

November 1989

REPORT ON  
THIRD ECONOMICS POSTGRADUATE RESEARCH CONFERENCE  
THE UNIVERSITY OF WESTERN AUSTRALIA  
NOVEMBER 5-7 1989

by

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For the past three years the Economic Research Centre at The University of Western Australia has been organizing conferences in Perth for Australia's leading Ph.D. students in economics and business. These conferences have attracted over 50 Ph.D. students, as well as some of Australia's most prominent economists who have acted as discussants of the papers and presented invited lectures.

The third conference in this series was held in November 1989. There were international visitors from New Zealand, The Phillipines, Japan, the U.S. and Malaysia. Professor Alan Powell, from the University of Melbourne, presented a special lecture on "The Reconciliation of Computable General Equilibrium and Macroeconomic Modelling: Grounds for Hope?" and Dr. Ed Shann, of Access Economics, was the after-dinner speaker. Dr. Shann's visit was made possible by the generous support of the Standard Chartered Group. Appendix 1 of this report contains the conference programme; Appendix 2 the abstracts of the papers; and Appendix 3 a list of the participants.

The conference series has enjoyed the generous financial support of a large number of institutions. The 1989 sponsors were:

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The Centre greatly appreciates this support and the confidence which these institutions have shown in the conference.

## APPENDIX 1

### THE PROGRAMME

#### **Sunday November 5**

5.30pm Registration at Kingswood College, The University of Western Australia.

6.00pm Reception at Kingswood College, The University of Western Australia, hosted by the W.A. Branch of the Economic Society.

#### **Monday November 6**

9.00am - 9.30am Opening Session.

Opening address by Professor Roy M C Lourens, Acting Vice-Chancellor, The University of Western Australia.

9.30am - 11.00am Session 1: International Economics.

11.00am - 11.30am Coffee.

11.30am - 1.00pm Session 2: Labour Economics I.

1.00pm - 2.15pm Lunch.

2.15pm - 3.45pm Session: Special Lecture.

3.45pm - 4.15pm Coffee.

4.15pm - 5.45pm Session 4: Econometrics I.  
Session 5: Macroeconomics and Public Finance.

7.00pm or 7.30pm Dinner at Kingswood College.  
Speaker: Dr. Ed Shann, Director, Access Economics.

#### **Tuesday November 7**

9.00am - 10.30am Session 6: Finance.

10.30am - 11.00am Coffee.

11.00am - 12.30pm Session 7: Econometrics II.  
12.30pm - 2.15pm Lunch.  
2.15pm - 3.45pm Session 8: China.  
3.45pm - 4.00pm Coffee.  
4.00pm - 5.30pm Session 9: Labour Economics II.

## THE SESSIONS

### 1. INTERNATIONAL ECONOMICS

Chairman: Richard Snape, Department of Economics, Monash University.

Jayant Menon, Institute of Applied Economic and Social Research, The University of Melbourne, “The Law of One Price and Exchange Rate Pass-Through in the Short Run and Long Run: A Reconciliation, Survey and Policy Implications”.

Robin Stonecash, Department of Economics, The University of New South Wales, “International Trade with Labour Union Determination of Minimum Wages”.

Discussants: John Griffiths, Commonwealth Department of Treasury.

Masahiro Okuno-Fujiwara, Department of Economics, The University of Tokyo.

### 2. LABOUR ECONOMICS I

Chairman: Tom Karmel, Commonwealth Department of Employment, Education and Training.

Anne Daly, Department of Economics, Research School of Social Sciences, The Australian National University, “A Comparison of Age-Earnings Profiles of Men in Three Countries: Australia, Great Britain and the United States”.

Akira Kawaguchi, Department of Economics, Research School of Social Sciences, The Australian National University, “The Effects of Wages, Income and Taxes on Married Women’s Labour Supply: Comparison between Individual-Income-Based Tax System and Joint-Income-Based Tax System”.

Discussants: Charles Mulvey, Department of Industrial Relations, The University of Western Australia.

Peter Smith, Department of Statistics, The Faculties, The Australian National University.

### 3. SPECIAL LECTURE

Chairman: Takashi Takayama, Japanese Studies Unit, The University of Western Australia.

Alan Powell, Impact Research Centre, The University of Melbourne, “The Reconciliation of Computable General Equilibrium and Macroeconomic Modelling: Grounds for Hope?”.

#### 4. ECONOMETRICS I

Chairman: David Giles, Department of Economics, The University of Canterbury.

Maureen Rimmer, Impact Research Centre, The University of Melbourne, and Department of Economics, La Trobe University, “Primary Factor Substitution in Manufacturing and the Real Wage Explosions”.

Ping Wu, Department of Econometrics, Monash University, “Testing for Block Effects and Misspecification in Regression Models Based on Survey Data”.

Discussants: Keith McLaren, Department of Econometrics, Monash University.

Ronald Bewley, Department of Econometrics, The University of New South Wales.

#### 5. MACROECONOMICS AND PUBLIC FINANCE

Chairman: Jeffrey Carmichael, School of Business, Bond University.

Tony Bryant, Department of Econometrics, The University of Sydney and Department of Economics, The University of Western Sydney, “Equilibrium Models of the Business Cycle: An Assessment”.

Harrie Hendrikx, Department of Economics, The University of Queensland, “What J-curve? Some Discussion about the Sequences of the Centre-Periphery Paradigm”.

Darryn Abraham, Department of Economics, The Faculties, The Australian National University, “Recipient Numbers and the Average Rate of Australian Age Pensions”.

Discussants: Jerome Fahrner, Research Department, Reserve Bank of Australia.

George Fane, Department of Economics, Research School of Social Sciences, The Australian National University.

Neville Norman, Department of Economics, The University of Melbourne.

## 6. FINANCE

Chairman: Philip Maxwell, School of Economics & Finance, Curtin University of Technology.

Jackie Johnson, Department of Accounting and Finance, The University of Western Australia, “The Use of Index Futures in Hedging Decisions: Australian Evidence”.

Garry Twite, Australian Graduate School of Management, The University of New South Wales, “The Pricing of SPI Futures Contracts with Taxes and Transaction Costs”.

Discussants: Jeffrey Carmichael, School of Business, Bond University.

Geoffrey Kingston, Department of Economics, The University of New South Wales.

## 7. ECONOMETRICS II

Chairman: Keith McLaren, Department of Econometrics, Monash University.

Muhammad Bhatti, Department of Econometrics, Mohash University, “Efficient Estimation of Random Coefficient Models Based on Survey Data”.

Guang Wan, Department of Agricultural Economics and Business Management, The University of New England, “Estimation of Seemingly Unrelated Production Functions with Error Components and Flexible Risk Effects”.

Discussants: Ray Byron, School of Business, Bond University.

David Giles, Department of Economics, The University of Canterbury.

## 8. CHINA

Chairman: Robin Ghosh, Department of Economics, The University of Western Australia.

Yanrui Wu, Department of Economics, The University of Adelaide, “Rural Industrialization in China: A Theoretical Exploration within a Macro Framework”.

Bing Zhao, Department of Economics, The University of New South Wales, “The H-O Theorem With Intermediate Goods in the Chinese Economy”

Discussants: Epictetus Patalinghug, College of Business Administration, The University of the Philippines.

Ray Trewin, Australian Bureau of Agricultural and Resource Economics

Kym Anderson, Centre for International Economic Studies, The University of Adelaide.

## 9. LABOUR ECONOMICS II

Chairman: Peter Kenyon, School of Economics and Commerce, Murdoch University.

Rushidan Rahman, National Centre for Development Studies, The Australian National University, “Factors Influencing Labour Allocation Among Self- Employed Rural Women in Bangladesh”.

Darcy McCormack, Department of Economics, La Trobe University, “An Analytical Examination of Youth Labour and Education”.

Discussants: Muthi Semudram, Faculty of Economics and Administration, The University of Malaya.

Robert Gregory, Centre for Economic Policy Research, The Australian National University.

Bruce Chapman, Centre for Economic Policy Research, The Australian National University.

**APPENDIX 2****THE ABSTRACTS****THE “LAW OF ONE PRICE” AND EXCHANGE RATE “PASS-THROUGH”  
IN THE SHORT RUN AND LONG RUN: A RECONCILIATION,  
SURVEY AND POLICY IMPLICATIONS**

by

Jayant Menon

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The variability of floating exchange rates has brought the relationship between exchange rates and the prices of internationally traded goods to the forefront of economic debate. In this paper an attempt is made to reconcile the literature on the “Law of One Price” (LOP) and exchange rate “Pass-Through” (PT) while deriving a number of propositions with respect to their interrelatedness. The rationale lies with the implications that violation of Test 1 and Test 2 of the LOP have for exchange rate PT in the long run. Having examined the factors that can contribute to incomplete PT in the short run but not the long run, it becomes apparent that the examination of the violations of Test 1 and Test 2 of the LOP are separate issues in detecting incomplete PT in the long run. We show that price discrimination between markets (violation of test 2) and imperfect substitutability between goods (violation of test 1), can account for incomplete and unequal PT in the long run. By separating the studies that have used some version of test 1 from those using test 2 in our survey of empirical literature, we highlight the fact that perfect substitutability between goods and perfect competition in different markets are independent conditions to attain the LOP even in the presence of perfect arbitrage. Incomplete PT in the short run and incomplete and unequal PT in the long run have a number of important policy implications. There may be a need to reconsider: (i) the effects of short term validity and long term misalignment of the exchange rate on price competitiveness of traded goods; (ii) the inflationary/deflationary effects of exchange rate depreciation/appreciation; and (iii) the applicability of the “small country” assumption for any trading nation; and more particularly the assumption of constant or exogenous terms of trade following exchange rate movements.

**INTERNATIONAL TRADE WITH LABOUR UNION DETERMINATION  
OF MINIMUM WAGES**

by

Robin Stonecash  
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Several authors have written on the effects of introducing a minimum wage into models of international trade. In most cases, the minimum wage is simply assumed. This paper sets up a framework for allowing a union to make a rational choice between a higher wage and the unemployment that its imposition might produce. Unions are allowed to form in each of the two countries in the model. Conditions for an internal equilibrium are stated and some preliminary comparative static results are presented.

**A COMPARISON OF AGE-EARNINGS PROFILES OF MEN IN THREE  
COUNTRIES: AUSTRALIA, GREAT BRITAIN AND THE UNITED STATES**

by

Anne Daly  
Department of Economics,  
Research School of Social Sciences  
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In Australia, Great Britain and the United States, earnings vary by age and by level of education. There are, however, important differences between the three countries in the shape of the aggregate age earnings profile. In the US, the profile was steeper and peaked at a later age than in Australia and Great Britain. The purpose of this paper is to consider possible explanations of these differences. There are three groups of explanations for rising earnings with age and education which we shall consider here: human capital, efficiency wages and the role of labour market institutions. Our empirical results suggest that differences in endowments are the major cause of differences in the shapes of the profiles. The flatter age earnings profiles of Australia compared with the US reflects lower levels of investment in human capital rather than showing a more egalitarian wage structure.

**THE EFFECTS OF WAGES, INCOME AND TAXES ON MARRIED WOMEN'S  
LABOUR SUPPLY: COMPARISON BETWEEN INDIVIDUAL-INCOME-BASED  
TAX SYSTEM AND JOINT-INCOME-BASED TAX SYSTEM**

by

Akira Kawaguchi  
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The paper estimates married women's labour supply taking account of a kinked budget line and simultaneous decision of participation and hours. The estimates are utilized for simulation of tax reforms. Wives' labour supply, welfare and equity are compared between ten alternative tax systems, five of which are joint-income-based tax systems and the other five are individual-income-based tax systems. The simulation shows that, as far as married women are concerned, the individual-income-based tax system is more equitable and efficient, and has a relatively small trade-off between equity and efficiency.

**THE RECONCILIATION OF COMPUTABLE GENERAL EQUILIBRIUM  
AND MACROECONOMIC MODELLING: GROUNDS FOR HOPE?**

by

Bruce Parsell  
Alan Powell  
Peter Wilcoxon  
Impact Research Centre  
The University of Melbourne  
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In the aftermath of the rational expectations debate and the onslaught of the New Classical economics, some builders of macroeconomic models have begun to change some of their habits, arguably for the better. In particular, neoclassical discipline is increasingly respected in the formation of the steady states or balanced growth solutions of the latest versions of several models (e.g. Australia's Murphy Model, and the McKibbin-Sachs Global Model). Also, the behaviour of certain variables (especially exchange rates and investment) increasingly tends to be linked to intertemporal optimization. In this paper we evaluate these innovations and illustrate the role of each using recent simulations of the Murphy and McKibbin-Sachs models. We conclude that conditions have never been better for convergence in the two streams of economy wide modelling.

**PRIMARY FACTOR SUBSTITUTION IN MANUFACTURING AND  
THE REAL WAGE EXPLOSIONS**

by

Maureen Rimmer  
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Department of Economics  
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In this paper an attempt is made to estimate the demand for labour in Australian manufacturing from time series data spanning 1962-63 through 1985-86. Over this period two major wage shocks occurred; the first in 1973-74 and the second in 1981- 82. The effects of these two events on the elasticity of primary factor substitution in manufacturing are estimated here. Of related interest are the movements in the capital intensity of the technology over the period; these movements are also estimated. Allowance is made for possible disequilibrium at the height of the wages shocks.

**TESTING FOR BLOCK EFFECTS AND MISSPECIFICATION IN  
REGRESSION MODELS BASED ON SURVEY DATA**

by

Ping Wu  
and  
Muhammad Bhatti  
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Monash University  
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Much applied work in econometrics and other social sciences involves regression analysis using survey data. Deaton and Irish (1983) and King and Evans (1986) considered an equicorrelated error term model and proposed one-sided Lagrange multiplier and locally best invariant tests, respectively. In this paper, however, we consider more general situations and construct tests for equicorrelation over different blocks and even over different subblocks using King and Wu's (1989) locally most mean powerful invariant test. A procedure of diagnostic checking for model adequacy based on testing simultaneously for omitted regressors and equicorrelation in the errors is then presented. We go on to use Monte Carlo studies to investigate the performance of our tests, which are finally applied to data from Bangladesh.

**EQUILIBRIUM MODELS OF THE BUSINESS CYCLE: AN ASSESSMENT**

by

Tony Bryant  
Department of Econometrics  
The University of Sydney  
and  
Department of Economics  
The University of Western Sydney  
KINGSWOOD NSW 2750

Equilibrium models of the business cycle, both real and nominal, form an important part of macroeconomic research into the causes of fluctuations in levels of economic activity. This paper presents an assessment of this class of models and finds that while the theoretical foundations of the models are quite weak, the empirical evidence concerning their relevance is mixed.

**WHAT J-CURVE? SOME DISCUSSION ABOUT THE SEQUENCES OF THE  
CENTRE-PERIPHERY PARADIGM**

by

Harrie Hendrikx  
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The paper is concerned with global policy perspectives which incorporate the trend analysis that centres around the centre-periphery paradigm. The paradigm contains an internally consistent mechanism which centres around capital flows. These are seen to originate with hemispheric inter-centre-periphery displacement which relates to the changing terms of trade between factors of production. The paper discusses the process whereby the topic has developed; it touches on some methodological issues; it describes the sequences and their main phases; it describes the main hypotheses which can be tested to indicate the statistical reality of the latest sequence; it discusses some aspects of the paradigm's policy relevance; and it provides an overview of some aspects of the author's research.

**RECIPIENT NUMBERS AND THE AVERAGE RATE OF AUSTRALIAN AGE PENSIONS**

by

Darryn Abraham  
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In this paper a simple model of redistributive transfers by a support-maximising government is presented. At the government's optimum, an increase in the size of a recipient group will decrease the average subsidy paid to its members unless the capacity of the group to make political contributions is improved. This prediction is tested against the history of the average rate of age pension paid in Australia since 1948-49. The estimated relationship is inconsistent with the predictions of the model unless certain untested conditions hold, but suggests that further increases in the size of the pensioner numbers will eventually lead to a decrease in the rate of age pension.

**THE USE OF INDEX FUTURES IN HEDGING DECISIONS:  
AUSTRALIAN EVIDENCE**

by

Jackie Johnson  
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Hedging with index futures can substantially reduce fluctuations in the value of a stock portfolio. The effectiveness of hedging, involving a naive one-to-one hedge speculation, on the basis and estimated risk minimizing hedges, is tested. In all cases the hedged positions proved significantly less risky (in terms of standard deviation) than the unhedged positions. Use of the naive hedge proves more effective than more complex hedges.

## **THE PRICING OF SPI FUTURES CONTRACTS WITH TAXES AND TRANSACTION COSTS**

by

Garry Twite  
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This paper examines the pricing behaviour of the futures contracts written on the ASE All Ordinaries Share Price Index, incorporating taxes and transaction costs with the no-arbitrage pricing relationship. Incorporating a tax structure with a zero tax rate on dividends and a positive tax rate on interest and trading income reduces the predicted futures price. However, the observed futures price remains statistically significantly different from the predicted price after the incorporation of taxes. The magnitude of the difference between the observed futures price and the predicted price is generally not large enough to cover the taxes and transaction costs associated with trading in the futures and share markets. The observed price is generally not sufficiently large to offer profitable arbitrage opportunities to investors, when bid-ask spreads of approximately 0.2% for the futures market and 1% for the share market are assumed. The positive relationship between the magnitude of the boundary violation and the time to maturity of the futures contract revealed in the pricing relationship between the share market and futures market, suggests that the level of transaction costs is underestimated.

## **EFFICIENT ESTIMATION OF RANDOM COEFFICIENT MODELS BASED ON SURVEY DATA**

by

Mahammad Bhatti  
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Ever since the introduction of block sampling by the United States Census Bureau, the application of statistical methods to blocked survey data has grown and considerable interest has been shown by econometricians and other social scientists. Deaton and Irish (1983) and King and Evans (1986) considered an equicorrelated error term model with fixed coefficients and proposed one-sided Lagrange multiplier and locally best invariant tests for testing for an equicorrelated parameter, respectively. However, in practice, there are situations in which economic structures vary, so it is possible that the response parameters may also vary over blocks, clusters, or regions. In this paper we consider an efficient estimation procedure for the linear regression model with stochastic coefficients and equicorrelation across blocks. An algorithm for the maximum likelihood estimator is

presented, using King's (1986) approach for an error component model. Finally its application to a model based on Bangladesh data is discussed.

**ESTIMATION OF SEEMINGLY UNRELATED PRODUCTION FUNCTIONS  
WITH ERROR COMPONENTS AND FLEXIBLE RISK EFFECTS**

by

Guang Wan  
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In this paper, seemingly unrelated production functions (SUPF) with reasonable risk implications and error components are proposed. These functions are distinguished from others in that they allow the risks (indicated by variances) of outputs to change in any direction in response to input changes. This is an extension of the work by Just and Pope (1978). It is also a generalisation of the models considered by Wan, Griffiths and Anderson (1989). The paper contains a discussion of the economic implications of SUPF as well as a multi-stage estimation procedure.

**RURAL INDUSTRIALIZATION IN CHINA:  
A THEORETICAL EXPLORATION WITHIN A MACRO FRAMEWORK**

by

Yanrui Wu  
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This paper looks at some important aspects of industrialization in rural China by putting rural industry into a macroeconomic framework. The effects of the recent rural industrial boom on the economy are discussed according to the traditional 'Dutch Disease' theory. Finally, in order to examine these effects further, a computable general equilibrium model is developed.

**THE H-O THEOREM WITH INTERMEDIATE GOODS IN THE CHINESE ECONOMY**

by

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The purpose of this paper is to analyse changes in China's trade pattern during the period of 1970-1986 by explicitly analysing trade in intermediate products. In doing so, the empirical evidence suggests that the H-O Theorem should be interpreted from the perspective of multi-stage production when traded inputs are allowed.

**FACTORS INFLUENCING LABOUR ALLOCATION AMONG SELF-EMPLOYED RURAL WOMEN IN BANGLADESH**

by

Rushidan Rahman  
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This paper examines the labour allocation of self-employed female workers in Bangladesh. Such workers allocate their time by equalising the utility from the marginal product of self employment with the marginal utility from housework. Family size is directly related to the marginal utility from housework and therefore inversely related to self employment. The other important variable which influences the amount of self employment is the amount of capital in the enterprise, which has a significant positive influence on her labour input. This influence, along with the fact that the marginal product of capital in these enterprises is greater than the rate of interest charged by formal lending institutions, provides a rationale for expanding capital in these enterprises.

**AN ANALYTICAL EXAMINATION OF YOUTH LABOUR AND EDUCATION**

by

Darcy McCormack  
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This paper reviews and analyses the labour supply and demand decisions of participants in the Australian youth labour market over the last two decades. By working from a theoretical basis it attempts to estimate labour supply and demand equations. The results indicate that while some variables support the predictions of theory, the role of others is unclear. A youth education participation equation is also estimated.

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