The 29th PhD Conference in Economics and Business

The University of Western Australia

November 2016

Perth, WA

CONFERENCE REPORT

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CONFERENCE SUMARY

The PhD Conference in Economics and Business is an annual event that brings together students and academics from most Australian universities, as well as some overseas institutions. It was first initiated in 1987 by the Business School of the University of Western Australia. The conference is currently co-organised by the Australian National University, Monash University, University of Queensland and University of Western Australia. The location of the conference has alternated between these four universities.

The basic objective of the conference is to help with the training of promising doctoral students by giving them the opportunity to gain feedback on and exposure for their research. It also enables PhD students to meet with their peers and to make contact with senior academics and researchers with similar interests, as well as acting as an informal job market whereby students can demonstrate their abilities and attract attention to their prospects.

The format of the conference has remained true to the original concept whereby each student is assigned a discussant to comment on their research paper. The discussants, who are specially chosen to match the subject matter of the papers, include an impressive list of senior researchers with extensive experience in supervision. This highlights an important feature of the conference which is the outstanding quality of the feedback given to the students by the discussants and other participants. Additionally, the conference is a productive combination of research in both economics and finance, something that is rare in Australia.[1]

The 29th PhD Conference was held at the UWA Business School in November 2016 and involved 32 students from a number of Australian and NZ universities and 32 discussants. The conference was opened by Robyn Owens, Deputy Vice-Chancellor (Research) at UWA. A number of extremely interesting papers were presented and it was clear from the quality of the students and discussants that the future of research in economics and finance is indeed exciting.

Four prizes were determined by a secret ballot of all participants and the winners were:

- **Best Presenter, Economics** -- David Delacrétaz, University of Melbourne
- **Best Presenter, Finance --** Emma Zhang, University of New South Wales
- **Best Discussant, Economics --** Paul Frijters, University of Queensland
- **Best Discussant, Finance --**Terry Walter, University of Sydney, and Mardi Dungey, University of Tasmania

Two special prizes were awarded to the student with the most potential, chosen by Martin Richardson (ANU) and Izan (University of Western Australia). The winners were:

- **Student with Most Potential, Economics** -- David Delacrétaz, University of Melbourne
- **Student with Most Potential, Finance** -- Jianlei Han, University of Queensland

[1] For details of this history of the conference, see K. W. Clements, "The PhD Conference in Economics and Business Two Decade On", Economic Papers, 2012, 29(2): 169-80.

Mei Han was the Conference Coordinator and she did an outstanding job in dealing with all aspects of the arrangements and ensuring that the conference participants were well catered for. Mei Han was assisted by Aiden Depiazzi, Derek Ding, Adam Hearman, Mosha Hussain, Jian Liang, Haiyan Liu, David Marshall, Jiawei Si, Grace Taylor and Long Vo. We would like to extend our sincere thanks to all members of the conference team for their hard work.

The PhD Conference Hall of Fame was created in November 2007 on the occasion of the 20th anniversary of the Conference to acknowledge people who have made outstanding contributions to the conference over the long term. At this year's conference, Philip Adams (Victoria University), Doug Foster (University of Sydney) and Alan Woodland (UNSW) were inducted into the Hall of Fame and we would like to thank them for their devotion to the Conference.

The Conference would not have been possible without the generous financial support of a number of sponsors to whom we are most grateful. The names of the sponsors are listed below.

The detailed program and abstracts are given later in this report.

Izan
and
Ken Clements
Conference Convenors

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University of Queensland

University of Western Australia

WA Office of the Auditor General

PROGRAM

OPENING CEREMONY: WELCOME AND OPENING ADDRESS

- **Professor Robyn Owens**, Deputy Vice-Chancellor (Research), University of Western Australia

Session Chair: **Izan**, University of Western Australia

SESSION 1: TAXATION AND TRADE

- **Son Thanh Nguyen**, University of Western Australia
  Production Network and Its Impact on International Trade: A Comparison between East Asia and European Union

- **Shane Johnson**, Australian National University
  Taxpayer Responsiveness to Marginal Tax Rates: Bunching Evidence from the Australian Personal Income Tax System

Session Chair: **Peter Robertson**, University of Western Australia

Discussants: **Paul Gretton**, Productivity Commission
Alan Woodland, University of New South Wales

SESSION 2: SKILL AND ATTENTION OF DIRECTORS

- **Attila Balogh**, University of Sydney
  Professional Expertise on Boards, Corporate Lifecycle, and Firm Performance

- **Emma Jincheng Zhang**, University of New South Wales
  Preoccupied Independent Directors

Session Chair: **Millie Chang**, University of Western Australia

Discussants: **Ray da Silva Rosa**, University of Western Australia
Martin Bugeja, University of Technology, Sydney

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- **Tony So**, University of Auckland
  Rank as an Inherent Incentive: Experimental Evidence from a Cognitively Challenging Task

- **Zack Dorner**, Monash University
  Crowding In or Crowding Out? A Laboratory Experiment on Intrinsic Motivation and Extrinsic Incentives

Session Chair: **Elisa Birch**, University of Western Australia

Discussants: **Paul Frijters**, University of Queensland
Kenan Kalayci, University of Queensland

SESSION 4: DIVIDEND POLICY

- **Yiqing Dai**, University of Adelaide
  Value Investing with Maximum Dividend to Market Ratio

- **Derek Ding**, University of Western Australia
  Impact of Managerial Incentive on Dividend Payout: Evidence from Australia

Session Chair: **Marvin Wee**, University of Western Australia

Discussants: **Richard Heaney**, University of Western Australia
Terry Walter, University of Sydney

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- **Chandika Gunasinghe**, Griffith University
  Fiscal Policy, Economic Growth and Income Inequality: A Case Study on Australia

- **Kagiso Mangadi**, Macquarie University
  Identifying Terms of Trade Shocks in a Developing Country using a Sign Restrictions Approach

Session Chair: **Rod Tyers**, University of Western Australia

Discussants: **Jeffery Sheen**, Macquarie University
Markus Brueckner, Australian National University

SESSION 6: DEFAULT AND BANKRUPTCY

- **Guangqian (Isaac) Pan**, Australian National University
  Patience is a Virtue: Evidence from Bankruptcy

- **Ye Ye**, University of Sydney
  Strategic Default and Capital Structure Decision

Session Chair: **Ann Tarca**, University of Western Australia

Discussants: **John Simon**, Reserve Bank of Australia
Michael Skully, Monash University

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- **Rebecca Owusu Coffie**, University of Western Australia
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Session Chair: **James Fogarty**, University of Western Australia

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Ray Trewin, Australian National University

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- **Luke Hartigan**, University of New South Wales
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Bonsoo Koo, Monash University

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- **Kelly Trinh**, University of Queensland
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Reza Hajargasht, University of Melbourne

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- **Qiuyang (Mars) Chen**, Monash University
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Session Chair: **Bei Li**, University of Western Australia

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Philip Adams, Victoria University

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- **Neha Swami**, University of Melbourne
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Session Chair: **Michael McLure**, University of Western Australia

Discussants: **Geoff Kingston**, Macquarie University
Bob Gregory, Australian National University

ABSTRACTS

Production Network and Its Impact on International Trade: A Comparison between East Asia and European Union

Son Thanh Nguyen
The University of Western Australia

The emergence of production networks has changed the structure of international trade as reflected by a large share of intra-regional trade flows and rising value of intermediate goods trade. This paper aims to examine and compare the impact of production networks on international trade in East Asia and European Union. The results show that at the global level, intermediate goods export is more sensitive to trade barriers than total goods. At regional level, a comparison between East Asia and European Union shows service link costs in East Asia have been successfully reduced. Despite the efforts directed towards export market diversification in East Asia, the region is still more dependent on other regions' economic conditions than European Union is.

Taxpayer Responsiveness to Marginal Tax Rates: Bunching Evidence from the Australian Personal Income Tax System

Shane Johnson
Australian National University

We examine taxpayers' responsiveness to marginal tax rates in Australia. Utilising the universe of taxpayer records from 2000 to 2014, we estimate the degree to which taxpayer's bunch at kink points in the Australian personal tax system, and the associated elasticity of taxable income. Unlike previous studies, we find sharp bunching at all kink points in the Australian tax system. We estimate the associated observed elasticity of taxable income and find elasticities ranging from effectively zero for wage earners, to around 0.26 for self-employed tax filers. Exploiting the detail and size of the dataset we find substantial heterogeneity in responses to changes in marginal tax rates over time and across a range of sub-groups, with higher elasticities for married females, females with children and younger tax filers.

Professional Expertise on Boards, Corporate Lifecycle, and Firm Performance

Attila Balogh
University of Sydney

This study demonstrates that suitable professional expertise on corporate boards can have a significant impact on firm outcomes. We examine diversity of expertise on boards, its link to shareholder value, and extend the literature by introducing corporate lifecycle and industry sectors to explore when specific types of expertise matter. Exploring dominant cash flow patterns, we find a strong link between firm value and financial, mining and engineering expertise of early stage firm boards across ASX-listed companies in 2014. We also find a relationship between firm performance and financial, mining, and other unclassified board expertise for companies in the shake-out stage.

Preoccupied Independent Directors

Emma Jincheng Zhang
University of New South Wales

Busy independent directors are not constantly "busy" and "independent" all the time and in all firms they serve for. To reflect this, I identify the actual time periods that a firm's independent directors are preoccupied by serious external circumstances. These external circumstances include severe health issues, national awards (for outside activities) and major distractions from more important positions at unaffiliated firms where the director concurrently serves, such as major illness or turnover of the CEO or other director on the same committee, firm underperformance, financial misconduct investigations, financial distress and large acquisitions and divestitures. On average 22% of independent directors are identified to be preoccupied each year. I find that these directors have lower meeting attendance and more frequently relinquish less prestigious directorships, conditional on poor firm performance. Firms with a higher proportion of preoccupied independent directors tend to have lower firm value and worse M&A performance. These firm-level negative effects are stronger when the preoccupied independent directors have important monitoring responsibilities.

Rank as an Inherent incentive: Experimental Evidence from a Cognitively Challenging Task

Tony So
University of Auckland

We study the impact of relative performance feedback as an inherent incentive mechanism to enhance productivity in a cognitively challenging task. In each of multiple rounds subjects are shown two cue values, Cue A and Cue B, and asked to predict the value of a third variable X, which is a function of the two cue values. We use forecast errors, the absolute difference between the predicted value of X and the actual value of X, as the metric for performance. Our treatments include: (1) piece rates, where subjects are paid on the basis of only their own absolute errors; (2) piece-rate-win-lose, where subjects are paired and paid a piece rate that depends on their own absolute errors only, but informed about whether they did better or worse than their partners; (3) a two-person winner-take-all-tournament where subjects are paired and the one with the smaller error earns a positive payoff while the other earns nothing. We find that average forecast errors are smaller in the piece-rate-win-lose treatment, compared to the piece-rate and the winner-take-all-tournament treatments, with no difference between the last two.

Crowding In or Crowding Out? A Laboratory Experiment on Intrinsic Motivation and Extrinsic Incentives

Zack Dorner
Monash University

This paper uses a laboratory experiment to investigate the extent to which intrinsic motivation can be crowded in or out by adding and then removing monetary or non-monetary incentives. The impact of size and type of incentive on motivation is tested between subjects. Furthermore, we investigate whether this effect is homogeneous or heterogeneous depending on baseline intrinsic motivation to address a gap in the literature. The analysis includes survey data on participants' pro-environmental and health behaviours, along with physically measured body mass index and waist size. The findings of the project may be useful for informing health and environmental policy.

Value Investing with Maximum Dividend to Market Ratio

Yiqing Dai
University of Adelaide

The book-to-market ratio (BM) is a noisy metric for value investing because book value is a weak indicator of intrinsic value. Using the dividend discount model of Miller and Modigliani (1961), this paper proposes an alternative metric for value investing: the maximum-dividend-to-market ratio (MDM), where maximum dividend is defined as profitability minus investment. Test results show that MDM effectively distinguishes between undervalued stocks and overvalued ones, leading to substantial economic gains. Further, MDM is a parsimonious, more efficient measure to estimate expected returns than a linear model consisting of BM, profitability and investment. An investor can increase a portfolio's Sharpe ratio by adding a MDM factor rather than a combination of the BM, profitability and investment factors.

Impact of Managerial Incentive on Dividend Payout: Evidence from Australia

Derek Ding
University of Western Australia

This paper investigates the impact of managerial incentives in the form of executive compensation on a firm’s dividend payout, both in terms of the likelihood of payment and the amount paid. The results show that CFO compensation has more negative impacts on the likelihood of paying dividends while CEO equity compensation determines how much dividends to be paid. Further, partially franked firms are usually the most mature firms while the no franked firms are the newest firms.

Fiscal Policy, Economic Growth and Income Inequality: A Case Study on Australia

Chandika Gunasinghe
Griffith University

This paper investigates the impact of fiscal policy on economic growth and income inequality in Australia under a structural vector autoregressive (SVAR) framework using annual data from 1962 to 2012. Our empirical results reveal that: (1) both tax- and debt-financed fiscal policies have trade-offs between economic growth and net income equality; (2) direct tax system is progressive whereas indirect tax system plays a neutral role in the determination of income redistribution; (3) the negative effects of deficit financing on economic growth outweigh its positive effects; and (4) financing government expenditure through indirect taxes does not create a trade-off between equity and efficiency.

Identifying Terms of Trade Shocks in a Developing Country using a Sign Restrictions Approach

Kagiso Mangadi
Macquarie University

Using data for Botswana from 1960 to 2012, we examine the responses of macroeconomic variables to four generalized positive terms of trade shocks—global demand, globalizing, sector-specific and global supply. A sign restricted structural vector autoregression model with a penalty function is estimated to identify the four shocks. While positive global demand and globalization shocks are both expansionary, they have opposite effects on inflation. A positive commodity market specific shock dampens real GDP growth and is inflationary, suggesting a possible Dutch disease response. A negative global supply shock suppresses both output growth and inflation. All but the last shock lead to a significant declining interest rate probably reflecting improved credit risk. Monetary policy contraction is recommended for the first shock, and expansion for the others.

Patience is a Virtue: Evidence from Bankruptcy

Guangqian (Isaac) Pan
Australian National University

Pre-packaged reorganization (prepack) during Chapter 11 bankruptcy has been praised for shortening process and lowering bankruptcy costs. We propose an information acquisition model where creditors trade off higher bankruptcy costs under traditional reorganization with the benefits of higher accuracy in filtering the inefficient from efficient firms. The decision to prepack or not is governed by the value of the signal they are able to acquire under traditional bankruptcy. My empirical evidence supports these predictions. Namely, firms choosing traditional reorganization are typically those with precise information signals (i.e. low intangible assets) and higher down side risk (i.e. lower Z-score). These firms subsequently have a lower rate of emerging from traditional Chapter 11 but a higher survival rate conditional on emergence. This result is robust after controlling industrial distress, economic downturns, CEO turnover, professional costs, DIP financing and several judicial variables. Interestingly, direct costs do not lower firms' survival rate after traditional Chapter 11, but would increase the firms' refiling after prepacks.

Strategic Default and Capital Structure Decision

Ye Ye
University of Sydney

This paper investigates whether overleverage identifies companies' strategic default incentives. The results show that overlevered firms have lower equity beta than their counterparts. The strategic default option becomes more valuable when the firms are overlevered. Firms are more likely to be overlevered when they have more strategic advantages over their debt holders (i.e. high liquidation costs, high shareholder's bargaining power, and low renegotiation frictions). In addition, for bankrupt firms, overleverage successfully identifies the high probability of filing for the reorganisation bankruptcy code and emerging from the reorganisation plan. Overall, these findings suggest that overleverage is the outcome of an endogenous capital structure decision, which implies a strategic incentive to default.

The Income and Price Sensitivity of Diets Globally

Haiyan Liu
University of Western Australia

This paper analyses detailed consumption patterns of food items in a large number of countries with a three-stage budgeting approach. Under the assumption of separable preferences, the first stage separates total consumption into food and non-food; the second splits food into the major food groups; and the third stage allocates consumption to the elementary goods within each food group. The model is implemented for the second two stages with 25 food items divided into 6 groups: staples, meats, dairy, fruit and vegetables, sweet things and other food. For each group, there is a system of conditional demand equations (with one equation for each elementary good), which depend on expenditure and prices within the group. The six systems are estimated with unpublished International Comparison Program data for more than 100 countries. These estimates are then combined with estimates of the group demand equations, which depend on total food consumption and prices indexes of the six groups, to give the overall income and price responses, conditional upon total food.

A Scale Adjusted Latent Class Model Application to Understand Small-Scale Rice Farmers' Choices for New Production Technology

Rebecca Owusu Coffie
University of Western Australia

New agricultural technologies for rice farmers are vital to raising agricultural productivity and food security in sub-Saharan Africa. However, adoption and diffusion of such technologies has been slow. In this paper, we survey farmers in two rice production regions in Ghana to gain insight into their preferences for technology attributes that improve rice production, and those that support household food security. We apply an integrated model that accounts for latent class choice, latent variables and scale heterogeneity to the data. Our results reveal that rice farmers hold a range of preferences over new technologies and that their food security status can influence their technology choice.

Data-Driven Particle Filters for Particle Markov Chain Monte Carlo

Patrick Leung
Monash University

This paper proposes new automated proposal distributions for sequential Monte Carlo algorithms, including particle filtering and related sequential importance sampling methods. The weights for these proposal distributions are easily establish, as is the unbiasedness property of the resultant likelihood estimators, so that the methods may be used within a particle Markov chain Monte Carlo (PMCMC) inferential setting. Simulation exercises, based on a range of state space models, are used to demonstrate the linkage between the signal-to-noise ratio of the system and the performance of the new particle filters, in comparison with existing filters. In particular, we demonstrate that one of our proposed filters performs well in a high signal-to-noise ratio setting, that is, when the observation is informative in identifying the location of the unobserved state. A second filter, deliberately designed to draw proposals that are informed by both the current observation and past states, is shown to work well across a range of signal-to-noise ratios and to be much more robust than the auxiliary particle filter, which is often used as the default choice. We then extend the study to explore the performance of the PMCMC algorithm using the new filters to estimate the likelihood function, once again in comparison with existing alternatives. Taking into consideration robustness to the signal-to-noise ratio, computation time and the efficiency of the chain, the second of the new filters is again found to be the best- performing method. Application of the preferred filter to a stochastic volatility model for weekly Australian/US exchange rate returns completes the paper.

Alternative HAC Covariance Matrix Estimators with Improved Finite Sample Properties

Luke Hartigan
University of New South Wales

HAC estimators are known to produce test statistics that reject too frequently in finite samples. One neglected reason comes from using the OLS residuals when constructing the HAC estimator. If the regression matrix contains high leverage points, such as from outliers, then the OLS residuals will be negatively biased. This reduces the variance of the OLS residuals and the HAC estimator takes this to signal a more accurate coefficient estimate. Transformations to reflate the OLS residuals and offset the bias have been used in the related HC literature for many years, but these have been overlooked in the HAC literature. Using a suite of simulations I provide strong evidence in favour of replacing the OLS residual-based HAC estimator with estimators related to extensions of either of the two main HC alternatives. In an empirical application I show how different inference from using the alternative HAC estimators can be important, not only from a statistical perspective, but also from an economic one as well.

The Impact of Large Solar and Wind Generation on the New Zealand Electricity Market

Mina Bahrami Gholami
University of Auckland

The effect of grid connection of large-capacity solar and wind power t is examined. We focus on comparing the wholesale electricity prices resulted from the 6 scenarios of wind integration as well as solar plus wind aggregation into the New Zealand electricity market. The major contribution of this paper is figured by assuming that wind is partially replaced by solar and investigated if solar joined wind power results in better outcome compared with only wind expansion models. To have a better understanding of solar and wind contribution we simulate the power market based on 2006 and 2007 and forecast the year 2025 when solar and wind have sufficient time to develop yet it is not too far. Market power is taken into account because we are interested in evaluating the long term impact of the defined scenarios. We employ the market pricing model SWEM, Simulation of Wind in Electricity Markets, and modify the model in order to allow us analysing solar power contribution both in the national and nodal scopes.

Results show that generally solar power is a better match for the Northern part of the North Island where receives significantly more sunny hours annually; however, solar integrated system stimulates market power coming down towards the South Island. This effect is further intensified over dry year, 2006, using large intermittent generation, solar and wind. In national level, both SW2 and W3 are prior scenarios in term of diminishing the wholesale price. From the producer view point, is still an open question for this study in order to deliver a better solution.

**Non-Linear Time-Varying Stochastic Frontier Model:
Assessing Determinants of Economic Growth**

Kelly Trinh
University of Queensland

In this paper we propose a stochastic frontier model in which i) the slope coefficients of production/cost function are time-varying, ii) inefficiency and the effects of determinants of inefficiency vary across individuals and over time. We show that the model specification is flexible enough to accommodate a number of commonly used production/cost functions (e.g., Cobb-Douglas, translog) and different types of trend behaviours (e.g., linear, quadratic). We also present a formal test for time-variation in the parameters. Bayesian tools are used to estimate the proposed model and to make inferences about the individual firm-specific inefficiencies. The proposed model is applied in a study of economic growth of 21 OECD countries. We found the evidence suggesting inefficiencies are time-varying. Foreign trade investment plays an important role as influencing the production frontier rather than inefficiencies.

Investor Sentiment and the Cross-Section of Japanese Stock Returns

Joyce Khuu
Curtin University

This paper examines sentiment as an augmentation to the Fama and French three-factor model. International tests of empirical asset pricing models show that only three pricing factors are relevant, but perhaps not sufficient, in modelling the cross-section of Japanese stock returns. We find that that sentiment can help explain the cross-section of Japanese stock returns and is able to remove excess returns when added to the three-factor model. We also observe asymmetric effects of sentiment on stocks in the cross-section of size. Small stocks and large stocks are more affected by sentiment. This paper demonstrates that the addition of a factor capturing sentiment should be considered when modelling Japanese stock returns.

Institutional Order Illiquidity and Expected Stock Returns

Qiuyang Chen
Monash University

This study proposes a new approach for estimating the adverse selection component of illiquidity, and links the new measures to asset pricing. Motivated by Kyle's (1985) price impact model, we decompose the aggregate price impact into institutional and individual components by conditioning order flows on the identity of different investor classes. The asset pricing analysis shows that the positive illiquidity premium is predominantly driven by the institutional order illiquidity, and that individual order illiquidity plays no role in explaining stock returns. Further analyses on the buy- and sell- component of institutional/individual order illiquidity suggest that institutional sell-order illiquidity is the most significantly priced price impact variable. The significant pricing of institutional order illiquidity is supported by both the information and liquidity channels of institutional trading.

Solving Sequential Decision Problems via Continuation Values

Qingyin Ma
Australian National University

We study a solution method for sequential decision problems based around the continuation value function, rather than the value function. This approach turns to have significant advantages. One is that continuation value functions are smoother, allowing for sharper analysis of optimal policies and more efficient computation. Another is that, for a range of problems, the continuation value function exists in a lower dimensional space than the value function, mitigating the curse of dimensionality. In one typical experiment, the lower state dimension reduces computation time from over a week to less than three minutes.

Matching with Quantity

David Delacrétaz
University of Melbourne

We consider matching problems without transfers and with exogenous priorities where some agents demand two units of the same object while others only demand one unit. Applications of this model include the matching of children to day-care centers, students to exchange programs and refugees to localities. We show that, in this environment, the set of stable matchings may not possess same properties as in the canonical school choice model and may even be empty. We propose an algorithm to find an undominated stable matching whenever one exists.

On the Relation between Liquidity and the Futures-Cash Basis: Evidence from a Natural Experiment

Jianlei Han
University of Queensland

We use a natural experiment to test the hypothesis that liquidity and pricing efficiency causally affect each other. During and after the 2015 Chinese market crash, regulators prohibit the arbitrage activities in the index futures and cash markets. The resulting shift in the arbitrage boundary leads to the breakdown of the two-way positive causality relation between spreads and the absolute futures-cash bases, and this treatment effect is not confounded by the market crash effect. We thus confirm that the relation between liquidity and basis is not driven by the omitted variable bias, but is indeed due to the arbitrage force.

The Modelling of Noncognitive Skills: Beyond the Factor-Analytic Framework

Felix Leung
University of Sydney

The body of evidence in favour of a five-factor structure in the modelling of personality traits is consistent with not only a factor analysis model but also a mixture model. A necessary condition for a latent variable model to be considered a characterisation of the data generating process, and thus for the latent variables to be given any interpretation, is that the latent variable model must be shown to have a marginal likelihood higher than other candidate models. Different factor analysis models and mixture models are estimated on a dataset from the HIDLA survey. The Five-Factor Model does not fulfil this condition.

Hours Worked by General Practitioners and Waiting Times for Primary Care

Megha Swami
University of Melbourne

Over the past decade concerns about access to primary health care services have been growing. A key factor contributing to this rising concern is the changing workload patterns and labour supply of General Practitioners (GPs). This paper investigates this issue by estimating the causal effect of hours worked by general practitioners (GPs) on waiting times in primary care using the MABEL longitudinal survey of Australian doctors. Using a Fixed Effects Instrumental Variable approach, our analyses take into account the possible endogeneity of hours worked due to both time-invariant and time-varying unobserved factors that might be correlated with GP's labour supply and waiting times. We also control for a rich set of individual GP characteristics, practice features and characteristics of the practice location. Our results suggest that waiting times do respond to changes in hours worked by GPs. An increase in the average hours worked by 10 percent would reduce average waiting time for a patient by about 12 percent. These results are largely driven by female GPs. Female GPs work much fewer hours than male GPs due to significant negative effect of childbearing on women labour supply. As a result, our instruments capturing family characteristics work well only for female GPs.

Policy Choice in a Complicated Health Insurance Market: Do People Get It Right?

Nathan Kettlewell
University of New South Wales

This paper evaluates health insurance policy selection using a discrete choice experiment closely calibrated to the Australian private health insurance market. The experimental approach overcomes some limitations of revealed preference research in this area. The results indicate that consumers are likely to make choices that violate expected utility theory, use heuristic decision strategies, and over-insure relative to minimising out-of-pocket costs. Decision quality is significantly lower when choosing a bundled hospital/ancillaries health insurance policy (compared to stand-alone ancillaries cover), which is the policy type most consumers purchase in Australia.

Infinite Hidden Markov Switching VARS with Application to Macroeconomic Forecast

Chenghan Hou
Australian National University

This paper develops vector autoregressive models with infinite hidden Markov structures. This is motivated by the recent empirical success of hierarchical Dirichlet process mixture models in financial and macroeconomic applications. We first develop a new Markov chain Monte Carlo (MCMC) method built upon the precision-based algorithms to improve computational efficiency. We then investigate the forecasting performance of these infinite hidden Markov switching models. Our forecasting results suggest that 1) models with separate infinite hid- den Markov processes for the VAR coefficients and volatilities in general forecast better than other specifications of infinite hidden Markov switching models; 2) us- ing a single infinite hidden Markov process to govern all model parameters tends to forecast poorly; 3) most of the gains in forecasting GDP inflation and GDP growth seem to come from allowing for time-variation in volatilities rather than conditional mean coefficients. In contrast, allowing time-variation in all model parameters is important in forecasting short-term interest rate.

Jump Risk in the Indian Financial Market

Mohammad Abu Sayeed
University of Tasmania

This paper examines the jump risks for banking sector and non-banking financial sector of India using intra-day high frequency data. We observe wide variation in jump detection rates across different methods. Our test results show that the banking industry is associated with higher degree of jump risk compared with the market whereas the result is opposite for the FI industry. The intra-day jump test results of Indian financial stocks reveal existence of intra-day and weekly seasonality in jump pattern in contrast with the general description of jump occurrences in early literature as a Poisson distribution.

Confidence Intervals for the Degree Distribution of a Graph under Induced Subgraph Sampling

Robert Garrard
University of Adelaide

We study the problem of constructing confidence intervals for the degree distribution of a graph when degrees are sampled via induced subgraph sampling. This sampling method results in observations that are not independent, an ill-conditioned design matrix, and noise whose covariance matrix depends on nuisance parameters. We propose a Monte Carlo method akin to a parametric bootstrap whereby the degree distribution is estimated using a truncated singular value decomposition and several graphs respecting the estimated degree distribution are constructed randomly from which we may draw pseudosamples. For each graph the relevant quantiles of the estimator are determined and confidence intervals are constructed by taking the minimum and maximum values of the respective quantiles over all the graphs.

Interconnections of the Industries in the Economy: A Network Approach

Evgeniya Goryacheva
University of Technology Sydney

This paper uses a network approach to investigate the interrelation be- tween industries in the economy. I consider the economy as a network of the industries connected with each other through the product flows. I pro- pose dynamic directed weighted network formation model. According to the model industry's position in a network and productivity level affect its probability of a new link adoption. I apply a empirical methodology to the data obtained from the input-output tables in order to identify the key factors affecting the changes of the technological network.

The Effects of Sovereign Credit Rating on Foreign Direct Investment

Peilin Cai
University of Sydney

This paper examines the relationship between sovereign credit ratings and FDI flows from 31 OECD donor countries to 72 recipient (OECD and non-OECD) countries over the period of 1985-2012. There are three main findings in the paper. First, sovereign credit ratings of donor and recipient are important drivers of bilateral FDI flows. FDI in general flows from low-rated donor countries to high-rated recipient countries. Second, an OECD recipient receives high FDI inflow when its credit rating is high, whereas a non-OECD recipient receives high FDI inflow when its credit rating is low. Third, countries have more FDI inflows when their geographic region has higher average credit rating compared to other regions.

The Effect of Non-Permanent Contractual Employment on Financial Hardship

Neha Swami
University of Melbourne

The increasing incidence of non-permanent contractual forms of employment raises the question about the consequences of these types of employment on workers' well-being. This study uses data from the Household, Income and Labour Dynamics in Australia (HILDA) survey to examine how fixed-term and casual employment affect financial hardship among individuals. To estimate the relationship between employment and financial hardship, I use multivariate ordered logit fixed-effects models that account for unobserved heterogeneity, and a rich set of individual level characteristics. My results indicate that, for men, casual employment is associated with more financial hardships after controlling for a rich set of observed factors. However, mechanisms analysis suggests once I account for level of income, employment shocks (job loss and job change), and hours worked, estimates become considerably weaker in magnitude as well as significance. For women, particularly those with caring responsibilities, accounting for potential mechanisms (income, employment shocks, and hours worked) has relatively small effect on the estimates of casual employment and it continues to be directly and significantly associated with more financial hardships. Fixed-term employment is not associated with more financial hardship for either men or women.

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