth  
in the South Pacific Island Nations*
- (ii) Patrick Laplagne, Department of Economics, University of New England  
*The Aid-Growth Relationship in South Pacific MIRAB Economies*

Discussants: (i) Ron Bewley, Department of Econometrics, University of New South  
Wales  
(ii) Richard Snape, Dept of Economics, Monash University

### 2. Theoretical and Empirical Research into Growth

Chairperson: Peter Warr, Department of Economics, Research School of Pacific  
Studies, Australian National University

- (i) Gitanjali Nandan, National Centre for Development Studies, ANU  
*The Impact of the Single European Market on the Manufactured Exports of the  
Dynamic Asian Economies*
- (ii) Minxian Yang, School of Economics, University of New South Wales  
*Economic Growth, R & D, and Risk in R & D*

Discussants: (i) Christopher Findlay, Department of Economics, University of  
Adelaide  
(ii) John Quiggin, Centre for Economic Policy Research, Research School  
of Social Sciences, ANU

### 3. Trade and Industrial Economics

Chairperson: Christopher Findlay, Department of Economics, University of  
Adelaide

- (i) Heather Smith, Department of Economics, Research School of Pacific Studies,  
Australian National University

*Taiwan's Industrial Policy during the 1980s and its Relevance to the Theory of Strategic Trade*

- (ii) Ken Robertson, Department of Economics, Uni. of Western Australia  
*The Product Life Cycle and Trade Diversification over Time:  
Jordan 1970 - 1988*

Discussants: (i) Richard Pomfret, Department of Economics, University of Adelaide  
(ii) Rod Falvey, Department of Economics, Faculty of Economics and  
Commerce, Australian National University

#### **4. Exchange Rate Modelling**

Chairperson: John Pitchford, Economics Program, Research School of Social  
Sciences, Australian National University

- (i) Anthony Webber, Dept of Economics, University of New South Wales  
*Import Pass-Through in a Small Open Economy*
- (ii) Cohn Rose, Department of Economics, University of Sydney  
*The Distributional Approach to Exchange Rate Target Zones*

Discussants: (i) Phil Lowe, Economic Research Department, Reserve Bank of  
Australia  
(ii) Vance Martin, Dept of Economics, Uni. of Melbourne

#### **Special Lecture**

Chairperson: Adrian Pagan, Economics Program, Research School of Social  
Sciences, Australian National University

John Creedy, Department of Economics, University of Melbourne  
*Taxation in General Equilibrium*

#### **5. Econometrics and Finance**

Chairperson: Trevor Breusch, Department of Statistics, The Faculties, Australian  
National University

- (i) Alan Wan, Department of Economics, University of Canterbury  
*The Sampling Performance of Inequality Restricted and Pre-test Estimators in a  
Mis-specified Linear Model*

- (ii) Garry de Jager, Department of Economics, University of Technology, Sydney  
*Re-examining Binomial Stock Option Pricing Parameters*

Discussants: (i) Bill Griffiths, Department of Econometrics, University of New England  
(ii) Kim Sawyer, Department of Economics and Finance, Royal Melbourne Institute of Technology

## **6. History of Economic Thought and Policy**

Chairperson: Graeme Snooks, Economic History Program, Research School of Social Sciences, Australian National University

- (i) Grant Fleming, Department of Economics, University of Auckland  
*The Economics of Agricultural Support Policies in New Zealand 1922- 1938*
- (ii) Gregory Moore, Department of Economics, La Trobe University  
*The Conspiracy Against Orthodox Economics: A Case Study*

Discussants: (i) Tony Chisholm, Department of Agriculture, La Trobe University  
(ii) Peter Groenewegen, Department of Economics, University of Sydney

## **7. Labour Markets and Immigration**

Chairperson: P.N. (Raja) Junankar, Public Policy Program, ANU

- (i) Matthew Peter, Department of Economics, Monash University  
*Immigration and the Economy in the Medium Term, 1989-90 to 1995- 96: An Applied General Equilibrium Analysis*
- (ii) Sarah Rummery, Economics Program, RSSS, ANU  
*The Relationship between Completed Education and Voluntary Non-Employment, for young Australians*

Discussants: (i) Glenn Withers, Economic Planning Advisory Council  
(ii) Michael Kidd, Centre for Economic Policy Research, Australian National Uni./University of Tasmania

## **8. The Chinese Economy**

Chairperson: Guonan Ma, Department of Economics, Faculty of Economics and Commerce, ANU

- (i) Xiaohe Zhang, Department of Economics, University of Adelaide  
*Market Distortions, Production and International Trade in China: An Analytical Framework*
- (ii) Gang Tian, School of Economics, Macquarie University  
*Shanghai's Role in China's Export-Oriented Economy in the 1980s*

Discussants: (i) Ross Garnaut, Economics Department, Research School of Pacific Studies, Australian National University  
(ii) Brian Brogan, Asia Research Program, National Centre for Development Studies, Australian National University

## 9. Macroeconomics

Chairperson: Chris Murphy, Access Economics, Canberra

- (i) Daehoon Nahm, Department of Econometrics, University of Sydney  
*The Almost Ideal Demand System in Monetary Aggregation*
- (ii) Phillip Wild, Department of Economics, University of Queensland  
*An Optimal Control Algorithm that will be used in Conjunction with the Access Economics Murphy Model of the Australian Economy to Investigate the Attainment of Internal and External Balance Objectives*

Discussants: (i) Ross Milbourne, School of Economics, University of New South Wales  
(ii) Peter Stemp, Economics Program, Research School of Social Sciences, Australian National University

## 10. Developments in Asian Economies

Chairperson: Heinz Arndt, National Centre for Development Studies, Australian National University

- (i) Teresa Fung, Economics Department, Faculty of Economics and Commerce, Australian National University.  
*Capital Flight: The Case of Hong Kong*
- (ii) Yiping Huang, Australia-Japan Research Centre, ANU  
*Farmers' Feasible Choice Set and Agricultural Performance in China: 1985-90*

Discussants: (i) Ian Harper, Department of Economics, University of Melbourne  
(ii) Ken Clements, Economic Research Centre, University of Western Australia

## ***APPENDIX 2***

### **The Abstracts**

#### ***Re-examining Binomial Stock Option Pricing Parameters***

**Garry de laager, Department of Economics, University of Technology, Sydney**

The binomial process is commonly used in the pricing of a variety of options. Three sets of binomial parameters are primarily used by practitioners when determining stock option prices. This paper shows that under certain circumstances these parameters may produce anomalous results unless the number of binomial steps is carefully chosen. An alternative parameter set is developed to avoid many of the anomalies. The mathematics of the derivation suggests that a theoretical improvement to the Cox, Ross and Rubinstein parameters is possible.

The paper also details a set of binomial parameters that are explicitly dependent on the stock's expected rate of return demonstrating that the binomial option pricing method verifies option prices are independent of the stock's return.

#### ***The Economics of Agricultural Support Policies in New Zealand 1922-1938***

**Grant Fleming, Department of Economics, University of Auckland**

Debate since 1984 on the role of producer boards in New Zealand has concentrated on the costs and benefits of a monopoly seller competing in a competitive world market. Treasury (1984) has argued that a single selling agency controlling exports can lead to bureaucratic inefficiencies and that such an agency does not provide greater benefits than those generated by a competitive firm. By contrast, supporters of the producer board structure point to the boards' abilities to maximise gains from promotion and marketing investment (as legislation eliminates the free-rider problem).

Given this recent re-evaluation of the producer board structure it is timely to examine the economic arguments put forth by New Zealand economists during the early years of producer boards. Between 1922 and 1938 New Zealand agricultural producers and successive New Zealand governments introduced a number of measures designed to support the agricultural sector. In the first part of this paper I argue that economists' microeconomic analyses of producer boards were based on the Marshallian approach of analysing industries as either perfectly competitive or monopolistic. However, economists were completely uncritical of the producer board structure and, in contrast with Marshallian approach, believed implicitly that competition among exporters was a destructive process. Further, economists failed to incorporate into their work contemporary advances in the theory of monopolistic competition, which resulted in economists concentrating on supply-side problems and neglecting demand conditions facing New Zealand exports. In the second part of the paper I examine economists' arguments on the effectiveness of sliding-scale tariffs and guaranteed prices to stabilise

commodity prices. I show that economists (a) understood the transfer effects of a sliding-scale tariff on wheat which caused consumer surplus losses, and (b) raised questions about the transfer and efficiency effects resulting from implementation of guaranteed dairy produce prices.

***Capital Flight: The case of Hong Kong***

**Teresa Fung, Department of Economics, Faculty of Economics and Commerce,  
ANU**

In Hong Kong, the eventual return of sovereignty of the territory from Britain to the People's Republic of China in 1997 has triggered the issues of political uncertainty and capital flight since 1982. While the outflows of resources in 1982-83 were relatively short term and speculative in nature, those which occurred between 1984 and 1989 were associated with a wide range of longer term activities, such as emigration and the diversification of investment overseas. Several relevant macroeconomic trends in the two periods were examined and compared. While the capital outflows in the first period were financed mainly by the government's international reserves, those in the second period were financed by the trade account surpluses, deriving from the excess of saving over investment in both the private and public sectors and the inflows of foreign direct investment. Since 1989, the economic factors have become less favourable for those who wish to diversify overseas. In the run up to 1997, capital flight activities will continue to mirror the confidence on one important factor - China.

***Farmers' Feasible Choice Set and Agricultural Performance in China: 1985-90***

**Yiping Huang, Australia-Japan Research Centre, ANU**

What is the dominant factor behind the extraordinary path of agricultural development in 1985-90 in China? In this paper, five hypotheses that have been put forward in the literature are tested in turn. It is found that the frequently quoted relative price argument is largely irrelevant to agricultural performance during that particular period. While hypotheses concerning completion of institutional reform and weather conditions make some sense with respect to the agricultural stagnation that occurred, they fail to explain the swift factor flows behind agricultural performance. A hypothesis of the feasible choice set of farmers is then proposed in this paper, derived through a simple model for a dual economy. The feasible set hypothesis is supported by both observation of changes in the restriction on resource movements and empirical estimation of the relative marginal productivities of labour in agricultural and non-agricultural sectors. The paper concludes that the slow-down of agricultural development in 1985-88 is an expected outcome of market expansion, and should not be regarded as a failure of market-oriented economic reform. The agricultural boom in 1989 and 1990 occurred at the cost of recession in other industries and the lower income of farmers.

***The Aid-Growth Relationship in South Pacific MIRAB Economies***  
**Patrick Laplagne, Department of Economics, University of New England**

This paper, after a brief review of the historical debate on the existence or otherwise of a positive aid-growth relationship, examines the evidence emanating from the micro economies of the South Pacific, the so-called MIRAB economies. Contrary to observations made in relation to other types of economies, where domestic wage and credit policies can positively influence the effectiveness of aid, it would appear that, in a MIRAB economy, such positive influence is unattainable. It is shown, using a simple theoretical model, that this pessimistic result may be explained in terms of the macroeconomic rigidities inherent in such an economy. In particular, the inability to alter the capital-labour ratio is singled out as an important cause of migration occurring, thus restricting output growth below what population expansion would warrant.

***The Conspiracy Against Orthodox Economists: A case study***  
**Gregory Moore, Department of Economics, La Trobe University**

The paper analyses how neo-classical economics was denied a voice in turn-of-the-century Germany. It describes how Gustav Schmoller, the leader of the 'young German historical school', was able to dominate political economy in Imperial Germany by (a) controlling the education of undergraduates, (b) editing the central mediums for the exchanging of ideas and hence governing the means of determining reputations, and (c) selecting the candidates for academic positions via the 'Althoff system'. The latest literature in the philosophy and sociology of science is used to highlight the implications of these three 'pillars of control'. The paper ends by suggesting that the conspiracy theories developed by the Austrians - von Mises, Schumpeter and von Hayek - were partly the result of these scholars witnessing this discrimination at first hand.

***The Almost Ideal Demand System in Monetary Aggregation***  
**Daehoon Nahm, Department of Econometrics, University of Sydney**

This paper relates the Almost Ideal Demand System to Aggregation and Index Number Theories. It identifies the distance function of the AIDS model and shows that the Tornqvist-Theil Divisia quantity index is 'exactly' equal to the Malmquist quantity index when the preference is represented by the AIDS model. It also develops test a procedure for quasi-separability using the AIDS model. The model is applied to monetary aggregation for the Australian economy.

***The Impact of the Single European Market on the Manufactured Exports of the Dynamic Asian Economies***

**Gitanjali Nandan, National Centre for Development Studies, ANU**

This paper presents the attempt to quantify the gains-from-trade effects of the single European market of 1992 on the manufactured exports of the dynamic Asian economies (which consist of Hong Kong, Singapore, South Korea and Taiwan Thailand, Indonesia and Malaysia). This market will result in potential trade creation (additional imports from these six countries) and trade diversion (replacement of imports from them by production from within the European Community). The dynamic Asian Economies' supply capability puts them in a position to profit more' than any less developed countries from the structural changes in this bloc. However, the net outcome for their manufactured exports is heavily dependent on the import restrictions they face from the European Community after 1992.

***Preliminary Evaluation of Export Revenues as Determinants of Economic Growth in the South Pacific Island Nations***

**Sospeter Onchoke, Department of Agricultural Economics and Business Management, University of New England**

The consistently held contention that export performance determines economic growth, particularly in less developed countries, is analysed empirically for the South Pacific island nations. The study investigates the relationships between export and GDP using the most available consistent data set for four selected economies (Fiji, Papua New Guinea, Solomon Islands and Tonga) of the South Pacific island nations. Given that there is substantial evidence on export revenue/GDP linkages, this study focused on the long-run and short-run relationships of the variables. Cointegration analysis was applied for the long-run analyses while Granger causality based on vector autoregressive models, forecast error decomposition and impulse response analyses were employed for the short-run investigations. The results supported the short-run export/GDP linkages, with one positive case of feedback causality, and the existence of dynamic relationships between the exports and GDP. However, cointegration relationships between the two variables were rejected.

***An Applied General Equilibrium Analysis of the Economic Consequences of Immigration***

**Matthew Peter, Department of Economics and Centre of Policy Studies, Monash University**

This paper uses a large scale multisectoral model of the Australian economy to simulate the impact of variations to the current migrant intake. Projections account for characteristics of additional migrants including labour force participation rates, consumption preferences and funds transferred on arrival. Results indicate that the most important effects of increased migration are via the impact on employment. In addition,

the effect on Australia's current account deficit on the balance of payments is simulated under alternative scenarios to do with the dynamics of capital accumulation.

***The Product Life Cycle and Trade Diversification Over Time: Jordan 1970 - 1988***  
**Ken Robertson, University of Western Australia**

The generational shift of technology and production from Developed Country (DC) to Less Developed Country (LDC) in the Product Life Cycle (PLC) model is generally assumed to incorporate an abrupt cessation of DC production simultaneous with the beginning of LDC production. This paper uses data from the period 1970 to 1988 to test an hypothesis that it is a more realistic assumption for there to be an overlap of exports and imports after production of a "new" good has begun in the LDC. The results support this hypothesis, indicating that even incomplete transition of production from LDC to DC is a process involving long time periods.

***The Distributional Approach to Exchange Rate Target Zones***  
**Cohn Rose, Department of Economics, University of Sydney**

Following Krugman (1991), exchange rate target zones have engendered considerable interest. Whereas Krugman-style models assume that fundamentals follow a continuous time stochastic process, we assume that the exchange rate itself is stochastic in a discrete-time, continuous state space model. The problem then simplifies to modelling a stochastic variable with a doubly bounded distribution. Intuitive analytical solutions are easily derived, and several new results follow. In particular, we establish the convergence of the exchange rate, stability propositions, convergence of the interest differential, and are able to explain established empirical phenomena. Moreover, the techniques introduced in this paper have general application to the modelling of bounded stochastic processes.

***The Relationship between Completed Education and Voluntary Non-Employment, for young Australians***  
**Sarah Rummery, Economics Program, Research School of Social Sciences, ANU**

Given the importance of human capital attributes in the wage determination process and the empirically and theoretically supported assertion that most investments in human capital occur at young ages, what affect does anticipated periods of non-employment have on the accumulation of human capital?

Do we find evidence to support the Polachek (1974) hypothesis that those individuals, such as women, who anticipate spells of voluntary non-employment systematically "under invest" in human capital relative to a continuous participant? Or do we observe individuals selecting voluntary nonemployment because they have less education and are therefore in some senses less marketable?

We attempt to ascertain whether there is an empirically measurable direction of causality. A two stage model will be used where completed schooling, which includes post school qualifications, and anticipations of voluntary non-employment, as proxied by the actual rate in 1986, are treated as jointly endogenous. The status of voluntary non-employment is an interesting one as it contains people who have made the decision for widely varying reasons. These reasons vary from the desire to return to study or look for a better job, to pregnancy, travel, moving, disability or minding a family member, to mention a few.

The fundamental question to be answered by this work, is does the anticipation of voluntary non-employment influence the decision to invest in human capital? As such we are primarily interested in the behaviour of those individuals who leave the labour market for “non-market” reasons, rather than those who leave to pursue “market” activities such as further study or job search.

To help answer this question we estimate a two stage model using a restricted definition of voluntary separation which excludes anyone who chose non-employment in order to return to study or to search for a better job. The two factors being explained by the two stage model are completed schooling and voluntary non-employment.

***Taiwan’s Industry Policy in the 1980s and its Relevance to the Theory of Strategic Trade***

**Heather Smith, Department of Economics, Research School of Pacific Studies, ANU**

The paper discusses the contribution of industry policy interventions during the 1980s to the expansion of foreign trade and economic development of Taiwan. Composed of two parts, the paper provides a brief history of the trade and industry policies undertaken during the period. The government’s pursuance of a more sectoral approach to industrial policy formation is then discussed and evaluated in light of recent developments within the international trade literature. In presenting a number of policy conclusions, the paper finds that the industrial strategy adopted in the 1980s did not play a critical role in furthering Taiwan’s industrial development.

***Shanghai’s Role in China’s Export-Oriented Economy in the 1980s***

**Gang Tian, School of Economics, Macquarie University**

This paper deals with Shanghai’s role in China’s open door policy during the reform era as it developed under the impact of fiscal, foreign exchange, foreign trade and foreign investment regime reforms. The performance will be discussed by adopting a series of comparisons with other regions (such as Guangdong). The interaction and interrelationship between Shanghai’s external economic performance and economic reform; the economic performance and the central government’s policy toward Shanghai will be discussed.

***The Sampling Performance of Inequality Restricted and Pre-Test Estimators in a Mis-Specified Lineal Model***

**Alan Wan, Department of Economics, University of Canterbury**

We evaluate the sampling performance of the inequality restricted and pre test estimators for the prediction vector and the scale parameter when the underlying model involves a single inequality constraint on the coefficients and a design matrix from which relevant regressors are possibly omitted. Within the context of this analysis, we also derive and compute the optimal critical values for the preliminary test using both the minimum average relative risk and mini-max regret principles. It is found that most of our results concur qualitatively with those that one obtains when the restriction is assumed to hold as a strict equality.

***Import Pass-Through in a Small Open Economy***

**Anthony Webber, Department of Economics, University of New South Wales**

This paper constructs a model of import pass-through which is able to predict the entirety of pass-through permutations in the context of a small open domestic economy and competitive domestic import-substitute firms. This attribute of the model is inconsistent with the import pass-through contributions which comprise the status quo. This is by virtue of the fact that existing models of import pass-through are structured in such a way that the exporting firm is assumed to have domestic access to necessary inputs into production.

There exists five elements in the set which characterises the various degrees of import pass-through. The elements include complete, zero, partial and two forms of perverse import pass-through. The extent of import pass-through depends on the degree of production homogeneity and the market demand elasticity. In the context of import pass-through at the highest level of disaggregation, complete import pass-through is true if the demand curve for the import is perfectly elastic, or the volume of imports is fixed. Partial import pass-through is expected if the demand curve is an elastic, downward sloping function and production technology is decreasing returns. Zero import pass-through is realised if production technology is constant returns to scale. Perverse import pass-through necessitates increasing returns to scale production technology.

***A Statement of an Optimal Control Algorithm that will be used in conjunction with the Access Economics Murphy Model of the Australian Economy to investigate the Attainment of Internal and External Balance Objectives***

**Phillip Wild, Department of Economics, University of Queensland**

In this paper, an algorithm is presented which essentially involve the combination of two separate algorithms. The first is the solution method employed in the Access Economics Murphy Model to generate quarterly forecasts. This algorithm is applicable to a macroeconomic model containing rational expectations and involves the joint use of the Gauss-Newton, Gauss-Seidel, and Extended Path Methods.

The second is a Linear-Gaussian (L-G) optimal stochastic control algorithm developed by Professor Chow, and employs the method of Dynamic Programming.

A sequential approach to policy formulation is advocated in which learning is treated at any given point in time as a “passive” phenomenon. Through time, however, learning is incorporated with the pursuit of adaptive forecasting, and with frequent revision and assessment of the performance of policy decisions against the objectives set by policy-makers.

***Economic Growth, R & D, and Risk in R & D***

**Minxian Yang, School of Economics, University of New South Wales**

An endogenous growth model is constructed to investigate the effects on growth of risk in R&D. The model describes an overlapping-generations economy where individuals can choose either to work for firms or to engage in R&D activities of which the results are protected by a patent system. The driving force of sustainable growth in this economy is the mechanism that R&D activities lead to not only direct improvements in productivity of producing commodities but also enhancements in human knowledge which improve the productivity of future R&D efforts. The analysis in this framework shows that the presence of risk in R&D in combination with strongly risk-averse behaviour may suffocate the potential growth if risk sharing arrangements are missing. The analysis suggests that general attitudes towards risk, risk-taking behaviour and the risk-sharing arrangements are important factors that underlie an economy’s experience of growth.

***Domestic Distortions, Production and International Trade in China: An Analytical Framework***

**Xiaohe Zhang, Department of Economics, University of Adelaide**

This paper attempts to examine the impact of China’s market distortions on its production and international trade by using simple production and trade models. The primary findings include that: [1] China’s industrial production was more capital intensive and its agricultural production was more labour abundant than expected in perfectly competitive circumstances; [2] China tends to export more agricultural products and import more manufacturing goods than expected; [3] the rural industry boom which emerged in the eighties tends to lead a more labour intensive production structure, declining agricultural exports and increasing labour intensive manufacturing exports; [4] the price distortions biased towards the capital intensive manufactured goods sector limit the exploitation of China’s comparative advantage, reducing the exports of labour-intensive manufacturing products and encouraging labour-intensive agricultural production and exports; and [5] economic gains can be achieved by further liberalising the factor as well as the goods markets.

## *APPENDIX 3*

### **List of Participants**

Emeritus Professor Heinz Arndt  
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