DEPARTMENT OF ACCOUNTING AND FINANCE
University of Western Australia

Report on
PhD Conference in Economics and Business
November 1995
Perth

by

Daranee Chenhall

Economic Research Centre
Department of Economics
University of Western Australia
Report on

PhD CONFERENCE IN ECONOMICS AND BUSINESS

November 1995

by

Daranee Chenhall
Economic Research Centre
Department of Economics
The University of Western Australia

*I would like to acknowledge the help of David Butler.*
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Report</td>
<td>1</td>
</tr>
<tr>
<td>Appendix 1 The Programme</td>
<td>5</td>
</tr>
<tr>
<td>Appendix 2 The Abstracts</td>
<td>15</td>
</tr>
<tr>
<td>Appendix 3 The Participants</td>
<td>31</td>
</tr>
<tr>
<td>Appendix 4 Media Coverage</td>
<td>39</td>
</tr>
</tbody>
</table>
The Report

The 1995 PhD Conference in Economics and Business, the eighth in this series, was held at the University of Western Australia in Perth during 8-10 November. It was jointly organised by the Economic Research Centre, the Department of Accounting and Finance at UWA and the Centre for Economic Policy Research at the Australian National University.

Twenty-seven students from many of the major universities in Australia and New Zealand presented their papers in the areas of labor economics, productivity and economic data, industrial organization, consumption and human capital, international trade and agriculture, econometrics, political science and economics, exchange rates, economic growth, aspects of the Indian economy, rationality and neural networks, issues in financial institutions, and finance. The Conference also attracted 29 of Australia’s leading economists who acted as discussants of the papers.

The Conference started with a reception at the UWA Lawrence Wilson Art Gallery. This gave an opportunity for the authors and the discussants to meet and become familiar with each other. There seemed to be some fiery discussion which set off the fire alarm! This false alarm added a touch of excitement to the event.

The Conference was officially opened by Professor Paige Porter, Executive Dean of the Faculties of Economics and Commerce, Education and Law at UWA. Professor Porter said that the Conference is unique and has become one of the leading national conferences in the area.

Professor Fred Hilmer of the Australian Graduate School of Management, University of New South Wales, delivered the Invited Lecture which looked behind the political rhetoric to identify the main underlining ideas and issues in competition policy. The paper provided information to prospective researchers in this area and yielded a better appreciation of the subject of competition policy.

The Conference concluded with a dinner at which Professor Alan Powell of the IMPACI Project, Monash University, gave an entertaining and thought-provoking talk. Professor Powell expressed his concern that too many bright students work on economic and econometric theory without concerning themselves with real-world problems and questions. Our discipline’s incentive system was such that bright students could go further and faster by doing theory rather than applied work. To achieve a greater social payoff, more good people need to carry out empirically-relevant research. Professor Powell encouraged us to think of ways around this dilemma where there is conflict between private and social payoffs.

A new aspect was added to the Conference Dinner. The prize for the best presentation was awarded to Ms Alison Preston of UWA and the prize for the best discussant was won by Associate Professor Vance Martin of Melbourne University. A special prize was awarded to Professor Bob Gregory of ANU of his special contribution as a discussant.
The Survey of Authors reveals the following. Ninety percent of those who returned the questionnaire indicated that they benefited from the Conference and fulfilled their objectives by attending. Only four percent thought they did not benefit due to an inappropriate discussant (four percent did not express an opinion). The students indicated that they benefited in terms of (i) receiving useful comments and guidance; (ii) having an opportunity to expose their research work and make contact with other students; and (iii) gaining experience in presenting papers and being made aware of what is expected for PhD-level research.

The Conference would not have been possible without the financial support of the following sponsors:

- ABB Power Generation
- Acacia Resources
- Agricultural and Resource Economics, UWA
- Alcoa of Australia
- Argyle Diamond Sales
- Association of Mining and Exploration Companies
- Australian Agricultural and Resource Economics Society
- Australian Bureau of Statistics
- Australian Capital Equity
- Australian Competition and Consumer Commission
- Australian Equipment Lessors Association
- Australian Finance Conference
- Australian Financial Markets Association
- BankWest
- Bureau of Industry Economics
- Bureau of Transport and Communications Economics
- BZW Investment Management Australia
- Canon Australia
- Centre for International Economics
- Chamber of Commerce and Industry of WA
- Committee for Economic Development of Australia (CEDA)
- Commonwealth Bank
- Commonwealth Department of Finance
- Commonwealth Treasury
- Coopers & Lybrand
- CPA Services
- CSIRO - Division of Exploration and Mining
- Department of Employment, Education, and Training
- Department of Organisational and Labour Studies, UWA
- Department of Political Science, UWA
- Economic Society of Australia
- Energy Policy and Planning Bureau
- EPAC
We are very grateful to these institutions for their generous support.

Appendix 1 of this report contains the Conference programme, while the abstracts of the papers are in Appendix 2. Appendix 3 lists the names of the participants. A copy of a newspaper report about Professor Hilmer's lecture is given in Appendix 4.
APPENDIX 1
THE PROGRAMME

Wednesday November 8
6.00 - 7.00pm Reception at the Lawrence Wilson Art Gallery, University of Western Australia

Thursday November 9
9.15am - 9.30am Opening Session
Opening address by Paige Porter, Executive Dean, Faculties of Economics and Commerce, Education and Law, University of Western Australia
9.30am - 11.00am Invited Lecture
11.00am - 11.30am Tea/Coffee
11.30am - 1.00pm Session 1: Labour Economics
          Session 2: Issues in Financial Institutions*
1.00pm - 2.15pm Lunch in the Tropical Grove
2.15pm - 3.45pm Session 3: Productivity and Economic Data
          Session 4: Industrial Organisation*
3.45pm - 4.15pm Tea/Coffee
4.15pm - 5.45pm Session 5: Consumption and Human Capital
          Session 6: Finance I*

Friday November 10
9.00am - 10.30am Session 7: International Trade and Agriculture
          Session 8: Econometrics*
10.30am - 11.00am Tea/Coffee
11.00am - 12.30pm Session 9: Political Science and Economics
          Session 10: Exchange Rates*
12.30pm - 1.45pm  Lunch at Matilda Bay Foreshore

1.45pm - 3.15pm  Session 11: Economic Growth
                 Session 12: Finance II*

3.15pm - 3.45pm  Tea/Coffee

3.45pm - 5.15pm  Session 13: Aspects of the Indian Economy
                 Session 14: Rational and Neural Networks*

7.00pm for 7.30pm  Conference Dint at Matilda Bay Restaurant
                   After-dinner speaker: Alan Powell, Impact Project, Monash University

Sessions marked with an asterisk (*) will be held in the Research Centre in Accounting and Finance Conference Room, first floor of the Economics and Commerce Building. All other sessions will be held in the Conference Room, third floor of the Economics and Commerce Building.

Tea/Coffee will be provided in the third-floor lea room of the Economics and Commerce Building.

Details of the papers for each session are given below.
THE SESSIONS

INVITED LECTURE

(Conference Room, Third Floor)

Chairperson: Stephen King, Economics Program, RSSS, Australian National University

Fred Hilmer, Australian Graduate School of Management, University of New South Wales, “Competitive Policy: Underlying Ideas and Issues”

1. LABOUR ECONOMICS

(Conference Room, Third Floor)

Chairperson: Paul Miller, Department of Economics, University of Western Australia

James McDonald, Department of Economics, University of Melbourne, “The Composition of Industrial Action In Australian Mining and Manufacturing”

Lilli Ann Abello, National Centre for Development Studies, Australian National University, “Interrmarriage and Earnings: The Relationship Among Native Americans”

Discussants: Paul Chen, Department of Economics, The Faculties, Australian National University
Jeff Borland, Department of Economics, University of Melbourne

2. ISSUES IN FINANCIAL INSTITUTIONS

(Research Centre in Accounting and Finance Conference Room, First Floor)

Chairperson: David Alien, School of Economics and Finance, Curtin University of Technology

Mohammed Nishat, Department of Economics, University of Auckland, “The Impact of Institutional Development on Stock Market Linkages: Evidence From the Pakistani Stock Market”

Deborah Ralston, School of Business, Bond University, “An Empirical Study of the Effectiveness of Regulation on the Stability and Efficiency of Financial Institutions”

Discussants: Kunal Sen. Australian South Asia Research Centre, RSPAS, Australian National University
Warren Hogan, Department of Economics, University of Sydney
3. PRODUCFIVITY AND ECONOMIC DATA

(Conference Room, Third floor)

Chairperson: Darrell Turkington, Department of Economics, University of Western Australia

Mel Wen, Department of Economics, Monash University, “Division of Labor In Economic Development”

Guyonne Kalb, Department of Econometrics, Monash University, “Using the EM Algorithm with Complete, but Scrambled, Data”

Discussants: Stephen King, Economics Program, RSSS, Australian National University
    Denzil Fiebig, Department of Econometrics, University of Sydney

4. INDUSTRIAL ORGANISATION

(Research Centre in Accounting and Finance Conference Room, First Floor)

Chairperson: Phil Lewis, School of Economics and Commerce, Murdoch University

Kelly Bird, Economics Division, RSPAS, Australian National University, “The Determinants of Market Share Instability In Oligopolies in Indonesian Manufacturing”

Madhumita Bhattacharya, Department of Economics, University of Tasmania, “Profits, Concentration and Collusion: A Model for Australian Manufacturing”

Discussants: Harry Bloch, Department of Economics, University of Tasmania
    Glenn Otto, School of Economics, University of New South Wales
5. CONSUMPTION AND HUMAN CAPITAL

(Conference Room, Third Floor)

Chairperson: Robert Greig, Economic Research Centre, Department of Economics, University of Western Australia

Maria Rebecca Valenzuela, Department of Econometrics, University of New England, “Household Equivalence Scales and Income Inequality A New Estimation Method and A Decomposition Analysis”

Alison Preston, Graduate School of Management and Department of Economics, University of Western Australia, “Where Are We Now With Human Capital Theory In Australia?”

Discussants: Ranjan Ray, Department of Economics, University of Tasmania
Bob Gregory, Economics Program, RSSS, Australian National University

6. FINANCE I

(Research Centre in Accounting and Finance Conference Room, First floor)

Chairperson: Raymond da Silva Rosa, Department of Accounting and Finance, University of Western Australia

Alastair Marsden, Department of Accounting and Finance, University of Auckland, “Security Price Reaction to Rights Issues An Extension of the Myers and Majiuf Model”

Elaine Hutson, School of Finance and Economics, University of Technology Sydney, “Factors Affecting the Price of Takeover Targets”

Discussants: Tom Smith, Australian Graduate School of Management University of New South Wales
Terry Walter, Department of Accounting, University of Sydney
7. INTERNATIONAL TRADE AND AGRICULTURE

(Conference Room, Third Floor)

Chairperson: Abu Siddique, Department of Economics, University of Western Australia

Matthew Cumberworth, Department of Economics, University of New South Wales, “Stepping Stones or Stumbling Blocs? The Role of Trade Blocs in the Movement Towards Free Trade”


Discussants: Richard Pomfret, Department of Economics, University of Adelaide
Peter Dixon, Centre of Policy Studies, Monash University

8. ECONOMETRICS

(Research Centre in Accounting and Finance Conference Room, First Floor)

Chairperson: Michael McAleer, Department of Economics, University of Western Australia

Mizan Laskar, Department of Econometrics, Monash University, “Parameter Orthogonality and Likelihood Functions”

Gad Marjin, Department of Econometrics, Monash University, “Fractional Cointegration A Bayesian Approach”

Discussants: Andy Tremayne, Department of Econometrics, University of Sydney
Bill Grifiths, Department of Econometrics, University of New England
9. **POLITICAL SCIENCE AND ECONOMICS**

(Conference Room, Third Floor)

Chairperson: Bruce Coram, Department of Political Science, University of Western Australia

Simon Fry, Department of Political Science, University of Tasmania, “**Private Interest Theories of Politics and the Case of Workcare**”

Mark Beeson, Politics Department, Murdoch University, “**Governmentality and the Discourse of Neoliberalism**”

Discussants: Jonathan Pincus, Department of Economics, University of Adelaide David Gow, Department of Government, University of Queensland

10. **EXCHANGE RATES**

(Research Centre in Accounting and Finance Conference Room, First Floor)

Chairperson: Meher Manzur, School of Economics and Finance, Curtin University of Technology

Mardi Dungey, Economics Program, RSSS, Australian National University, “**A Multilateral Approach to Decomposing Volatility in Bilateral Exchange Rates**”

Li Lian Ong, Department of Accounting and Finance, University of Western Australia, “**Burgernomics The Economics of the Big Mac Standard**”

Discussants: Phil Lowe, Reserve Bank of Australia Geoff Kingston, Department of Economics, University of New South Wales Peter Forsyth, Department of Economics, University of New England
11. ECONOMIC GROWTH

(Conference Room, Third Floor)

Chairperson: Juerg Weber, Department of Economics, University of Western Australia


Gordon Schmidt, Centre of Policy Studies, Monash University, “The ‘Romer Model’ of Endogenous Growth: Dynamics, Optimality, and Other Issues”

Discussants: Joshua Gans, School of Economics, University of New South Wales
          Tom Nguyen, School of Economics, Griffith University

12. FINANCE II

(Research Centre in Accounting and Finance Conference Room, First Floor)

Chairperson: David Walsh, Department of Accounting and Finance University of Western Australia

Mary Sweeney, Department of Accounting and Finance University of Melbourne, “Equity Duration Australian Evidence”

Eduardo Roca, School of International Business Relations, Griffith University, “Australian and Asian Equity Markets Interdependence”

Discussants: Frank Finn, Department of Commerce, University of Queensland
          Jeff Carmichael, School of Business, Bond University
13. ASPECTS OF THE INDIAN ECONOMY

(Conference Room, Third Floor)

Chairperson: Ken McPherson, Indian Ocean Centre, Curtin University of Technology

Patricia Cahill, School of Economics, Murdoch University, “The Political Economy of Telecommunications in India”

Ajit Dayanandan, Department of Economics, University of Sydney, “Trade Credit and Demand for Money in Private Corporate Sector in India”

Discussants: Sisira Jayasuriya, Department of Economics, La Trobe University’
Ian Harper, Melbourne Business School, University of Melbourne

14. RATIONALITY AND NEURAL NETWORKS

(Research Centre in Accounting and Finance Conference Room, First Floor)

Chairperson: MoonJoong Tcha, Economic Research Centre, Department of Economics, University of Western Australia

David Butler, Department of Economics, University of Western Australia, “Imprecise Preferences: Some Implications for Non-Expected Utility Theories and the Theory of Errors”

Clarence Tan, Centre for Banking and Finance, Bond University, “Applying Artificial Neural Networks In Finance A Foreign Exchange Market Trading System Example with Transactions Costs”

Discussants: Simon Grant, Economics Program, RSSS, Australian National University
Vance Martin, Department of Economics, University of Melbourne
APPENDIX 2

THE ABSTRACTS

CONTRIBUTION OF RACIAL INTERMARRIAGE TO THE DEVELOPMENT OF NATIVE AMERICAN MIDDLE CLASS

Lilli Ann Abello
Australian National University

Interradge is said to be an important indicator of an ethnic group integration to the mainstream. One major puzzle about Native Americans is why, despite their high rates of intermarriage with whites, they continue to rank among the poorest in American society. This study takes a look at Native American men aged 25-64 and models the determinants of wages and annual hours worked, differentiating among those married to whites, non-whites and fellow Native Americans. After taking into account a host of factors such as education, experience, location and industry of occupation, it is found that Native Americans in same-race marriages still fare far worse than those married to whites. Decomposition analysis shows that differences in educational attainment and location/geography are the major distinguishing factors. These effects are reinforced by greater returns to experience for those married to whites.

GOVERNMENTALITY AND THE DISCOURSE OF NEOLIBERALISM

Mark Beeson
Murdoch University

Existing accounts of the rise of neo-liberal policies in Australia generally neglect important sources of its influence. This paper suggests that it is necessary to cast a wider theoretical net in order to develop a more comprehensive explanation. Consequently the notions of discourse and governmentality - particularly as developed by Foucault - are explored as possible complements to existing theorisation. It is suggested that neo-Liberalism’s influence in Australia owes a good deal to its discursive hegemony and the emergence of new strategies of governance.
PROFITS, CONCENTRATION AND COLLUSION: 
A MODEL FOR AUSTRALIAN MANUFACTURING

Madhumita Bhattacharya
University of Tasmania

Specification of the profits-concentration models has been largely *ad hoc* and subject to a number of conceptual difficulties. This paper derives the relationship among margins, concentration and degree of collusion across the manufacturing sector from a well known oligopoly model by Cowling and Waterson (1976). In this respect, the major criticisms against these studies (viz, omission of the relevant explanatory variables; estimation problems due to the simultaneous causality among variables and problems related to the measurement of variables) are examined. A cross-sectional analysis is carried out against a sample of Australian manufacturing industries at the Australian Standard Industrial Classification (ASIC) four-digit level for 1984-85. 11 resulting estimates suggest the importance of avoiding the omission of relevant explanatory variables and the importance of the choice of an appropriate measure for the price-cost margin. Also the model favours the proposition that high margins do appear to reflect collusive behaviour.

DETERMINANTS OF MARKET SHARE INSTABILITY FOR OLIGOPOLY IN INDONESIAN MANUFACTURING

Kelly Bird
Australian National University

The paper identifies and estimates the determinants of market share instability for a cross-section of industries in the manufacturing sector of Indonesia, a large, rapidly industrialising developing country with a comparatively rich industrial database. It adopts the presumption that market share stability is the outcome of tacit or overt collusion. Particular emphasis is given to the all-pervasive government policy regime, Multi-national Corporations (MNCs) dominance in several industries and exposure of oligopolies to international trade. The empirical results show a non-linear relationship between industrial concentration and market share instability as predicted by in theory and similar to the one found in an earlier empirical work by Caves and Porter (1978) for the US. The estimates also show that state-owned enterprise dominance of an industry is positively correlated with market share instability, while one of the two variables designed to capture the regulatory effect on oligopolistic behaviour is negatively correlated with market share instability. Government industrial regulations (pricing, distribution and entry controls) inhibit competition in several concentrated industries. Since the policy regime in developing economies is typically more interventionist than that in developed economies, this suggests that studies of the former ignore the policy context at their peril. Interestingly, MNCs are found to be negatively correlated with
market share instability in oligopolies providing some support for the argument that MNCs collude in the host countries markets, rather than the conventional belief that MNCs increase the structural competitiveness of an industry. Finally, the results indicate that oligopolies use the export market to maintain a stable domestic market share. The import variable has the expected sign, but is not statistically significant.

**IMPRECISE PREFERENCES: SOME IMPLICATIONS FOR NON-EXPECTED UTILITY THEORIES AND THE THEORY OF ERRORS**

David Butler
University of Western Australia

This paper presents a model that highlights the links between Expected Utility (EU) theory, the non-transitive choice models, and the psychologies of choice on which the latter are implicitly based. It then describes an experimental study of the extent to which individuals have only incompletely known preferences when making a series of incentive-compatible choices between pairwise gambles, and the implications of any incompleteness for the above models of choice under uncertainty. If preferences over these gambles are incomplete, they must be constructed during the choice process. It is then possible that the frame in which the choice is presented may be particularly suited to particular constructive choice rules. These rules in turn may have different implications for the applicability of EU axioms. We will focus on the two key compensatory choice strategies, the additive and additive-difference choice rules.

Three themes in particular are investigated. First, the question of whether choice ‘error’ rates are sensitive to the extent of vagueness in the underlying preferences. Second, the possible impact of frames on the clarity of the preferences the strategy constructs (as measured by differences in average confidence rates), and indirectly, the influence of frames on ‘error’ rates. Third, the links between clarity of preference, frames, and the relative strengths of regret effects and event-splitting effects (ESE’s) are sought. In particular, regret effects are hypothesised to occur at least as often for confident as for non-confident choices. Event-splitting effects (ESE’s) however are viewed as being just another type of error, so that a reduction in their frequency is predicted for choices based on clearer preferences.

If supported, the above hypotheses would have normative implications for non-transitive choice theories, as enhancing the clarity of preferences (thereby lowering error rates) is desirable. But as it has been proved that transitivity is not in general a property of additive-difference choice rules, reduced error rates resulting from the use of this rule would come at the price of substantially weakening the transitivity axiom.
A Luxemburg perspective prioritising new markets for investment goods, or which provide the rationale for increasing capital stock is used to analyse a particular case: the emerging market for telecommunications in India. Luxemburg emphasised that the investment function is independent, and crucial for the realisation of profits. Increasing competition for contested incomes drives technology, not only to innovate new products, but to cut labour costs; it also leads structural effects on the investment function and distributional shares. In addition, the increasing cost of technology itself has created new pressures to find additional markets to extend the product life cycle. Structural changes in the mature economies have made it more difficult for capitalists to identify new domestic investment opportunities. Blecker (1989) identified such a structural shift in 1983, and showed that the US had shifted from a wage-led to a profit-led, exhilarationist growth path. This structural break in the mature economies appears to coincide with the resurgence of the need for investment opportunities and markets in the underdeveloped economies.

Over the last decade the formation and enlargement of regional trade groups has rekindled the debate over whether trade blocs help or hinder the movement towards free trade. The purpose of this paper is to show formally why trade blocs are stumbling blocks in the movement towards free trade even with a system of lump sum transfers in place. In the context of a general equilibrium model incorporating imperfect competition, we show that both firms and consumers in founding and new member countries unambiguously gain through trade bloc membership. As the trade bloc grows in size, firms in existing trade bloc member countries experience a decrease in their equilibrium level of operating profits. Hence there exists an optimal trade bloc size from the point of view of existing trade bloc firms: the size at which the change in operating profits following the admission of a new member equals zero. Trade bloc firms want to restrict membership to this size whereas consumers want membership to expand until every country is a member (free trade). Assuming governments maximise an objective function which is a weighted average of the welfare of consumers and the political donations of firms, trade bloc size will lie somewhere between the preferred size of firms and the preferred size of...
consumers. The world subsequently divides into at least three blocs. Hence trade blocs will block the movement of the world towards free trade.

TRADE CREDIT AND DEMAND FOR MONEY BY THE PRIVATE CORPORATE SECTOR IN INDIA

Ajit Dayanandan
University of Sydney

This study examines the role of trade credit in the private corporate sector in India using the demand for money framework. Initially an analysis is made of the differences in the use of trade credit among small and medium/large (ML) firms. Using cointegration techniques and including trade credit as an additional variable, a demand for money equation is estimated separately for small and ML firms. The study found that there exists a unique cointegrating vector among the variables included in the vector autoregression for small and ML firms. The estimates of elasticities of income, trade credit and interest rate with respect to money of small and ML firms were divergent. Estimates show that ML firms are able to adjust their money balances to changes in income trade credit and interest rates faster than small firms. In the case of small firms, the estimated elasticities show that money is less of a luxury good for these firms. These results are corroborated by the short-run dynamics of the model. The short-run model also brings out the crucial role played by trade credit in the demand for money. The study also reveals that when disturbed from long-run equilibrium, the speed of adjustment of money balances is much faster for the ML than for small firms.

A MULTILATERAL APPROACH TO DECOMPOSING VOLATILITY IN BILATERAL EXCHANGE RATES

Mardi Dungey
Australian National University

This paper attempts to decompose volatility in exchange rates into unobserved components using the variance of weekly bilateral exchange rates to measure volatility. We hypothesise that movements in bilateral exchange rates can be explained as a combination of a world shock and the idiosyncratic shocks in the two countries which issue the currencies concerned. Each of these shocks is unobserved. Within a set of currencies the idiosyncratic shock for the country chosen as numeraire results in our model having a common shock to all currencies. Conditions are given for the possibility of identifying the relative variances of each of the shocks. Individual exchange rates are not constrained to react identically to world shocks. Using a panel of exchange rate data
we estimate the parameters of this factor model using a GMM estimator. The results allows us to determine the contribution of domestic and world shocks to the variances of bilateral exchange rates.

PRIVATE INTEREST THEORIES OF POLITICS AND THE CASE OF WORKCARE

Simon Fry
University of Tasmania

In 1985 the Cain Labor Government abolished Victoria’s privates multi-insurer workers’ compensation system and established a new system (WorkCare) characterised by a public monopoly workers’ compensation insurer. Competing explanations exist for this policy. The Government and political scientist, Mark Considine, have explained the policy in public interest terms: WorkCare was introduced in order to promote occupational safety and rehabilitation, reduce litigation and reduce employers’ premiums. Economists, including Michael Porter, have (following Stigler) explained WorkCare in private interest terms: the public monopoly came at the behest of employers in high risk Industries seeking cross-subsidisation of their premium costs from low risk industries. The paper argues that neither explanation is adequate. Public interest accounts fail to acknowledge the redistributive consequences of WorkCare and the role of self-interest in the scheme’s introduction. Private interest explanations are inadequate because they are historical, simplistic, fail to account for the role of ideas and understate the degree of autonomy held by the state.

FACTORS AFFECTING THE PRICE OF TAKEOVER TARGETS

Elaine Hutson
University of Technology Sydney

In order to examine the factors affecting the share price of takeover targets, this paper divides takeovers into three types: full bids, partial bids, and clean-up bids. A review of the literature discusses factors which may affect the target price and a theoretical model is presented for each type of takeover.
Consider two sets of records from the same survey. One preserves full detail about a few questions under focus (on labour supply), but contains almost no other variables. The other set contains very little information about the question of interest, but has complete information on the remaining variables. Unfortunately, the key which would allow the two sets to be matched is not available. However, the structure of the record sets does allow a partial matching. In order to extract the maximum amount of information about the question of interest, the use of statistical inference is required.

In this paper the EM algorithm, which has been used successfully with censored and incomplete data sets, is adapted to the problem of scrambled data. The performance of the method is assayed using an artificially constructed dataset. The relevance of the results for a real world labour market problem is explored.

This paper derives the conditional profile restricted likelihood (CPRL) function for inference concerning parameters involved in the variance-covariance matrix of linear regression disturbances. We find that this likelihood function is slightly different to the marginal likelihood function and results in different likelihood-based test statistics but yields exactly the same maximum likelihood estimates. A series of Monte Carlo experiments were conducted to compare the small sample properties of four maximum likelihood estimators and five sets of likelihood based tests constructed using different likelihood functions in the context of first-order moving average regression disturbances. Simulation methods were also used to estimate Kullback-Leiber information measures of distance between the actual small-sample distribution and the asymptotic distribution for five maximum likelihood estimators. 11 results show that the use of the conditional profile likelihood, marginal likelihood or CPRL can reduce estimation bias and variation and yield estimates that appear more normal and closer to their asymptotic distributions than those from the standard profile or concentrated likelihood. Overall, the CPRL based tests seem to have more desirable size properties than their counterparts, although in many cases any differences are minor.
SECURITY PRICE REACTION TO RIGHTS ISSUES: AN EXTENSION OF THE MYERS AND MAJLUF MODEL

Alastair Marsden
University of Auckland

This paper modifies the models of M and Majlf (1984) and Cooney and Kalay (1993) for firms that choose rights issues to raise new equity capital. The revised model provides for varying levels of existing shareholder participation in the issue. Under the model the adverse selection costs are lower (higher) the greater (smaller) the existing shareholder participation in the rights issue. The results of numerical analysis support this prediction whereby share price reaction to the announcement of a rights issue is less negative (more positive) the greater the existing shareholder take-up of the issue.

FRACTIONAL COINTEGRATION: A BAYESIAN APPROACH

Gael Martin
Monash University

The concept of fractional cointegration, whereby deviations from an equilibrium relationship are allowed to follow a fractionally integrated process, has attracted some attention in the literature of late. The long memory aspect of the fractional process is seen as an appropriate characterization of slow reversion to an equilibrium relationship. This paper presents a Bayesian method for conducting inference within the context of a fractional cointegration model. The analysis is based on an approximate likelihood function, which is motivated by the need both to solve a fundamental identification problem and to produce a posterior density with a relatively simple algebraic form. Inferences are based on the associated marginal posterior densities, estimated by a hybrid of the Gibbs and Metropolis Markov Chain Monte Carlo method.

THE COMPOSITION OF INDUSTRIAL ACTION IN AUSTRALIAN MINING AND MANUFACTURING

James McDonald
University of Melbourne

When a grievance arises between a union and firm, the union has a number of possible courses of action to follow in attempting to resolve the grievance on terms beneficial for the union members. Most previous work on the occurrence of industrial action, however,
has focused solely on strikes and has ignored the possibility that a union can engage in alternative forms of industrial action such as work bans and limitations. In this paper, a simple empirical model is developed to explain when a union may prefer to engage in one form of action over others, and then predictions of the model are tested using a micro-level data set of industrial action in Australian mining and manufacturing

IMPACT OF INSTITUTIONAL DEVELOPMENT ON STOCK MARKET LINKAGES: EVIDENCE FROM THE PAKISTANI STOCK MARKET

Mohammed Nishat
University of Auckland

This paper determines the impact of institutional development in the Pakistani stock market upon its linkages and interaction with other international markets. Based on weekly price indices the results indicate a long-run linkage or integration with other national markets. The Pakistani stock market was cointegrated with both developed and emerging markets in the long-run. However, in the short-run the Pakistani market was only linked with developed markets. The error-correction model estimation indicated that the Pakistani stock market has more interaction and interdependence with emerging markets. The Islamic price index exhibits a similar pattern to that observed between the all-Pakistan stock index and other market indexes.

BURGERNOMICS: THE ECONOMICS OF THE BIG MAC STANDARD

LiLian Ong
University of Western Australia

In the course of PPP research over the years, the debate has alternatively boiled and simmered over the choice of appropriate ingredients for inclusion in the traditional “basket of goods and services”. Amongst the items on the menu are a veritable smorgasbord of indices to whet the appetite of the PPP gourmet. The selection includes wholesale prices, consumer prices and gross domestic product price measures. However, researchers have made a meal of the argument over their accuracy for PPP purposes, giving the different consistency in the mixture of goods and services which make up these indices, and the extent to which these items spice up the exchange rate. Thus, we consider the use of the Big Mac as the international monetary standard as being a more plausible alternative, since it is produced locally in 79 countries around the world, subject to only minor changes in recipe, and thus has the flavour of a perfect universal commodity”. Icing on the cake is that we are also able to incorporate the productivity bias concept into
our research, since the Big Mac comprises both traded and non-traded goods. Our findings are indeed results to savour for connoisseurs of PPP as they appear to give this area of research its just desserts.

WHERE ARE WE NOW WITH HUMAN CAPITAL THEORY IN AUSTRALIA?

Alison Preston
University of Western Australia

Human Capital Theory is the dominant paradigm for the study of wage determination in Australia. This is despite the fact that, in Australia, industrial tribunals are an important mediation in the wage determination process. Their role raises an important question, namely “How relevant is human capital theory in the Australian institutional context? In addressing this question this paper used a number of different techniques to evaluate the current empirical status of human capital theory in Australia. The findings suggest that the human capital model performs moderately well in Australia, explaining up to 50 per cent of the variation in earnings. Weaknesses of the model include the unexplained 50 per cent of variations in earnings, and the systematic variations in earnings which competitive wage theory is unable to explain. Examples of the latter include the finding of persistent and significant inter-industry, inter-occupational, and gender wage differences.

AN EMPIRICAL STUDY OF THE EFFECTIVENESS OF REGULATION ON THE STABILITY AND EFFICIENCY OF FINANCIAL INSTITUTIONS

Deborah Ralston
Bond University

Government intervention in the affairs of financial institutions is essentially a twentieth century phenomenon. As financial institutions evolved over time, various regulatory measures such as entry requirements, and note issue were introduced, but it was not until the development of central banks in the nineteenth and twentieth centuries that governments began to intervene directly in the business of banking through controls such as interest rate ceilings, portfolio restrictions and capital requirements. The overriding aim of institutional regulation has often been the achievement of political and social goals, rather than the attainment of modern regulatory objectives such as preservation of stability and confidence in the financial system, the enhancement of competition and allocative efficiency, and the protection of depositors.
This study examines the effectiveness of a post regulatory system in achieving these regulatory objectives, and explores the trade-off between the competing goals of stability and efficiency. In order to do so, the study develops two alternative methodologies; a distress prediction-based risk measure, which is applied to estimating the changing risk level of an industry, and a portfolio theory model, which plots the performance of institutional portfolios in risk-return space. From these two models conclusions can be drawn about the effectiveness of the Financial Institutions Code (1992) on the stability and efficiency of a group of non-bank financial institutions, and therefore, the relative merits of these regulatory provisions. These results can then be generalised to provide some insight into wide institutional regulation.

AUSTRALIAN AND ASIAN EQUITY MARKETS INTERDEPENDENCE

Eduardo Roca
Griffith University

This paper seeks to determine the extent and structure of interdependence between the Australian and Asia-Pacific equity markets of Tokyo, Hong Kong, Singapore, Korea, and Taiwan. The US and UK markets are, however, also included on account of their large size and heavy economic involvement with the Asia-Pacific region. The study undertakes Granger-causality, variance decomposition and impulse response analyses within a vector-autoregression context Daily stockmarket data from 1984-93 are used. The results showed that, overall, the level of interdependence among the markets has remained at a relatively low level and even decreased after the stockmarket crash. The Australian market was found to be significantly linked only to Tokyo and Korea. Korea, Australia and Taiwan have exhibited the highest level of interdependence with other markets both as sources of influence and receivers of influence. 11 US, Japan and the UK turned out to be the least interdependent with other markets. This is an indication of the absence of either a “dollar”, “yen” or “commonwealth” bloc among equity markets in the Asia-Pacific region. The transmission of influence between Australia and the Asia-Pacific markets was found to go beyond the “efficient level” of two days, inspite of the fact that these markets lie within the same time zone.
THE DIFFUSION OF KNOWLEDGE AND ECONOMIC GROWTH: 
AN EMPIRICAL INVESTIGATION USING PANEL DATA (1965-1991)

Mark Rogers
Australian National University

This paper undertakes an empirical investigation into the causes of economic growth in a panel of 59 countries from 1965-91. In particular, it investigates whether the diffusion of knowledge is an important factor in economic growth. The importance of the diffusion of knowledge is often overlooked in theoretical work on growth. Given this, section 2 illustrates how assumptions about diffusion affect the results of an endogenous growth model. Section 3 discusses and estimates various regressions which have the average annual rate of GDP per capita growth as a dependent variable. The analysis shows that the common approach of using cross-sectional datasets has some potential weaknesses. A more reliable method is to use a fixed effects estimation method that allows for each country to have a time invariant specific growth factor. The results from the fixed effects estimation show that the most significant factors affecting growth are political disturbances and terms of trade shocks. There is also some evidence that the number of students a country has studying abroad in the USA has a positive influence on subsequent growth rates.

THE ‘ROMER MODEL’ OF ENDOGENOUS GROWTH: DYNAMICS, 
OPTIMALITY, AND OTHER ISSUES

Gordon Schmidt
Monash University & Bureau of Industry Economics

Primarily, the paper adds dynamics to Romer’s (1990) model of endogenous growth. First, the essential ingredients of the model are briefly reviewed, and its dynamic properties are developed. Numerical solution procedures are then outlined and used to investigate the model’s adjustment responses to a variety of economic policy shocks. The model’s phase-space is introduced, and a ‘stripped down’ Keynesian-Romer version of the model is developed in order to illustrate the dynamics in phase-space. Next, the decentralised market solution to the model is compared with the socially (Pareto) optimum result in an effort to assess economic welfare issues. Finally, a policy response which corrects for the decentralised market distortions is identified.
ENVIRONMENTAL IMPACTS OF ALTERING AGRICULTURAL INCENTIVES: A GENERAL EQUILIBRIUM APPROACH FOR INDONESIA

Anna Strutt
University of Adelaide

Market liberalization along with economic development, income growth and structural change, may have both positive and negative impacts on the natural environment. This paper examines the relationship between economic growth and environmental services, and suggests that the net effect on the environment of market liberalization (or other sources of economic growth) can only be determined a priori by empirical estimation. To help determine the direction and magnitude of the effects of economic reforms on Indonesia’s environment, a computable general equilibrium model will be used. Environmental impacts, including damage functions, feedback effects on production, and irreversible effects, will be modelled in addition to the standard intersectoral impacts of economic policy reforms. To keep the task manageable, the paper focuses on the agricultural sector.

EQUITY DURATION: AUSTRALIAN EVIDENCE

Mary Sweeney
University of Melbourne

The objective of shareholder wealth maximisation means that the focus of interest rate risk management will be the sensitivity of the market value of equity to interest rate movements, which is referred to as equity duration. It is widely accepted that this can be calculated by determining the gap between the duration of assets and the duration of liabilities.

The objective of this paper is to estimate the duration of equity for shares listed on the Australian Stock Exchange; to determine whether the mix of assets in place and growth opportunities have an impact on equity duration, and to test whether high growth or low growth opportunity firms exhibit higher duration.

While findings are sensitive to the proxy used, there is some evidence to suggest equity duration may vary between firms depending upon their relative asset mix, which suggests this should be considered when devising or refining the duration based benchmark used in the management of interest rate risk.
APPLYING ARTIFICIAL NEURAL NETWORKS IN FINANCE: A FOREIGN EXCHANGE MARKET TRADING SYSTEM EXAMPLE WITH TRANSACTIONS COSTS

Clarence Tan
Bond University

This paper is divided into two parts. The first part introduces the Artificial Neural Networks (ANNs) concept and its current commercial application. The second part of the paper discusses one of the two applications of ANNs pursued in the author’s thesis, namely, modeling of a foreign exchange trading system.

The paper discusses the application of ANNs to foreign exchange trading, focusing on trading simulations in the foreign exchange market, in particular, the USD/AUD market. The simulations take account of the interest differentials and financial transaction costs. Comparison of the ANN-based trading system is made against the traditional time-series autoregressive (AR)-based system. In the case of the USD/AUD exchange rate market, the AR-based trading system outperformed a simple ANN-based system. However, this paper introduces a simple ‘hybrid’ model, ANNWAR, that outperformed both earlier trading models by combining ANN with AR results. This paper suggests that time arbitrage opportunities may exist in some financial markets and that these may be exploited by utilizing ANNWAR.

HOUSEHOLD EQUIVALENCE SCALES AND INCOME INEQUALITY: A NEW ESTIMATION METHOD AND A DECOMPOSITION ANALYSIS (An Application to the 1988 Australian Household Expenditure Survey)

Maria Rebecca Valenzuela
University of New England

In this paper, a maximum likelihood (MLE) estimation procedure for the estimation of household equivalence scales from an extended linear expenditure system is derived and computed using 1988 Australian Household Expenditure Survey data. The procedure allows for the presence of contemporaneous error correlation for different commodities and a given household type. Households with different compositions are allowed to have different error-covariance matrices. The MLE procedure improves on the 2-step procedure suggested by Kakwani (1980) and adopted by Binh and Whiteford (1990) to estimate Australian household equivalence scales. The model described in the paper is a more general version of equivalence scale models previously derived from the linear expenditure system. MLE scale estimates are obtained for 11 commodity groups and 8 different household composition types.
In the second part of the paper, the MLE procedure is applied to a larger data set consisting of 16 household types. 11 resulting equivalence scales are then used to adjust household incomes which are, in turn, used to analyse the distribution of incomes in Australia. Measures of inequality are obtained and decomposed based on these adjusted incomes. The results are compared with those based on incomes which have not been “scaled” according to the differing needs of the household members.

**DIVISION OF LABOR IN ECONOMIC DEVELOPMENT**

Mei Wen  
Monash University

The paper uses general equilibrium models and inframarginal analysis to expound the division of labor in economic development and theoretically explores why the level of division of labor in an economy reflects its productivity. The paper begins by introducing an analytical framework of consumer-producer, economics of specialisation and transaction cost, later exploring the implications of production and allocation efficiency with economies of specialisation, benefits of division of labour and transaction costs. Inframarginal analysis suggests the level of division of labor is determined by the tradeoffs among economies of specialisation, benefits of division of labour and transaction costs. Therefore, primary resource, transformation of energy, investment in infrastructure and development of economic organisation play very important roles in the evolution of the division of labor and economic development.
### APPENDIX 3

#### THE PARTICIPANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms Heather ATKINSON</td>
<td>JP Morgan Australia</td>
<td>Level 26, 333 Collins Street, MELBOURNE VICTORIA 3000</td>
</tr>
<tr>
<td>Professor David ALLEN</td>
<td>School for Economics &amp; Finance</td>
<td>Curtin University of Technology, GPO Box U1987, PERTH WA 6001</td>
</tr>
<tr>
<td>Mr Madhumita BHATFACHARYA</td>
<td>Department of Economics</td>
<td>University of Tasmania, GPO Box 252C, HOBART TASMANIA 7005</td>
</tr>
<tr>
<td>Dr Harry BLOCH</td>
<td>Department of Economics</td>
<td>University of Melbourne, GPO Box 252C, HOBART TASMANIA 7005</td>
</tr>
<tr>
<td>Dr Jeff BORLAND</td>
<td>Department of Economics</td>
<td>University of Melbourne, PARKVILLE VICTORIA 3052</td>
</tr>
<tr>
<td>Mr David BUTLER</td>
<td>Department Of Economics</td>
<td>University of Western Australia, NEDLANDS WA 6907</td>
</tr>
<tr>
<td>Ms Lilli Ann ABELLO</td>
<td>National Centre for Development Studies</td>
<td>Australian National University, CANBERRA ACT 0200</td>
</tr>
<tr>
<td>Mr Mark BEESON</td>
<td>Politics Department</td>
<td>Murdoch University, MURDOCH WA 6150</td>
</tr>
<tr>
<td>Mr Kelly BIRD</td>
<td>Economics Division</td>
<td>Research School of Pacific &amp; Asian Studies, Australia National University, CANBERRA ACT 0200</td>
</tr>
<tr>
<td>Mr Seth BOLAS</td>
<td>Department of Resources Development</td>
<td>170 St George Terrace, PERTH WA 6000</td>
</tr>
<tr>
<td>Mr Richard BOROZDIN</td>
<td>Department of Minerals and Energy</td>
<td>Mineral House, 100 Plain Street, EAST PERTH WA 6004</td>
</tr>
<tr>
<td>Ms Patricia CAHILL</td>
<td>Department of Economics</td>
<td>Murdoch University, MURDOCH WA 6150</td>
</tr>
</tbody>
</table>
Professor Jeff CARMICHAEL  
School of Business  
Bond University  
GOLD COAST QUEENSLAND 4229

Ms Rae CARSON  
Economics Program, RSSS  
Australian National University  
CANBERRA ACT 0200

Dr Paul CHEN  
Department of Economics  
The Faculties  
Australian National University  
CANBERRA ACT 0200

Mrs Daranee CHENHALL  
Economic Research Centre  
Department of Economics  
University of Western Australia  
NEDLANDS WA 6907

Mr Stuart CLARKE  
Department of Minerals & Energy  
Mineral House  
100 Plain Street  
EAST PERTH WA 6004

Professor Ken CLEMENTS  
Economic Research Centre  
Department of Economics  
University of Western Australia  
NEDLANDS WA 6907

Dr Bruce CORAM  
Department of Political Science  
University of Western Australia  
NEDLANDS WA 6907

Mr Matthew CUMBERWORTH  
Department of Economics  
University of New South Wales  
SYDNEY NSW 2052

Dr Raymond DA SILVA ROSA  
Department of Accounting & Finance  
University of Western Australia  
NEDLANDS WA 6907

Mr Ajit DAYANANDAN  
Department of Economics  
University of Sydney  
SYDNEY NSW 2006

Professor Peter DIXON  
Centre of Policy Studies  
Monash University  
CLAYTON VICTORIA 3168

Dr David DOLE  
Agricultural Resource Economics  
University of Western Australia  
NEDLANDS WA 6907

Ms Mardi DUNGEY  
Economics Program, RSSS  
Australian National University  
Research School of Social Sciences  
CANBERRA ACT 0200

Mr Andrew EDWARDS  
Coopers & Lybrand  
The Quadrant, 1 William Street  
PERTh WA 6000
Dr Meher MANZUR  
School of Economics & Finance  
Curtin University of Technology  
GPO Box U1987  
PERTH WA 6001

Ms Gael MARTIN  
Department of Econometrics  
Monash University  
CLAYTON VICTORIA 3168

Ms Lisa NORTON  
Western Power  
GPO Box L921  
PERTH WA 6001

Dr Glenn OTTO  
School of Economics  
University of New South Wales  
SYDNEY NSW 2052

Mr Alastair MARSDEN  
Department of Accounting & Finance  
University of Auckland  
Private Bag 92019  
AUCKLAND NEW ZEALAND

A/Professor Vance MARTIN  
Department of Economics  
University of Melbourne  
PARK VILLE VICTORIA 3052

A/Professor Paul MILLER  
Department of Economics  
University of Western Australia  
NEDLANDS WA 6907

Ms Li Lian ONG  
Department of Accounting & Finance  
University of Western Australia  
NEDLANDS WA 6907

Dr Jammie PENM  
Australian Bureau of Agricultural Resources Economics  
GPO Box 1563  
CANBERRA ACT 2601
Ms Jan SMITH
Economic Research Centre
Department of Economics
University of Western Australia
NEDLANDS WA 6907

Mr Roger SNELL
Hollywood Private Hospital
P0 Box 1065
NEDLANDS WA 6009

Ms Mary SWEENEY
Department of Accounting & Finance
University of Melbourne
PARK VILLE VICTORIA 3052

Dr MoonJoong TCHA
Economic Research Centre
Department of Economics
University of Western Australia
NEDLANDS WA 6907

Mr Grant THOMPSON
WA Farmers Federation
PO Box 6291
EAST PERTH WA 6892

A/Professor Andy TREMAYNE
Department of Econometrics
University of Sydney
SYDNEY NSW 2006

Ms Maria Rebecca VALENZUELA
Department of Econometrics
University of New England
ARMIDALE NSW 2035

Professor Tom SMITH
Australian Graduate School of Management
University of New South Wales
SYDNEY NSW 2052

Ms Anna STRUTT
Department of Economics and Centre for International Economic Studies
University of Adelaide
ADELAIDE SA 5005

Mr Clarence TAN
Centre for Banking and Finance
Bond University
GOLD COAST QUEENSLAND 4229

Mr Allan TEEDE
Department of Minerals and Energy
Mineral House
100 Plain Street
EAST PERTH WA 6004

Mr David TOVEY
Western Power
GPO Box L921
PERTH WA 6001

A/Professor Darrell TURKINGTON
Department of Economics
University of Western Australia
NEDLANDS WA 6907

Mr David WALSH
Department of Accounting & Finance
University of Western Australia
NEDLANDS WA 6907
Policy hits the right note, says Hilmer

By NIGEL WILSON

The architect of competition policy in Australia, Professor Fred Hilmer, says the issue has struck a chord with politicians, business and the wider community far beyond anything he expected.

Professor Hilmer, Mr Mark Rayner and Mr Geoff Taperell formed the National Competition Policy Committee established by the Federal Government in 1992 to conduct an independent inquiry into the subject.

Key aspects of their recommendations have since been adopted, culminating in the formation of the Australian Competition and Consumer Commission, which came into operation on Monday.

In a paper delivered to a conference in Perth organised by the University of Western Australia's high-profile Economic Research Centre, Professor Hilmer said competition policy was now somewhat incorrectly expressed as shorthand for "more competition".

It was now the central plank of reform in areas as diverse as electricity generation, legal services, healthcare and ports.

"Competition policy, however, a term that can cover a wide range of policies and that reflects a large number of economic concepts, some relatively soundly established and some largely speculative," he said.

Later in the speech, Professor Hilmer, who is also chairman of Pacific Power, the NSW power utility which supplies 60 per cent of the NSW market for power, gave details of some economic studies on the impact of the break-up of the utility.

A study splitting Pacific Power into two groups did not greatly change prices for electricity, while a split into three groups lowered prices only about one-third of the time but these price levels still tended to be above marginal costs.

Professor Hilmer said the studies were concluding that quite a large number of competitors were required in the power industry to achieve efficiency.