



# The 12<sup>th</sup> Joint Economics Symposium of Five Leading East Asian Universities

(Fudan University, Keio University, National Chengchi University, National University of Singapore, Yonsei University)

### **ASIA & CHANGING INTERNATIONAL ECONOMIC RELATIONS**

January 29, 2018
Kent Ridge Guild House, NUS

#### Host:

**SCAPE, Department of Economics, NUS** 

### **Sponsors:**

Yonsei University, Asia Research Fund, Northeast Asia Economic Association of Korea, Singapore Centre for Applied and Policy Economics

### Schedule

### January 28, Sunday

7:00-9:00pm Reception hosted by Yonsei University (by invitation)

### January 29, Monday

8:45-9:00am	Opening (Dalvey and Evans Rooms)
9:00-10:30am	Plenary 1: Global Macroeconomics
10:30-11:00am	Tea Break
11:00am-12:30pm	Plenary 2: Economics of the Family
12:30-1:30pm	Lunch
1:30-3:00pm	Money and Banking, Dalvey Room
	Health Economics, Evans Room
3:00-3:30pm	Tea Break
3:30-5:30pm	International Trade, Dalvey Room
	Graduate Seminars, Evans Room
5:30-5:35pm	Closing (Dalvey and Evans Rooms)

### **Program**

8:45am-9:00am Welcome Remarks

CHIA, Ngee Choon (Director, SCAPE)

Basant Kapur (Acting Head, Department of Economics, NUS) GOH, Robbie (Dean, Faculty of Arts and Social Sciences, NUS)

9:00am-10:30am Global Macroeconomics

Room: Dalvey and Evans, Guild House

Chair: CHIA, Ngee Choon (National University of Singapore)

The Globalization and Economic Policy Survey CHOR, Davin (National University of Singapore)

Trust, Individual earnings, and Wealth of Nations CHUANG, Yih-Chyi (National ChengChi University)

Do Political Attitudes Affect Consumers' Inflation Expectations GILLITZER, Christian (University of Sydney)

10:30am-11:00am **Tea Break** 

11:00am-12:30pm Economics of the Family

Room: Dalvey and Evans, Guild House Chair: CHOI, Sangyup (Yonsei University)

Birth Order, Gender, and the Parental Investment Gap among

Children

MCKENZIE, Colin (Keio University)

Rationed Fertility: Theory and Evidence YI, Junjian (National University of Singapore)

How does family income influence their teenage children's

consumption of music?

TANIGUCHI, Miyuki (Keio University)

12:30pm-1:30pm **Lunch** 

1:30pm-3:00pm Parallel Sessions

**Money and Banking** 

Room: Dalvey, Guild House

Chair: XIE, Yiqing (Fudan University)

The Role of Inflation Target Adjustment in Stabilization Policy LIE, Denny (University of Sydney)

Uncertainty and Cross-Border Banking Flows CHOI, Sangyup (Yonsei University)

How unsecured credit policies influence mortgage and unsecured loan defaults KIM, Jiseob (Yonsei University)

#### **Health Economics**

Room: Evans, Guild House

Chair: MCKENZIE, Colin (Keio University)

Decision fatigue among physicians ZHONG, Songfa (National University of Singapore)

The Impact of Competition on Prices and Efficiency: Evidence from China's Health Care Market LI, Ting (Fudan University)

Severe Air Pollution and School Absences: Longitudinal Data on Expatriates in North China LIU, Haoming (National University of Singapore)

3:00pm-3:30pm **Tea Break** 

3:30pm-5:30pm Parallel Sessions

#### **International Trade**

Room: Dalvey, Guild House

Chair: ABEYSHINGHE, Tilak (National University of Singapore)

Trade, Pollution and Mortality in China LI, Bing Jing (National University of Singapore)

How Would Infant Industry Evolve in Facing Trade Retaliation? The Case of Photovoltaic Industry in China WANG, Shinn-Shyr (National ChengChi University)

Geography, Trade, and Internal Migration in China MA, Lin (National University of Singapore)

The Gravity of Intermediate Inputs in Productivity Spillovers: Evidence from Foreign Direct Investment in China XIE, Yiqing (Fudan University)

#### **Graduate Seminar**

Room: Evans, Guild House

Chair: CHUANG, Yih Chyi (National ChengChi University)

Motherhood Wage Effects in Korea YOON, Wonhee (Yonsei University)

Has Routine-biased Technological Change Lowered the Labor Share

PARK, Geunyong (Yonsei University)

Detecting Currency Manipulation: An Application of State-Space Model with Markov Switching KIM, Soohyon (Bank of Korea)

Core and Top Trading Cycles in a Market with indivisibilities and Externalities
HONG, Miho (Yonsei University)

5:30pm-5:35pm

### **Closing Remarks**

LEE, Doowon (Yonsei University)

Room: Dalvey and Evans, Guild House

#### The Globalization and Economic Policy Survey

In recent years, policy discourse seeking to reverse the liberalization of international trade and migration regimes has gained traction, most notably in the US and the UK. This has been driven in part by the argument that globalization forces have contributed to a widening of inequality and the stagnation of incomes for lower-income households. The recent academic research in economics that speaks to these issues is however less definitive on the net effect of globalization, with some studies pointing to adverse labor market effects, while others have pointed to beneficial welfare effects from trade liberalization. Motivated by these observations, this project seeks to examine whether the information that is made salient to individuals regarding the effects of globalization can shape their policy preferences on trade and migration policy. I will present some preliminary findings from a survey of attitudes towards globalization and related economic policies, in which we provided a randomized information treatment to respondents that varies in the extent to which the information highlighted the benefits as opposed to the pitfalls of openness to international trade. The study was piloted on a sample of students at NUS, and we have plans to expand this survey to cover university students in the US as well as a broader sample of the US population.



**Davin CHOR**Associate Professor
National University of Singapore

Davin Chor is an Associate Professor at the Department of Economics, National University of Singapore. His research interests are in international trade, political economy and economic history. His work in international trade focuses on understanding how institutional and policy forces affect patterns of comparative advantage and multinational activity. He presently serves as an Associate Editor at the *Journal of International Economics* and at the *Review of International Economics*. He is also an Associate Director at the Global Production Networks Centre at the National University of Singapore (GPN@NUS).

Davin completed his A.B. in Economics *summa cum laude* from Harvard University in 2000. He also holds an A.M. in Statistics (2000) and a Ph.D. in Economics (2007) from Harvard.

#### **Trust, Individual Earnings, and Wealth of Nations**

This paper considers the effect of trust on a country's long-run growth by constructing two growth models in which social trust is built in the representative household's budget constraint. The solutions of both models predict that trust is positively related with the level of output, while the predictions for the growth effect of trust are ambiguous. Using the cross-country data and Chinese cross-province data for empirical analysis, we find that trust only has an income effect but no growth effect. However, our results show that there's an important mutually enhancing relationship between human capital and trust. This positive income-trust relationship is further verified using the Chinese individual survey data. Our findings suggest that country with high social trust is likely to end up with high income level; however trust could be an impetus for human capital investment which in turn stimulates a country's long-run growth.



**Yih-Chyi CHUANG**Professor
National Chengchi University

Dr Yih-chyi Chuang (莊奕琦) is a distinguished professor of the Department of Economics at National Chengchi University, Taipei, Taiwan. He received his Ph.D. in Economics from University of Chicago in 1993. He was a visiting professor at Georgetown University in 1999 and Fulbright scholar at Fairbank Center for East Asian Research of Harvard University in 2003. From 2005 to 2016, he was invited as a guest professor at Free University of Berlin in Germany during the summer/winter terms. From 2012 to 2015, he served as the Dean of College of Social Sciences and the Director of Taiwan Studies Center at NCCU. His major teaching and research areas are theories of growth and development, education and labor market, and international trade and investment.

Dr Chuang has done research on many issues related to human capital and economic growth, including trade, the role of human capital, R&D and direct foreign investment. In the past few years, he has contributed on evaluation of returns to education, compulsory education policy, and intergenerational social mobility in Taiwan. He has published many articles in international journals including the International Economic Review, Journal of International and Comparative Economics, Journal of Development Studies, Applied Economics, Small Business Economics, Review of World Economics, Asian Economic Journal, Review of International Economics, Journal of Economic Development, Economic Modelling, and Economics of Education Review. He also actively participates and presents papers in several international conferences including AEA Annual Meeting, CEA conferences, WEA International Annual Conference, International Atlantic Economic Conference, etc.

#### Do Political Attitudes Affect Consumers' Inflation Expectations?

We show for the United States and Australia that consumers report significantly lower inflation expectations when the political party they support holds executive office. Our findings cannot be explained by previously documented sources of heterogeneity in consumer inflation expectations nor models of rational inattention or learning from experiences. Our findings are consistent with people using beliefs about presidential or prime ministerial competence as a stereotype for inflation, pointing to the use of heuristics in macroeconomic belief formation. We discuss implications for monetary policy.



Christian GILLITZER Lecturer University of Sydney

Christian Gillitzer is a Lecturer in the School of Economics at the University of Sydney. Prior to joining the University of Sydney in May 2017 he was a Senior Economist at the Reserve Bank of Australia. His research has covered topics including state fiscal capacity, optimal commodity taxation, inflation dynamics and consumer sentiment. Together with Joel Slemrod he is author of the book Tax Systems. He received his PhD in economics from the University of Michigan in 2013.

#### Birth Order, Gender, and the Parental Investment Gap among Children

Using panel data from the *Longitudinal Survey of Newborns in the 21st Century (21 seiki shusshoji judan chosa*), the purpose of this paper is to examine whether birth order and gender matter when parents make financial investments in their children. Rather than examining the effects of birth order and the number of siblings on the outcomes of children such as educational attainment, academic achievement and health status, this paper focuses on the actual investment in the children in the form of financial resources. In order to account for the endogeneity of family size, we use as a random effect instrumental variable estimator to estimate the models for parental investment in children. It is found that in Japan, parents spend more money on: their first born child; their male children when they are young; and their female children when they are old. In contrast, parents spending on educational related activities outside regular schools is higher for boys, but there is no difference between first born and later born children. Spending on extracurricular activities is higher for girls and for first born children. Interestingly, girls receive more pocket money than boys, whereas a first born child receives less pocket money compared to a higher order child of the same age.



**Colin McKENZIE** Professor Keio University

Colin McKenzie is currently a professor in the Faculty of Economics at Keio University. He has previously held full-time teaching positions in the Osaka School of International Public Policy (OSIPP) at Osaka University, the Faculty of Economics at Osaka University, and the Faculty of Economics at the Australian National University. His current research interests include the impact of working hours on health and mental outcomes, the distribution of parental resources (time and money) within the household; and the impact of family leave provisions on the employment outcomes of women in the medium-term to long-term. Colin is currently the Managing Editor of *Asian Economic Policy Review*.

#### **Rationed Fertility: Theory and Evidence**

We analyze the effect of *exogenous* changes in fertility on child quality both at and off the unrestricted optimal fertility level in a general model with rationed fertility. Besides the price and substitution effects analyzed in the literature, we show that a desired fertility change, representing a shift towards the optimal level, induces a positive income effect, while a forced fertility change, representing a shift away from the optimal level, induces a negative income effect. To empirically test the theory, we combine a natural experiment, *i.e.*, twins, with a policy change, *i.e.*, One-child Policy and find results that are consistent with the theoretical implications of our model. Our paper provides a theory of rationed fertility that reconciles recent empirical literature on the heterogeneous fertility effects on child quality, and advances our understanding of how population control policy affects human capital investment and economic development.



**YI Junjian**Assistant Professor
National University of Singapore

Dr Yi is an assistant professor in the Department of Economics at National University of Singapore since 2014. He received his Ph.D. in Economics from the Chinese University of Hong Kong in 2011. Subsequently, he conducted the postdoctoral research in the Department of Economics at the University of Chicago in 2011-2014. His research focuses on Economics on Health and Healthcare; Healthcare Big Data Analyses, Labor and Demographic Economics, Economic Development, and Economics on Human Capital.

#### How does family income influence their teenage children's consumption of music?

In Japan, since the Koizumi government reduced public sector funding and cut social security programs, there has been an increase in the population of low-income individuals and an increase in the poverty rate. The relative poverty rate among children has also increased. For children in relative poverty, it is difficult to live a standard cultural life. This study focuses on music consumption because almost all Japanese listen to music in their daily lives, and income inequality might affect how people listen to music. One of my hypotheses is that the rich attend live music concerts more often than the poor. This paper has two purposes: (1) to examine the connection between an increased poverty rate and a decrease in the number of people with money to spend on art and culture, especially live music concerts; and (2) to investigate how expenditures on art and culture have changed time since social security programs were cut, focusing on the impact of family income on teenage children's consumption of music. For the first purpose, this study uses regression analyses, using data from the *Survey on Time Use and Leisure Activities* conducted by the Japanese Ministry of Internal Affairs and Communications (MIC).



**Miyuki TANIGUCHI** Research Associate Keio University

Miyuki Taniguchi (Ph.D. in Economics, Keio University) is a research associate (non-tenured) at Keio University and an adjunct lecturer at Toyo University. She was born and raised in Fukui in rural Japan, and moved to the Tokyo metropolitan area to enter university. When she was an undergraduate student at Keio University, the Koizumi cabinet was implementing fiscal structural reform, based on the Libertarian idea that an introduction of market mechanism into public sector. Her research interest is in investigating the effects of such deregulation policies. "Relying too much on the market or the government could result in failure. My great passion is to discover the best balance between private market and government solutions."

#### The Role of Inflation Target Adjustment in Stabilization Policy

How and under what circumstances can adjusting the inflation target serve as a stabilization-policy tool and contribute to welfare improvement? We answer these questions quantitatively with a standard New Keynesian model that includes cost-push type shocks which create a trade-off between inflation and output gap stabilization. We show that this trade-off leads to a non-trivial welfare cost under a standard Taylor rule, even with optimized policy coefficients. We then propose an additional policy tool of an inflation target rule and find that the optimal target needs to be adjusted in a persistent manner and in the opposite direction to the realization of a cost-push shock. The inflation target rule, combined with a Taylor rule, significantly reduces fluctuations in inflation originating from the cost-push shocks and mitigates the policy trade-off, resulting in a similar level of welfare to that associated with the Ramsey optimal policy. The welfare implications of the inflation target rule are more pronounced under a flatter Phillips curve.



**Denny LIE**Assistant Professor / Lecturer
University of Sydney

Dr Denny Lie is an Assistant Professor of Economics/Lecturer at the University of Sydney and a research associate at the Centre for Applied Macroeconomic Analysis (CAMA), ANU, Australia. Prior to that he has been a research associate in the research department at the Federal Reserve Bank of Boston. His primary research interests are in the area of macroeconomics, monetary theory and policy, and international finance. A native of Indonesia, he received his PhD in economics from Boston University.

#### **Uncertainty and Cross-Border Banking Flows**

While global uncertainty—measured by the VIX—has proven to be a robust global "push" factor of international capital flows, there has been no systematic study assessing the role of country-specific uncertainty as a key (pull and push) factor of international capital flows. This paper tries to fill this gap in the literature by examining the effects of country-specific uncertainty shocks on cross-border banking flows using the confidential Bank for International Settlements Locational Banking Statistics data. The dyadic structure of this data allows to disentangle supply and demand factors and to better identify the effect of uncertainty shocks on cross-border banking flows. The results of this analysis suggest that: (i) uncertainty is both a push and pull factor that robustly predicts a decrease in both outflows (retrenchment) and inflows (stops); (ii) global banks rebalance their lending towards safer foreign borrowers from local borrowers when facing higher uncertainty; (iii) this rebalancing occurs only towards advanced economies (flight to quality), but not emerging market economies.



CHOI Sang Yup
Assistant Professor
Yonsei University

Sangyup (Sam) Choi is an Assistant Professor at School of Economics of Yonsei University. Prior to joining Yonsei University, he was an economist (Economist Program) at the Middle East and Central Asia Department of International Monetary Fund. Previously, he has also worked in the IMF's Statistics Department, and has done an internship in the IMF's Research Department. He received a Ph.D. in Economics from UCLA in 2015 and B.A. in Economics from Yonsei University in 2009. His primary field of research is international finance. His research, thus far, has focused on credit market imperfections, fluctuations in uncertainty, and international spillovers with a focus on emerging market economies.

#### How unsecured credit policies influence mortgage and unsecured loan

I examine impacts of unsecured credit policies on households' mortgage and unsecured loan default decisions. Households holding multiple types of debts can strategically default on their mortgage, rather than the unsecured loan, to make the unsecured loan accessible, in exchange for losing the homeownership. On the other hand, financially troubled households can also default only on the unsecured loan to maintain its home. My quantitative exercise shows that households are more likely to default on their mortgage and unsecured loan if the accessibility to unsecured credit market improves. Instead, increasing the post-bankruptcy costs can mitigate both default rates.



KIM Ji Seob Assistant Professor Yonsei University

Jiseob Kim is a tenure-track assistant professor of economics at Yonsei University in South Korea. Before joining Yonsei University in 2017, he was an associate fellow at Korea Development Institute (KDI). His research interests include mortgage and real estate finance market, household finance, and computational macroeconomics. His research appears in many academic journals such as Macroeconomic Dynamics, Journal of Macroeconomics, Economic Modelling, Economics Bulletin, and many Korean journals. He obtained his Ph.D. in economics from the University of Rochester in 2013.

#### **Decision fatigue among physicians**

It has been increasingly recognized that physician decision is not solely based on the health situation of patient, but also influenced by various extraneous factors. This study investigates whether and how decision fatigue may affect physician behavior. Using patient flow data from the emergency department, we find that decision fatigue, measured either by the number of patients treated or by the number of working hours, leads to an increased adoption of outpatient disposition, a reduced number of tests, a shorten patient length of stay, and an increased likelihood of re-admission. To address the endogeneity of patient assignment, we use ambulance arrivals as an instrumental variable, and the overall pattern remains. Our study sheds light on the design of work schedule of the physicians, and suggest the importance of psychological underpinnings in determining physician behavior.



**ZHONG Songfa**Associate Professor
National University of Singapore

Zhong Songfa is an Associate Professor in economics at the National University of Singapore. He uses a wide range of methodologies from behavioral economics and experimental economics to genetics and neuroscience to conduct research on decision making, encompassing theory, experiment, and application. The bulk of his research work has concentrated on the inquiry on decision making in three main categories: (i) model-based experimental studies of decision making; (ii) the biological basis of decision making; (iii) application of behavioral/biological economics.

He has published in well-regarded journals such as American Economic Review, Econometrica, International Economic Review, and Management Science, as well as more biology-oriented ones including Proceedings of the National Academy of Sciences, Neuron, Proceedings of the Royal Society B Biological Sciences, and Neuroimage. He is also a Coordinating Editor of Theory and Decision.

#### The Impact of Competition on Prices and Efficiency: Evidence from China's Health Care Market

The effect of competition on the welfare of health care remains a contested issue. This study investigates the impact of competition on different hospitals in China's health care market. Using patient-level data from 2013 to 2015, we find that the relationship between competition and prices or efficiency appears to be ambiguous. This is because hospitals respond differently to competition. In detail, secondary (low-grade) hospitals charge lower prices and are more efficient in face of more intense competition while the impact on tertiary (high-grade) hospitals is not significant.



**LI Ting**Assistant Professor
Fudan University

Ting Li is currently an assistant professor in the School of Economics at Fudan University. She graduated from Toulouse School of Economics. Her research interests include health economics and industrial organization.

#### Severe Air Pollution and School Absences: Longitudinal Data on Expatriates in North China

Little is known about how children of high-income expatriate families, often from rich nations, adapt to temporary residence in a severely polluted city of the developing world. We use a six-year panel of 6,500 students at three international schools in a major city in north China to estimate how fluctuation in ambient PM2.5 over the preceding fortnight impacts daily absences. Our preferred estimates are based on the exclusion restriction that absences respond to atmospheric ventilation such as thermal inversions only through ventilation's effect on particle levels. A large and rare 100 to 200  $\mu g/m^3$  shift in average PM2.5 in the prior week raises the incidence of absences by 1 percentage point, about one-quarter of the sample mean. We find stronger responses for US/Canada nationals than among Chinese nationals, and among students who generally miss school the most. Overall responses are modest compared to the effect on absences from more moderate in-sample variation in pollution estimated for the US using aggregate data. Using school absence patterns as a window into short-run health and behavior, our study suggests that high-income families find ways to adapt, likely by moving life indoors, even if temporary residence in north China comes at the expense of long-term health.



**LIU Haoming**Associate Professor
National University of Singapore

Dr Haoming Liu is an Associate Professor in the Economics Department at the National University of Singapore. Prior to joining the National University of Singapore, he has worked in the School of Economics, the University of New South Wales, Sydney, for one year. He holds a PhD in Economics from the University of Western Ontario, and a BA in Mechanical Engineering from Northern Jiaotong University, Beijing, China. His research focuses on topics in intergenerational mobility, Chinese labour market, and environmental economics. He is currently working on intergenerational mobility in China and Indonesia, and the impact of air population on labour productivity, health and school performance.

#### Trade, Pollution and Mortality in China

Has the expansion in exports affected pollution and health outcomes across different prefectures in China in the two decades between 1990 and 2010? We exploit variation in the initial industrial composition to gauge the effect of export expansion due to the decline in tariffs faced by Chinese exporters. We construct two export shocks at the prefecture

level: (i) PollutionExportShock represents the pollution content of export expansion and is measured in pounds of pollutants per worker; (ii) ExportShock measures export expansion in dollars per worker. The two measures differ because prefectures specialize in different products: while two prefectures may experience the same shock in dollar terms, the one specializing in the dirty sector has a larger PollutionExportShock. We instrument export shocks using the change in tariffs faced by Chinese producers exporting to the rest of the world. We find that the pollution content of export affected pollution and mortality. A one standard deviation increase in PollutionExportShock increases infant mortality by 2.2 deaths per thousand live births, which is about 13% of the standard deviation of infant mortality change during the period. The dollar value of export expansion tends to reduce mortality, but is not always statistically significant. We show that the channel through which exports affect mortality is pollution concentration: a one standard deviation increase in PollutionExportShock increases SO2 concentration by 5.4 ug/m^3 (the average is around 60). We find a negative, but insignificant effect on pollution of the dollar-value export shocks, a potential "technique" effect whereby higher income drives demand for clean environment. We find that only infant mortality related to cardio-respiratory conditions responds to exports shocks, while deaths due to accidents and other causes are not affected.



LI Bingjing Assistant Professor National University of Singapore

Bingjing Li is an Assistant Professor at the Department of Economics, National University of Singapore. Prof. Li obtained her Ph.D. from the University of British Columbia. Her main research fields are International Trade and Labor Economics.

# How Would Infant Industry Evolve in Facing Trade Retaliation? The Case of Photovoltaic Industry in China

The infant industry promotion has long served as a shortcut for industrialization or modernization in developing economies. However, this arguably generous policy usually distorts the optimal allocation of production inputs that results in the ubiquitous existence of zombie firms or further arouses large-scale trade retaliations from major exporting markets. This research investigates the outcome of trade retaliations in 2011 towards Chinese photovoltaic (PV) exporting firms. According to the empirical results, we surprisingly do not observe the waves of exit in Chinese PV exporting firms as predicted by the mass media. However, the capacity integration within existing Chinese PV exporters has played a role to adjust the optimal allocation of production inputs. We also investigate counterfactual analyses where the least productive zombie firms exit the markets. The analyses show that the exit of those zombie firms would not contribute to the major improvement of industry-level productivity as the effects brought by the production input reallocation result from the capacity reintegration.



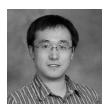
**Shinn-Shyr WANG**Associate Professor
National Chengchi University

Dr Shinn-Shyr Wang is an Associate Professor of the Department of Economics and Director of International Master's Program of Applied Economics and Social Development at National Chengchi University (NCCU), Taipei, Taiwan. He received his Ph.D. from the University of Wisconsin-Madison, USA. His current research interests include industrial organization, entrepreneurial economics, and applied microeconomics.

Dr Wang has experiences with empirical models of product differentiation at the firm level. He investigates the different markups that arise in the presence of different competition models. He also works on price transmission along the vertical supply chain in the retail industries with extensive numerical simulations. In addition, he is part of a research team where the theme is on the relationship of industrial dynamics and economic development between China and Taiwan. In the project of entrepreneurial economics, Dr Wang and his colleagues explore whether and how the educational network and political link can bridge the information dissemination and ease the barrier of crucial information flow between venture capitalists and start-up teams through a unique dataset collected and maintained by the Center for Economic Policy Research at NCCU. He has published articles in international journals, such as Journal of Macroeconomics and American Journal of Agricultural Economics.

#### Geography, Trade, and Internal Migration in China

We quantitatively evaluate the welfare impacts of intercity migration in China using a general equilibrium model with endogenous city and firm size distributions and imperfect labor mobility. We structurally estimate the model with data from 279 prefecture-level cities and real-world transportation networks. We find that intercity migration between 2000 and 2005 is able to explain 22 percent of the change in real income in the data. In addition, the agglomeration effects of immigrants quantitatively dominate their negative impacts on nominal wage and congestion in large cities, leading to welfare gains in the destination cities and higher spatial inequality across the country. Inter-city migration also amplifies the gains from international trade by around 147 percent as it increases labor supply in coastal cities.



MA Lin Assistant Professor National University of Singapore

Lin Ma is an assistant professor of economics at the Department of Economics, National University of Singapore. He received his PhD from University of Michigan in 2014, and joined NUS since then. His main research interest is in international trade, economic geography, and income inequality.

### The Gravity of Intermediate Inputs in Productivity Spillovers: Evidence from Foreign Direct Investment in China

We develop a model to illustrate that upstream foreign direct investment (FDI) generates heterogeneous productivity spillovers toward downstream domestic firms through the gravity of intermediate inputs---a domestic firm enjoys a higher productivity if it gets access to more inputs sold by FDI firms (general productivity-enhancing effect) and it is geographically closer to upstream FDI firms (proximity effect). We employ the Chinese firm-level data and empirically identity that (i) if a domestic firm's FDI input share increases by 1 percentage point, its productivity increases by 2.8%, and (ii) if this firm is 1% geographically remoter to upstream FDI firms (on average 3 kilometers), its productivity is 0.06% lower.



XIE Yi Qing Assistant Professor Fudan University

Yiqing Xie is currently an assistant professor at School of Economics, Fudan University. She graduated from University of Colorado at Boulder in 2012 and worked for University of North Dakota from 2012 to 2013. Her research field is international trade, and more specifically, multinational enterprises. She has been working on different types of firm-level models and empirics to illustrate firm-level MNEs' behaviors and trade patterns as well.

#### **Motherhood Wage Effects in Korea**

This paper aims to explain the 'Motherhood Penalty' in the Korean labor market, which is the wage gap between women with children and women without children. The study used the 2014 data from Korean Longitudinal Survey of Women & Families (KLOWF) and employed Heckman twostep method to correct for sample selection bias. The gross motherhood penalty was significantly large at about -12% per child. Human capital variables accounted for about 50% of the total penalty, and housework accounted for about 10% of the total penalty. The penalties for having two or more children was larger than having a single child. Women with 4-year college degree experienced the largest gross motherhood penalty compared to 2-year college degree graduates or high-school graduates. The paper concludes that loss in human capital and the interference of housework with work effort are key factors contributing to the wage gap between mothers and non-mothers.



**YOON Won Hee** Yonsei University

Won Hee Yoon is currently a graduate student at Yonsei University, Department of Economics. Previously, she studied economics at Underwood International College and studied Chinese Language at Daewon Foreign Language High-school. Her research interests include female labor supply and development economics.

#### Has Routine-Biased Technological Change Lowered the Labor Share?

After Kaldor's stylized facts, the stability of the labor income share has been a common factor of modern macroeconomic models. A noticeable decline in the labor share, however, has been observed globally since the early 1980s. On the other hand, job polarization, which refers to the disappearance of employment in occupations in the middle of the skill distribution, has also been a global phenomenon during the same time. It is well known that routine-biased technological change (RBTC) is the major cause of this polarization. I show that the progress in RBTC, which is captured by the decline of the share of middle-skilled workers in total labor compensation, has lowered the labor share at the industry level. First, I model the relationship between the labor share and the job polarization. Second, I empirically test the model with industry level panel data of the United States.



PARK Geun Yong Yonsei University

Geunyong Park is currently a graduate student working on a Master's degree in economics at Yonsei University. His current research interest is the varying influence of technological change on different people and how these influences affect aggregate quantities.

#### Detecting Currency Manipulation: An Application of State-Space Model with Markov Switching

Following an idea of Milton Friedman's ``plucking model,'' we propose a state-space model with Markov switching as an auxiliary tool for detecting currency manipulation. Without imposing any a priori restrictions, our model tests if fluctuations of a country's exchange rate are symmetric or if there exists a time-varying support level or resistance level of exchange rate. Using weekly and monthly data of countries on the ``monitoring list'' of U.S. Treasury as of April 2017, we find that exchange rates of China, South Korea, Switzerland, and Taiwan rarely fall below their time-varying trends, but are plucked upward from time to time by transitory shocks, suggesting a possibility that the foreign exchange authorities of these countries may have been intervening more actively against appreciation shocks. Meanwhile, Japan's exchange rate fluctuates rather symmetrically. Our sub-sample analysis reveals that our model accurately captures the period of Switzerland's minimum exchange rate with probability of one and Japan's exchange rate rarely falls below its trend after implementing Abenomics. We discuss the difficulties of detecting FX (foreign exchange) intervention along with the relative strength of our approach.



**KIM Soo Hyon** Yonsei University / Bank of Korea

I am a PhD candidate (expected in February 2018) at the Department of Economics, Yonsei University. I have been an economist in the central bank of Korea for 12 years. Concerning research, I am interested in wide area of macroeconomics including domestic and international finance, welfare and inequality.

#### Core and Top Trading Cycles in a Market with Indivisible Goods and Externalities

In this paper, we incorporate externalities into the Shapley-Scarf economy in which each agent owns a house, demands exactly one house, and seeks to trade houses with other agents. Agents' preferences are defined over allocations rather than houses, and we focus on preferences that are egocentric in the sense that agents primarily care about their own allotments. We define the concepts of the irreversible  $\gamma$ -core, the  $\delta$ -core, and stable allocations. When preferences are egocentric, we can apply the top trading cycles (TTC) algorithm using the associated preferences over houses. We show that the allocation generated by the TTC algorithm is a stable allocation in the irreversible  $\gamma$ -core, that under a further preference restriction it is the unique stable allocation in the irreversible  $\gamma$ -core, and that the two statements hold when the irreversible  $\gamma$ -core is replaced with the  $\delta$ -core. We also show that we can generate any stable allocation by the TTC algorithm for some endowments, that the TTC mechanism is coalitionally strategy-proof, and that a mechanism is individually rational, stable, and strategy-proof if and only if it is the TTC mechanism. Our results extend the existing results on the TTC algorithm to the case of egocentric preferences, and they suggest that the TTC algorithm is useful and has desirable properties even in the presence of externalities.



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