ICES 2018

2nd International Conference on Economic Structures

28-29 March, 2018

Nagoya University, Japan

(Address: Nagoya University, Furo, Chikusa, Nagoya, 464-8601, Japan).

- Chair of the Local Organizing Committee: J. NEMOTO and A. NOGUCHI, Nagoya University
- Chair of the Scientific Program Committee: K. FUJIKAWA (Vise-President of PAPAIOS), NU
- Contact: ICES_PAPAIOS@yahoo.co.jp
- Web site: http://www.gakkai.ne.jp/papaios/en/index.html
- Organized by the Pan Pacific Association of Input-Output Studies (PAPAIOS)
- Co-organized by School of Economics, Nagoya University (SOEC-NU) and Applied Social System Institute of Asia (AS^2IA), Nagoya University

The 2nd International Conference on Economic Structures
at Graduate School of Economics and Applied Social System Institute, Nagoya University

March 28, 2018

		Venue A 1st Lecture Room	Venue B 2nd Lecture Room	Venue C 3rd Lecture Room	Venue D 1st Meeting Room
1st Session	10:00-12:00	Environment 1	Int'l Economy 1	Productivity 1	Korea KESRA-KIET
2nd Session	13:00-15:00	Environment 2	Int'l Economy 2	Productivity 2	Meiji University
3rd Session	15:30-17:30	Environment 3		Ritsumeikan Univ.	China CIOA

Social Gathering

18:00-20:00

2nd Floor, Asian Legal Exchange Plaza

March 29, 2018

		Venue A 1st Lecture Room	Venue B 2nd Lecture Room	Venue C 3rd Lecture Room	Venue D 1st Meeting Room
4th Session	10:00-12:00	Tutorial Seminar Waste I-O analysis			India E3 Model
5th Session	13:00-15:00	Regional I-O	CGE model	SNA, IO Analysis 1	Nagoya Univ. 1
6th Session	15:30-17:30			SNA, IO Analysis 2	Nagoya Univ. 2

2018-04-02

Venue A, 1st session
Wednesday, March 28, 10:00-12:00
Environment, Resource and Energy

Chair: Yasushi KONDO (Waseda University)

1. Does Democracies Affect the Energy Efficiency and CO2 Emissions? An Empirical Analysis in America

Lichen CHOU (Wenzhou Business College)
Hsingchun LIN (National Chiayi University)
Fuming YANG (Wenzhou Business College)
Wanhao CHANG (Wenzhou Business College)

2. An International Comparison of the Effectiveness of Price Control under Energy Price Shocks

Shihmo LIN (Chung Yuan Christian University)
Shianghung SHEN (Chung Yuan Christian University)
Jinxu LIN (Chung yuan Christian University)
Kueifeng CHANG (Chung Yuan Christian University)

3. A note on the relationship between the waste input-output linear programming (WIO-LP) model and the rectangular choice-of-technology (RCOT) model

Yasushi KONDO (Waseda University)

Venue A, 2nd session
Wednesday, March 28, 13:00-15:00
Environment, Resource and Energy

Chair: Mitsuo YAMADA (Chukyo University)

1. FTA and Structural Change in Environmental Load in the East Asian Region

Hikari BAN (Kobe Gakuin University)
Kiyoshi FUJIKAWA (Nagoya University)

2. Scenario Input-Output Analysis on the New Hydrogen Supply System and Diffusion of Fuel Cell Vehicles

Mitsuo YAMADA (Chukyo University)
Kiyoshi FUJIKAWA (Nagoya University)
Yoshito UMEDA (Toho Cryogenics Co., Ltd.)

Venue A, 3rd session
Wednesday, March 28, 15:30-17:30
Environment, Resource and Energy

Chair: Makiko TSUKUI (Tokyo International University)

1. Economic and environmental impact by the choice of power sources in China: an application of scenario input-output analysis

Jiayang WANG (The University of Tokyo)

2. Resilient Partnership under Mega Disaster

Michael HUANG (GRIPS)

Social Gathering
Wednesday, March 28, 18:00-20:00

2nd Floor, Asian Legal Exchange Plaza

Venue A, 4th session (Open to the public)
Thursday, March 29, 10:00-12:00

Tutorial Seminar

Input-Output Analysis of Waste Management and Material Cycles

Lecturer: Yasushi KONDO (Professor of Econometrics at Faculty of Political Science and Economics, Waseda University)

Contents: Resource productivity and circular economy have recently received much attention, and thus there is growing demand for analysis of the environment and economy in a unified framework. This lecture introduces the basics of waste input-output (WIO) and its applications to footprint analysis and material flow analysis.

Venue A, 5th session
Thursday, March 29, 13:00-15:00

Regional Input-Output Analysis

Chair: Yoshifumi ISHIKAWA (Nanzan University)

1. Measuring Inclusivity and Marginality: Estimating Philippine Regional Input- Output Tables Using a Non- Survey Approach

   Josephine TEVES (Kyoto University)

2. Examining the Revolutionary Donation Tax in the Context of the Philippine Interregional Input Output Table

   Kwangmoon KIM (Kyoto University)
   Paolo Nicholas Cortes PADERANGA (Association of Regional Econometric and Environmental Studies)
   Josephine TEVES (Kyoto University)
   Kiyoshi KOBAYASHI (Kyoto University)

3. RAS structural decomposition analysis on the rural labor movement in Guizhou, China

   Shuning CHEN (Anshun University)
   Masaru KAGATSUME (Kyoto University)

Venue B

Venue B, 1st session
Wednesday, March 28, 10:00-12:00
International Economy and International Development 1

Chair: Tetsu KAWAKAMI (Kinki University)

1. Dynamics of Spatial Poverty and Disparity: Evidence from Vietnam, 1993-2014
Takahiro YAMADA (Keio University)

2. A Quantitative Analysis of Global Value Chains
Haoliang ZHU (Doshisha University)

Venue B, 2nd session
Wednesday, March 28, 13:00-15:00
International Economy and International Development 2

Chair: Nagendra SHRESTHA (Yokohama National University)

1. Climate Change, Yield Variation and the Volatility of International Price of Rice
Katsuhiro SAITO (The University of Tokyo)
Hideyasu SATO (The University of Tokyo)
Konomi SAITO (Soka University)

2. Economic Assessment of Global Value Chains: Case of China and India
Kakali MUKHOPADHYAY (Gokhale Institute of Politics & Science and McGill University)
Cuihong YANG (Chinese Academy of Sciences)

3. Global and Regional Shock Transmission
Nagendra SHRESTHA (Yokohama National University)

Social Gathering
Wednesday, March 28, 18:00-20:00

2nd Floor, Asian Legal Exchange Plaza

Venue B, 5th session, 13:00-15:00
Thursday, March 29
Computable General Equilibrium Model

Chair: Ken ITAKURA (Nagoya City University)

1. Assessing the Economy-Wide Effects of Public Procurement for Innovation Based on A CGE Analysis: A Case of Korean Electric Vehicle Sector

Yeongjun YEO (Seoul National University)
Kiyoon SHIN (Seoul National University)

2. China in 2025: Implications for Africa

Christian OTCHIA (Kwansei Gakuin University)

Venue C, 1st session
Wednesday, March 28, 10:00-12:00
Productivity 1

Chair: Katsuhiro SAITO (The University of Tokyo)

1. Market Size, Productivity and Product Quality regarding Firm Heterogeneity
Shiuehung LIN (Nanfang College of Sun Yat-Sen University)
Yungho WENG (National Chengchi University)

2. Producer Service, Input Variation and Chinese Manufacturing Firm's Productivity
Yinghua MENG (Shanghai University of International Business and Economics)
Ye ZUOYI (Shanghai University of International Business and Economics)

3. Cost Criteria and Productivity Criteria Using the World Input Output Database
Takahiko HASHIMOTO (Ritsumeikan University)

Venue C, 2nd session
Wednesday, March 28, 13:00-15:00
Productivity 2

Chair: Kiyoshi FUJIKAWA (Nagoya University)

1. Policy Impact of Public Procurement for Innovation for Korean Telecommunication Equipment Industry: Input-Output Structural Decomposition Analysis
Kiyoon SHIN (Seoul National University)
Yeongjun YEO (Seoul National University)

2. 13 Year Thailand TFP
Nutpol SIRISAWANG (L P Laikhum Co., Ltd.)
Nattaya KLAIRUANG (Kasesart University)
Apichart DALUNPETE (Kasesart University)

Venue C, 3rd session
Wednesday, March 28, 15:30-17:30
Organized session by Ritsumeikan University

Chair: Kazuo INABA (Ritsumeikan University)

1. International Production Sharing of the Textile-Clothing Industry of Bangladesh and Asian Exporters
Md MASUM (Ritsumeikan University)
Kazuo INABA (Ritsumeikan University)

2. Role of SMEs and Its Constraints: Case of Central Asia and Eastern Europe
Sevara MADGAZIEVA (Ritsumeikan University)
Kazuo INABA (Ritsumeikan University)

3. The Effects of Career Interruptions on Japanese Female Wages: Does the Timing of Birth Matter?
Magdalena Triasih DUMAULI（Ritsumeikan University)

Social Gathering
Wednesday, March 28, 18:00-20:00

2nd Floor, Asian Legal Exchange Plaza

Venue C, 5th session
Thursday, March 29, 13:00-15:00
Compilation and Theory of I-O, SNA or SAM 1

Chair: Keiji UJIKAWA

1. FISIM (SNA Bank Output Measures) and Endogenous Money Supply
Akimasa KATSURA (Momoyama Gakuin University)

2. Propagation of Economic Shocks through Input-Output Network: A Case of Thailand
Rangsima SRISAWAT (Thammasat University)

3. Compilation and estimation of EEIOT based on SEEA-CF
Keiji UJIKAWA (Yokohama National University)

Venue C, 6th session
Thursday, March 29, 15:30-17:30
Compilation and Theory of I-O, SNA or SAM 2

Chair: Kwangmoon KIM

1. A Network Analysis of Thai Macroeconomic Fluctuation through Input-Output Model
Pirapat PAREERATANASOMPORN (Thammasat University)

2. Creating a Financial and Social Accounting Matrix Using an Excel-based Computable General Equilibrium Model
Yusuke FUKUSHIMA (Kyoto University)
Kwangmoon KIM (Kyoto University)

3. Empirical Analysis of Economic Interdependencies in the GMS Based on a Five-Nation International Input-Output Table
Hidefumi KANEKO (Association of Regional Econometric and Environmental Studies)
Kwangmoon KIM (Kyoto University)
Secretario FRANCISCO (Association of Regional Econometric and Environmental Studies)

Venue D, 1st session
Wednesday, March 28, 10:00-12:00
Organized session by Korea KESRA-KIET

Chair: Jinmyon LEE (Korea Institute for Industrial Economics and Trade)

1. A Generalized Measure of Bilateral Trade
   Bawoo KIM (Korea Institute for Industrial Economics and Trade)

2. Analysis on Production Ripple Effects between Large and SME (Small and Medium Enterprises): Focusing on the Trickle Down and Up Effects
   Youngho LEE (Korea Institute for Industrial Economics and Trade)
   Jaejin KIM (Korea Institute for Industrial Economics and Trade)

3. Analysis on Creating of Value Added in Korea Electronics Industry using WIOT
   Taehyun KWON (Bank of Korea)
   Youngho JUNG (Bank of Korea)

4. A New Approach for the Size Estimation of Sports Market
   Joonho KANG (Seoul National University)
   Hwaseob KIM (Korea Institute for Industrial Economics and Trade)

Venue D, 2nd session
Wednesday, March 28, 13:00-15:00
Organized session by Meiji University

Chair: Tadashi YAGI (Meiji University)

1. A Study of Industrial Structure in France
   Rintaro MATSUDA (Meiji University)

2. A Study of Structural Changes in Japanese Industries
   Tsutomu YOSHIOKA (Meiji University)

3. Input-Output Table and Pasinetti's Macroeconomic Condition
   Jun OMATA (Meiji University)

Venue D, 3rd session
Wednesday, March 28, 15:30-17:30
Organized session by China CIOA

Chair: Cuihong YANG (Chinese Academy of Sciences)

1. Urban Transformation as An Adaption to Resource and Environmental Constraints Based on A Case Study of Beijing: From Efficiency Priority Strategy to Total Control Strategy
   Zhuoying ZHANG (Chinese Academy of Sciences)
   Xiaoling ZHANG (City University of Hong Kong)
   Minjun SHI (Renmin University of China)

2. Exploring the Role of Real Estate Sector in Economy Based on Input-Output Analysis

Xiuting LI (University of Chinese Academy of Sciences)
Jing HE (University of Chinese Academy of Sciences)
Jichang DONG (University of Chinese Academy of Sciences)
Zhi DONG (University of Chinese Academy of Sciences)

3. Measuring the Generalized Global Industry Relocation: Based on World Input-Output Model

Xiang GAO (Chinese Academy of Sciences)
○Cuihong YANG (Chinese Academy of Sciences)

Social Gathering
Wednesday, March 28, 18:00-20:00

2nd Floor, Asian Legal Exchange Plaza

Venue D, 4th session
Thursday, March 29, 10:00-12:00

Organized session by India E3 Model Team

Chair: Surabhi JOSHI (E3-India Initiative)

1. Modelling the Power Sectors of East Asia in 2050 using E3ME-FTT: Power

Soocheol LEE (Meijo University)

2. Modelling Impacts of Scaling up Energy Efficient Cleaner Technologies for Thermal Comfort in India using E-3 India

Surabhi JOSHI (E3-India Initiative)

3. Regional Impacts of Renewable Energy Targets on the Indian Economy: Application of E3-India Model

Kakali MUKHOPADHYAY (Gokhale Institute of Politics & Science and McGill University)
Partha Pratim Ghose (St. Xaviers college)

Venue D, 5th session
Thursday, March 29, 13:00-15:00
Organized session by Nagoya University 1

Chair: Kiyoshi FUJIKAWA (Nagoya University)

1. Inter-province Carbon Transfers of ETS Covering Sectors in China
   Yiyi JU (Nagoya University)

2. Income Distribution Effects of Carbon Tax in Chinese Provinces
   Yuzhu WANG (Nagoya University)

3. The Role of Agro-processing Industries in Promoting Economic Growth in Vietnam
   Trang Hong VU (Nagoya University)

Venue D, 6th session
Thursday, March 29, 15:30-17:30
Organized session by Nagoya University 2

Chair: Jiro NEMOTO (Nagoya University)

1. Outward Foreign Direct Investment and Employment in Japanese Manufacturing
   Huijie GU (Nagoya University)

2. A Spatial Autoregressive Stochastic Frontier Model for Panel Data Incorporating a Model of Technical Inefficiency
   Takahiro TSUKAMOTO (Nagoya University)

3. A Meta-analysis of Management Forecast
   Xiaobai ZHANG (Nagoya University)

Abstract

Venue A, 1st session
Wednesday, March 28, 10:00-12:00
Environment, Resource and Energy

1. Does Democracies Affect the Energy Efficiency and CO2 Emissions? An Empirical Analysis in America

Lichen CHOU (Wenzhou Business College)
Hsingchun LIN (National Chiayi University)
Fuming YANG (Wenzhou Business College)
Wanhao CHANG (Wenzhou Business College)

This study explores whether the development of democracy can significantly affect CO2 emissions and the energy efficiencies in the countries. Database reference from Freedom House, Polity IV project and World Development Indicator (WDI) were applied to analyze the relationship between the democracy development, CO2 emissions and the energy efficiency of 26 countries in America from year 1990 to 2013. Empirical result shows that the deepening democracy has a significant impact on the reduction of national CO2 emissions and brings a positive influence on energy efficiency. The further application of quantile regression also indicates that the influence of democratization on CO2 emissions and countries' energy efficient scores are significant.

2. An International Comparison of the Effectiveness of Price Control under Energy Price Shocks

Shihmo LIN (Chung Yuan Christian University)
Shianghung SHEN (Chung Yuan Christian University)
Jinxu LIN (Chung yuan Christian University)
Kueifeng CHANG (Chung Yuan Christian University)

This paper examines the relative effectiveness of price control for certain consumer goods and services on the general price level of major Asian economies in the face of rising energy prices. We conduct our analysis based on an international input-output price model. We also examine and compare the trends of the effects over time. Structural decomposition analyses between periods are performed to figure out the factors most attributable to the change of the price level resulting from a rise in energy prices. We make use of the newly published 2014 World Input-Output Tables (WIOTs) by the European Union to set up the international price models for the analysis. Our analysis covers 44 countries or regions and spans from 2000 to 2014. Structural decomposition analysis, however, is conducted mainly for the changes between 2000 and 2014. The results show that, price control would be relatively more effective for Japan than for Korea and Taiwan in easing the rise of CPI due to energy price hikes. With regard to which factor would be most responsible for the differential effects found between Taiwan and Korea over the 2000-2014 periods, our results reveal that the relatively slow adjustment in production technology for energy sectors in Taiwan might be accounted for.

3. A note on the relationship between the waste input-output linear programming (WIO-LP) model and the rectangular choice-of-technology (RCOT) model

Yasushi KONDO (Waseda University)

Duchin and Levine (2011, Econ Syst Res; 2012, J Econ Struct) proposed a linear programming input-output model, called the rectangular choice-of-technology (RCOT) model, in which one or more sectors may produce a commodity. RCOT model provides a framework to analyze scarcity rents for resources. Kondo and Nakamura (2005, Econ Syst Res) proposed the waste input-output linear programming (WIO-LP) model in which generated waste is allocated to multiple treatment technologies in an optimal way. Similarities and differences between RCOT and WIO-LP models would be discussed at the Conference.

Venue A, 2nd session
Wednesday, March 28, 13:00-15:00
Environment, Resource and Energy

1. FTA and Structural Change in Environmental Load in the East Asian Region

Hikari BAN (Kobe Gakuin University)
Kiyoshi FUJIKAWA (Nagoya University)

This study quantitatively examines economic and environmental impacts and structural changes caused by FTAs in the East Asia region by measuring CO2 emissions. We assess the following eight simulations: China-Japan FTA, China-Korea FTA, Japan-Korea FTA, China-Japan-Korea FTA, East Asia FTA, East Asia-Oceania FTA, TPP members' FTA, and Asia-Pacific FTA. An inter-regional input-output model is combined with a CGE model to evaluate structural changes in the environmental load. Although the environmental effects of FTAs differ across regions, we can make several general conclusions from our CGE analysis. First, under all scenarios, increases in CO2 emissions are very noticeable in East Asian countries. Second, by taking part in an FTA with China, output of many energy-intensive industries is likely to increase in Japan and Korea, while decreasing in China. Third, both labor and capital are likely to be replaced by energy in FTA regions because FTAs tend to increase wages and the cost of capital, compared with energy prices. The input-output analysis shows that both exports and imports of embodied CO2 emissions increase for almost all FTA members. It is interesting, however, that CO2 emissions induced by China's final demand decreases under the FTA scenarios where China participates in the FTA. The structural decomposition analysis suggests that the emission coefficient change contribution and the final demand contribution are positive for almost all FTA members. Notably, total CO2 emissions decrease in China for China-Japan-Korea FTAs, because the negative technological change contribution is larger than the positive final-demand change contribution.

2. Scenario Input-Output Analysis on the New Hydrogen Supply System and Diffusion of Fuel Cell Vehicles

Mitsuo YAMADA (Chukyo University)
Kiyoshi FUJIKAWA (Nagoya University)
Yoshito UMEDA (Toho Cryogenics Co., Ltd.)

In 2016, the Paris Agreement came into force as a new framework for the global environmental measures, especially mitigation of climate change, after 2020. The feature of this agreement is that each country sets an individual target on emissions of GHG called NDC. Under this agreement, Japan is to move toward the target of 26 percent reduction of GHG emissions before 2030 comparing those in 2013. In order to attain this target, it is indispensable to transcend a current fossil energy based society and shift to a renewable energy oriented society, and shift to a carbon dioxide emission free fuel in use as to energy sources besides introducing energy conservation technologies in each sector of manufacturing, transportation, business, and households. Then, a fuel cell whose motive power is hydrogen is being paid attention. Hydrogen, a source of energy for a fuel cell, can be generated in various ways. Representative examples include the extraction from fossil fuels or the electrolysis of water. Currently it is already in practical use to get hydrogen by steam reforming from petroleum, natural gas or coal such as Australian unused brown coal. These methods, however, have a disadvantage to emit carbon dioxide in the production process of hydrogen. Our research group is developing a new hydrogen generating system that directly decomposes hydrogen from methane, which separates carbon as a solid substance with no carbon dioxide emissions. We will estimate the carbon dioxide reduction effect of our new hydrogen generating system comparing with the current steam reforming method by applying scenario Input-Output analysis. In implementing this simulation analysis, we assume a certain volume of diffusion of fuel cell vehicles in the future and we use it as a reference case of the simulation analysis.

Venue A, 3rd session
Wednesday, March 28, 15:30-17:30
Environment, Resource and Energy

1. Economic and environmental impact by the choice of power sources in China: an application of scenario input-output analysis

Jiayang WANG (The University of Tokyo)

China's energy consumption has been increased rapidly especially in the last decade. While China has become the largest energy consuming and CO2 emitting country in the world leaving behind the United States, energy saving is becoming one of the most urgent political issues in China. As a matter of fact, China has declared that CO2 emissions per GDP will be reduced by 60-65% (compared with 2005) and total CO2 emissions will be peaking out by 2030 in the Paris Agreement in 2015. China's economy depends highly on fossil energies, especially coal. In order to achieve the Paris Agreement, China needs to reform such energy structure. The power generation sector accounts for approximately 50% of China's total CO2 emissions and the coal-fired power generation occupies about 70% of China's total power generation. Power generation by renewable energies, therefore, attracts a great interest from China's power sector because of its low CO2 intensity. Though renewable power generation is now rapidly diffusing in China, there are some issues that should be discussed. For example, it is not clear how large the economic negative/positive effect it will be given when the coal-fired power generation is replaced by renewable energies. Or, it is not clear how much CO2 emissions can be reduced when the coal-fired power generation is replaced by renewable energies, either. In other words, it is not clear how much is the marginal abatement cost of CO2 emissions by

introduction of renewable energies. This paper applies scenario input-output analysis in order to solve these challenges in China by shifting power sources.

2. Resilient Partnership under Mega Disaster

Michael HUANG (GRIPS)

The paper aims to provide the economic assessment in an assumed M9.1 earthquake in Japan's Nankai though area. Based on the assumed disaster impact data in the collapse building, we apply GTAP world trade model and examine the global economic impact focusing on the global supply chains of electronic, machinery and transportation equipment sectors. We also employ a recursive CGE model for investigate cost-effective recovery policy for Japan. The paper is expected to provide visualized disaster economic impact assessment that could be useful to identify the vulnerable industries and make ex-ante risk management.

Venue A, 5th session
Thursday, March 29, 13:00-15:00
Regional Input-Output Analysis

1. Measuring Inclusivity and Marginality: Estimating Philippine Regional Input- Output Tables Using a Non- Survey Approach

Josephine TEVES (Kyoto University)

The Philippine economy has experienced sustained and high growth as it grew by 6.5 percent in the second quarter of 2017. However, amidst economic growth, there are still people who are not able to feel the economic gains. As poverty headcount ratio remains high, the Philippines need to pursue inclusive growth and implement the new medium- term development plan that aims to transform the country into an upper-middle income economy, through rapid poverty reduction. The pursuit of regional economic development analysis requires detailed information about dynamic regional economies. Hence, regional input-output (IO) tables must be estimated using updated information. Using commonly used economic assumptions and available economic information, this paper examined on how IO helped in studying regional development policy in the Philippines. Specifically, it drew from Leontief's demonstration of inter dependencies between economic sectors to suggest that whereas national IO table is about giving better better granularity to the national accounts through an application of the technology of production, regional IO table provides regional variation in that technology and an understanding of the role of inter regional trade in an economy. The research contributes to several kinds of literature, particularly to an emerging area of study, the antecedents of inclusive growth framework.

2. Examining the Revolutionary Donation Tax in the Context of the Philippine Interregional Input Output Table

Kwangmoon KIM (Kyoto University)
Paolo Nicholas Cortes PADERANGA (Association of Regional Econometric and Environmental Studies)
Josephine TEVES (Kyoto University)
Kiyoshi KOBAYASHI (Kyoto University)

Conflict is deeply ingrained and incorporated into the history and culture of the Philippines. This paper aims to explore the existence and scope of a shadow economy in the Philippines by justifying and incorporating the alleged Revolutionary Donation Tax excised by certain quasi government groups. It explores the history, political ideology, and social impact of the said groups to establish the deep roots of this tax. This paper then incorporates the said tax into the Inter Regional Input Output Table to analysis its magnitude and linkages.

3. RAS structural decomposition analysis on the rural labor movement in Guizhou, China

Shuning CHEN (Anshun University)
Masaru KAGATSUME (Kyoto University)

Since 2010, China has started to emphasize the urbanization and interregional trade in the inland area to improve the regional economic development. This research applied the RAS structural decomposition analysis (SDA) framework to understand the determinants of the rural labor movement in Guizhou province. We decomposed the sectoral employment, labor productivity and income change according to four groups of factors which are the labor usage, the domestic final demand, the inter-regional trade (export and import) and the technical change. The results indicate the rural labor in Guizhou has strong tendency to move out from the agricultural sector. However, the employment opportunity in the modern urban sector has been reduced because of the rising of labor productivity and the income has increased in the process of output growth. On the other hand, the improvement of the labor productivity and production earning in agricultural sector seem to be very small. The cell-specific technical change in agricultural sector shows negative influence on labor productivity and the agricultural earning. From these results, we suggest that, for reducing the unemployment rate and promoting the sustainable development in the urbanization process in Guizhou, it is very important for policymakers to mitigate the urban-rural income differential and to improve the structure of agricultural production in a reasonable way.

Venue B, 1st session
Wednesday, March 28, 10:00-12:00
International Economy and International Development 1

1. Dynamics of Spatial Poverty and Disparity: Evidence from Vietnam, 1993-2014

Takahiro YAMADA (Keio University)

This paper verifies the dynamics of spatial poverty and inequality, notably for the bottom 40 percent of population in Vietnam, during the period of 1993-2014. According to Theil T and Blinder-Oaxaca decompositions, expenditure inequalities of urban-rural and between regions were diverging from the year 1993 to 2004, but they were converging from the year 2004 to 2014. Contrary, inequalities within areas and regions were converging from 1993 to 2004, and then diverging from 2004 to 2014. The urban-rural expenditure gap is mainly explained by years of education, job sector, and ethnic minority status of the household head, and remittances over the duration. For the determinants of poverty of bottom 40 percent of the population, years of education, service sector job and remittances, among others, largely and positively explained the dynamics. There are interesting chronological changes, notably on return to education and the role of domestic remittances for the increase of expenditure. The effects have been getting larger as time goes by from 1993-2014. Ethnic minorities are left behind from the benefits of economic growth relative to majority Kinh.

2. A Quantitative Analysis of Global Value Chains

Haoliang ZHU (Doshisha University)

This paper aims to measure the landscape of China's exports and real gains within global value chains. To this end, the first question to answer is whether the existing evidence based on conventional statistics reflects a real picture of China's exports. This paper analyzes domestic value-added (DVA) in China's exports over the period of 2000-2014 using World Input-Output Database (WIOD). By employing the framework introduced by Wang et al. (2013) and Koopman et al. (2014), this paper measures DVA in exports at the country, industry and sector-group (group of several sectors) level. The results show the long-run trend of DVA in China's exports and heterogeneity across different industries including high-technology, medium technology and low technology. The second question is what factors affect the change of DVA in exports. This paper not only measures the DVA in exports but also quantifies factors that cause the change of DVA. Such changes could be affected by different factors, such as changes in value-added coefficients (e.g. labor and capital), domestic input technology, export value, export structure and other factors. This paper extends the structural decomposition analysis (SDA) approach to examining the driving forces that affect DVA in China's exports. The results confirm that the increase of DVA in exports is mainly due to the expansion of export value. Moreover, the substitution of domestic intermediate inputs for imported materials contributes to the growth of DVA in exports.

Venue B, 2nd session
Wednesday, March 28, 13:00-15:00
International Economy and International Development 2

1. Climate Change, Yield Variation and the Volatility of International Price of Rice

Katsuhiro SAITO (The University of Tokyo)
Hideyasu SATO (The University of Tokyo)
Konomi SAITO (Soka University)

The average temperature of the Earth rose 0.74 degrees centigrade for 100 years from 1906 to 2005, and according to the forecast by IPCC, it will be increasing 2 to 4 degrees centigrade on average at the end of this century. Since climate change affects temperature, precipitation and radiation, the level of crop yields as well as the variation of them is going to be affected by climate change as well. There are a lot of researches which evaluate the impact of climate change on agricultural production. Most of these studies estimate and predict the production level, then evaluate the impact on prices. There is less research that concentrates on the volatility of price per se. Since the influence of climate change is not uniform among countries or regions, the regional correlation in yield variation is observed. This means that the correlation is of great importance when we consider the variation in international price of rice. Thus, the purpose of this study is to estimate the index of yield variation of rice for each country, to make analysis on the correlation matrix of these indexes, to evaluate the price volatility of rice, and to get the implication for poverty. First of all, we chose twenty two countries and regions which are best ten for rice production, consumption and exportation (some are overlapped). After estimating variation indices of rice yield, correlation matrices are calculated for several time periods such as 1960-2015, 1980-2000, and 2000-2015. We found some pairs with relatively high correlations. Next the synthetic international trade model of rice was constructed, and simulation was conducted for getting the international price of rice for yield variation with stochastic index of yield. The stochastic index (pseudo random numbers) was constructed with random number so as to preserve the estimated correlation. As a result, coefficient of variation for international price of rice during 1980 to 200 was 8 per cent, while the coefficient during 2000 to 2015 was 12 per cent. We confirm that the potential volatility of international price of rice is getting larger recent years. At the same time, we did the simulation with uncorrelated yield index and obtained almost the same coefficients of variation for two periods, i.e. 3 per cent. Climate change makes correlation of yield variation higher in recent years. We live in developed country with low Engel coefficient, and the price pike is not so much a big issue. For people who live in less developed countries with high Engel coefficient, price pike has the big impact. In addition, the increase of uncertainty in output price makes the producer less incentive to invest for future production. Thus, future production, in the long run, may be a factor to increase the level of international price of rice. We draw the implication of rice price volatility on poverty. On this study, ending and beginning stock of rice are assumed to be exogenous. In reality, governments are trying to control the stock so as to stabilize the price level of rice. Thus, the result of our study might be over estimate the price volatility. Some researchers point out the increase in international price volatility due to domestic price stabilization policy. We concentrate only on rice. When we take into account the wheat, which is one of the substitutes of rice, the volatility may be reduced depending on the elasticity of substitution and the correlation between rice and wheat yield variations. These are remaining points for further study.

2. Economic Assessment of Global Value Chains: Case of China and India

Kakali MUKHOPADHYAY (Gokhale Institute of Politics & Science and McGill University)
Cuihong YANG (Chinese Academy of Sciences)

Global Value Chains (GVCs) have taken centre stage in the process of development in developing and developed countries alike. China has established itself as the hub of low-cost production in the world and India has also been making tremendous policy shifts to reap the benefits of participating in GVCs. The position of a country in the vertical supply chain has come to dictate the distribution of surplus generated by this process. In this context, research and development (R&D) plays a significant role in productivity enhancement of production processes and is often the source of technology improvement in developing nations. However, the extent of the impact of R&D in GVCs, especially in upstream positions of the supply chain, remains inconclusive. Given the dominant role played by GVCs in the globalization process of economies, both India and China have made significant policy changes for better integration in the same. To tap into this environment, India has undertaken a major national initiative, “Make in India”, with the objective of facilitating investment, fostering innovation, enhancing skill development and increasing ease of doing business. The government of India launched supporting initiatives such as Digital India, Start up India, Skill India, Smart City projects and Pradhan Mantri Jhan Dhan Yojana to complement the Make in India project. The participation in GVCs has significant implications for technology improvement and productivity enhancement. Both countries have invested large amounts of capital, both financial and human, in large R&D projects.

In light of recent developments, focusing on China and India, this study aims to measure the imported intermediate inputs used in domestic processing sectors and the content of imported intermediate inputs in the export basket. The study assesses the R&D content in the imported intermediates and also in export. The study extends its analysis to the environmental impacts on the economies by accounting carbon emissions of imported intermediate inputs and its exports of both economies. Further, it calculates the domestic labour requirement to process the imported input so also export for China and India. The study attempts to address these objectives using the data from GTAP and GVC. The preliminary result indicates the efficiency and the competitiveness of China over India in international trade in value-added with a deepening of vertical specialization. Overall for both countries, the use of intermediate imports for exports is high although it varies depending on the trading partner. As per the results, R&D embodied in imported input by India is highest in the case of those from the EU and USA. In the Chinese economy, the EU and USA have highest absolute R&D content embodied in imported inputs. Additionally, the trade in intermediate goods appears to have large polluting implications on the economy.

3. Global and Regional Shock Transmission

Nagendra SHRESTHA (Yokohama National University)

Chinese economic growth in 2009 did not decline sharply, even though Chinese gross export of manufacturing goods experienced largest decline due to the global financial crisis in 2008 among Asian countries. In contrast, Japanese GDP growth fell sharply due to the global financial crisis as compared to

Chinese GDP. This paper attempt to figure out economic shock transmission mechanism associated with asymmetric impact of the global financial crisis on Asian economies.

Venue B, 5th session, 13:00-15:00
Thursday, March 29
Computable General Equilibrium Model

1. Assessing the Economy-Wide Effects of Public Procurement for Innovation Based on A CGE Analysis: A Case of Korean Electric Vehicle Sector

Yeongjun YEO (Seoul National University)
Kiyoon SHIN (Seoul National University)

Public procurement for innovation (PPI) has become a major innovation policy tool in recent years. While PPI refers to an order, placed by a public organization, for a new or improved product/service, because of the leverage it provides of state expenditures as regards the demand for and supply of innovation, PPI can also be defined and deployed as a deliberate demand-side innovation policy tool. Traditionally, innovation policy initiatives of countries and regions have mostly come from the supply-side, with interventions such as fiscal measures, support for training and mobility, public financing of research and development (R&D), information and brokerage support, and networking measures. However, the role of demand as an enabler and source of innovation has been a topic in innovation studies and policy for quite some time. Several studies have argued that PPI is much more effective for inducing innovation and speeding up the diffusion of innovation than any other innovation policy tools. Those studies state that PPI has various merits in overcoming various kinds of bottlenecks and problems in the generation and diffusion of the innovation, such as market and system failures which hamper the market entry of potential suppliers and diffusion of innovative goods or services. Despite of growing interests on the PPI as the innovation policy instrument, however, policy design of the public procurement for innovation has not been underpinned by a clear theoretical or empirical basis, rather based on anecdotal evidence. Empirical evidence about the effect of public procurement on innovation output and the economy more generally is rather fragmented and mostly limited to case studies. However, policymakers and practitioners are increasingly interested in finding out how to use their sizeable procurement budgets to address multiple objectives (such as, promoting innovation, driving economic growth, improving delivery of public services), and investigating the channels by which direct and indirect impacts of PPI take place within the economic system. Addressing a significant gap in our systematic understanding of the economy-wide effects of PPI, this study firstly attempts to analyze economic effects of PPI oriented towards an emerging sector, focusing on the Korean electric vehicle sector. In order to quantify the impacts numerically, we develop a knowledge-based computable general equilibrium (CGE) model, which incorporates some essential characteristics of knowledge and innovation activities (e.g., incorporating R&D activities, knowledge accumulation and knowledge spillover effects) in order to capture the changes of innovation-related activities within the economy induced by PPI policies. This methodological approach enables us to identify the linkage between the PPI and innovation from the innovation system perspective, and understand the impact channels/mechanisms induced by PPI within the economic system. Secondly, this study aims to construct additional policy scenarios by adopting an understanding of PPI as well as innovation policies, and by positioning PPI as a cross-domain policy which is inherently a mix of procurement

and innovation-related interventions (e.g., R&D tax credits or purchase subsidies). Based on these additional scenarios, this study compares the results of those scenarios, and analyzes how and which policy mix can be advantageous for the economic system under the PPI scheme oriented towards a new emerging sector (i.e., electric vehicle sector in Korea). Accordingly, this study expects to give a guidance for the public sector to achieve the value for money when it designs and implements the innovation-friendly PPI practices. Ultimately, ex-ante policy analysis based on standardized, validated methods based on a knowledge-based CGE model would provide a major contribution to the effectiveness of PPI and promote evidence-based policy making for economic growth and the improvement of the public good.

2. China in 2025: Implications for Africa

Christian OTCHIA (Kwansei Gakuin University)

That China is the main driver of economic growth in Africa, and that will last for the next 20 or 25 years at least is no longer a debate. What is not yet clear is the impact of recent policies of reorienting the Chinese economy towards domestic demand away from export-led growth. This paper provides a comprehensive and cohesive analysis of the likely effects on African economies of the recent structural reforms in China and complementary domestic policies by linking a global computable general equilibrium (GTAP) model to national CGE models that features domestic microsimulations. My analysis considers two steps. In the first step, I use the GTAP model to simulate growth and structural change in China, with and without the Continental Free Trade Agreement (CFTA) in Africa. Then I feed the changes (e.g. terms of trade, trade volume, FDI, etc.) from the GTAP model into national CGE models for two African countries, one resource-rich (Congo) and a resource-poor (Ethiopia), to assess the potential role of domestic complementary policies in maximizing welfare.

Venue C, 1st session
Wednesday, March 28, 10:00-12:00
Productivity 1

1. Market Size, Productivity and Product Quality regarding Firm Heterogeneity

Shiuehung LIN (Nanfang College of Sun Yat-Sen University)
Yungho WENG (National Chengchi University)

In this study we expand the basic framework of the model proposed by Melitz 2003 by including variables for production efficiency and product quality. We then use this expanded model to explore the effects of a scalar expansion of the global market in addition to the effects of the asymmetric market scale between countries. When the global market expands taking the case of the home country we find that the market allows only for lowering the productivity threshold for firms providing services to the domestic market and for firms with export abilities. However demand for other types of products increases according to the increases in the scale of the global market without affecting pricing while the profits of individual firms across the industry rise. This also allows those combinations of production efficiency and product quality originally unable to serve the domestic market or be exported to meet domestic or export demand. Next we explore the effect of the asymmetric scale between two countries markets We find that an expansion of the home countrys market will allow for firms with lower productivity to survive in the domestic market however the productivity threshold for exporting firms will increase. This finding illustrates that in the home country exporting firms must have higher productivity to be capable of exporting to other countries. The corresponding contraction of the scale of a foreign countrys market will have the opposite effect. Furthermore, taking the case of export decision making by firms from the two countries the zero profit curve for both countries firms distinguish between four export decision making areas. These four areas describe different export decisions under various production efficiency product quality combinations. This finding explains that not only firms with high productivity and high product quality can meet export thresholds rather it is necessary to have a reasonable level of product quality or production efficiency. These circumstances occur more easily as the markets of the two countries become more asymmetric in scale.

2. Producer Service, Input Variation and Chinese Manufacturing Firm's Productivity

Yinghua MENG (Shanghai University of International Business and Economics)
Ye ZUOYI (Shanghai University of International Business and Economics)

We use the micro-data of Chinas service firms and Chinas input output datasheet to study the influences of producer services which act as intermediate inputs on the productivity of manufacturing firms. The results show that the efficiency improvement of most producer services(except finance and education) have positive effects on Chinas manufacturing firms productivity and the positive effects of wholesaling industry, information transmission, computer service and software industry, scientific research industry and technical service industry is more pronounced than the others. In addition, most producer service make stronger positive effects to the middle and high productivity manufacturing firms than to the low productivity manufacturing firms. Thirdly, with the increasing input of high tech productive services, the positive effects on manufacturing firms will be enhanced, while the impact on the productivity of the manufacturing firms is not obvious or will be weakened with more input of the middle and low tech producer services. Finally, producer service increase

manufacturing firms productivity on east and middle region, while inhibit manufacturing firm's productivity on west region.

3. Cost Criteria and Productivity Criteria Using the World Input Output Database

Takahiko HASHIMOTO (Ritsumeikan University)

Based on the research of Okishio Nobuo, this paper examines different types of technical change, as categorized by productivity criteria and cost criteria. We have used data from the World Input-Output Database (focusing on developments in the international division of labor and technical advances for the period from 1995 to 2007) for our calculation and analysis. The results of our calculations confirm that for 124 out of 1,400 industries where technical change was accomplished, cost criteria were satisfied but productivity criteria were not satisfied. Among these technical changes, 86 industries experienced change that resulted in a decrease in direct labor and an increase in indirect labor, particularly indirect labor related to imported intermediate goods. The study confirms empirically that one reason for this type of technical change is that the value of imported intermediate goods divided by the money wage rate of the recipient country is lower than the amount of labor invested in imported intermediate goods.

Venue C, 2nd session
Wednesday, March 28, 13:00-15:00
Productivity 2

1. Policy Impact of Public Procurement for Innovation for Korean Telecommunication Equipment Industry: Input-Output Structural Decomposition Analysis

Kiyoon SHIN (Seoul National University)
Yeongjun YEO (Seoul National University)

Recently, there is growing interest on public procurement for innovation which utilizes public procurement for technological innovation and diffusion of innovation. As public procurement for innovation is well-known for one of the effective innovation policy tools, its policy impact assessment is limited on specific case studies and direct R&D expansion effect only. However, it is important to investigate public procurement for innovation in economic and innovation systems perspective because its policy impact is generated through the interactions and feedback among various economic agents; suppliers, consumers, governments, and social factors. This study investigates the policy impact of public procurement for innovation as change of industrial and innovation system of sector by input-output structural decomposition analysis. Specifically, it is analyzed the effect of Korean TDX (Time Division Exchange) public procurement for innovation policy on industrial system change of Korean telecommunication equipment manufacturing sector.

2.13 Year Thailand TFP

Nutpol SIRISAWANG (L P Laikhum Co., Ltd.)
Nattaya KLAIRUANG (Kasesart University)
Apichart DALUNPETE (Kasesart University)

Thailand Total Factor Productivity and Total Factor Productivity Growth (TFP/TFPG) was made for more than 10 year by Office of Economic Industry of Thailand (OIE). But it did not reflect to percentage of GDP.

Because of GDP changes by using CVM in last 5 year modification. By using survey data from 1870 data in last 10 years and applied CVM to normalize TFP/TFPG and compare with the last method.

Venue C, 3rd session
Wednesday, March 28, 15:30-17:30
Organized session by Ritsumeikan University

1. International Production Sharing of the Textile-Clothing Industry of Bangladesh and Asian Exporters

Md MASUM (Ritsumeikan University)
Kazuo INABA (Ritsumeikan University)

Production processes of textile-clothing industry (TCI) is increasingly fragmented and distributed across economies. As a result, it has become important to know the production sharing structure of the TCI of Bangladesh and Asian exporters in the global value chains in terms of various value-added items. The objective of this paper is to trace international production sharing of the TCI of Bangladesh and Asian exporters. This paper applies input-output analysis on gross exports in the multiregional input-output framework. The impact analysis finds that if one-unit final demand increases from outside of the Asian region, the highest production will be in China (1.81 units) followed by Viet Nam (1.75 units), Bangladesh (1.38 units), India (1.27 units), and Indonesia (1.16 units). To satisfy the increasing demand, production sharing in the TCI of Bangladesh is 1.9%, 1%, and 2% from China, India, and rest of the world respectively. Whereas, production sharing in the TCI Viet Nam is the highest (18.2%). China and India are almost independent to satisfy increasing international demand. This main contribution of this paper is to decompose the gross trade flows of the TCI into various value-added and double counted terms.

2. Role of SMEs and Its Constraints: Case of Central Asia and Eastern Europe

Sevara MADGAZIEVA (Ritsumeikan University)
Kazuo INABA (Ritsumeikan University)

This paper was aimed to examine the role of small and medium firms (SMEs) of transition countries which consist of three areas; Central Asian countries, Central and Eastern European countries, Balkan area, and how various constraints affect the performance of SMEs. The study conducts the empirical analysis to investigate the main determinants of firms' growth in these areas. Empirical model specifies that firms' growth is not determined by only their features such as size or age, but also by other specific factors such as index of financial constraint and tax rate. The dataset is taken from the Business Environment and Enterprise Performance Survey dataset conducted by the World Bank and covers 12 countries (Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Serbia, and Slovakia) over the period from 2002 to 2013. SMEs' dummy is used to investigate whether SMEs face tax and financial constraints. Besides the sample is divided into three areas, Central Asian countries and Eastern European countries, Balkan and Central European area to examine the characteristics of each area. The findings of empirical analysis show that negative effect of corporate income tax still remains as major barrier for SMEs, while SMEs do not suffer from financial constraint. The regression results by area show that tax barrier particularly severe in Central Asian countries.

3. The Effects of Career Interruptions on Japanese Female Wages: Does the Timing of Birth Matter?

Magdalena Triasih DUMAULI（Ritsumeikan University)
Kazuo INABA (Ritsumeikan University)

Although many studies find the negative impact of childbearing on women's wages, there is no empirical study in Japan which emphasizes the effect of timing of childbirth on wages due to data limitation. This study is based on Keio Household Panel Data (KHPS) that contains specific information on the work historical data to attest whether motherhood timing is important by examining the effect of the first age of childbirth on Japanese women wages. The empirical results show different findings from the precious studies. First, comparison of OLS and Fixed Effect estimates indicates that there are unobserved heterogeneities when women choose to be early and late child bearers. Second, returns of experiences after birth indicates that Japanese females are more productive in the labor force. Third, unlike in the US cases, child wage penalties are higher in Japan. It indicates that the opportunity costs are higher in Japan and it might the reason of discouraging Japanese women to have babies. Four, there is no variation in the child wage penalty based on motherhood timing since the decision to give birth will automatically impose women to bear wage penalties. Therefore, delaying childbirth may not be the optimal strategy to build the Japanese women career.

Venue C, 5th session
Thursday, March 29, 13:00-15:00
Compilation and Theory of I-O, SNA or SAM 1

1. FISIM (SNA Bank Output Measures) and Endogenous Money Supply

Akimasa KATSURA (Momoyama Gakuin University)

FISIM (SNA bank output measures) and endogenous money supply -New proposal for bank output measures- Akimasa Katsura I doubt why the market output of the bank industry does not exist in the SNA output measures(FISIM). FISIM (SNA bank output measures) means a financial intermediation service. This is not a market output and the service is not sold in the market. However, every industry other than bank industry has its market output. I think that this situation has caused the weakness of the industrial analysis employing SNA data and I-O data. In this report, I will point out four points as follows to search for more better bank output measures. Firstly, I will point out that SNA peculiarity of the bank output measurement derives from the exogenous money supply theory or money (credit) multiplier theory. But these theories that cash money creates lending would not be effective, because as the quantitative easing shows, the volume increase of the base money of central bank does not induce to the money stock through the bank industry lending. Secondly, based upon the first point, it is necessary for us to seek for the alternative theory except the exogenous money supply. I would like to consider, as its alternative theory, the endogenous money supply theory. Before explaining the endogenous money supply theory, I will confirm both money supply theories. To sum up both theories, the exogenous money supply theory is that the base money of central bank brings bank lending, that is, bank industry lends the base money or cash money(external money). On the other hand, the endogenous money supply theory is that bank lending is induced by transaction demand and the necessity of central bank reserve deposit for deposit creation by bank lending is supplied by the central bank base money. So, it is found out that both theories are exact reverse regarding the relation

between bank lending and supply of the base money of central bank. In the following, I will consider the relation between bank lending and base money supply from the point of the view of (1) bank industry characteristic and (2) the decision process of policy interest through demand and supply of the reserve deposit by central bank. As to (1), as deposit-taking corporations, the bank industry can lend without cash money since the bank industry itself can issue the deposit(deposit creation). We can confirm that the bank industry does not lend cash money(external money) but lends by deposit creation, therefore the starting point of the bank industry activity is not collection of cash money or central bank reserve money but lending by deposit creation. As to (2), as bank lending is deposit creation, bank lending generates deposit, this deposit requires the deposit to the central bank, i.e., central bank reserve deposit in the bank industry, the central bank supplies the base money for the demand of the reserve deposit in the bank industry through its operation, as the result, the policy interest is decided, the policy interest guides the level of long and medium interest, and referring to these interests, bank industry again lends by deposit creation. So we can confirm that the supply of the base money of central bank is not starting point in the bank lending but the result of the bank lending by deposit creation, and we can recognize that the endogenous money supply theory is superior to the exogenous money supply theory with regard to the relation between bank lending and base money supply from the above point of the view of (1) bank industry characteristic and (2)the decision process of policy interest through demand and supply of the reserve deposit by central bank. Therefore, I think that we should employ the endogenous money supply theory in the bank industry output measurement. Thirdly, I will point out that since SNA bank output measurement has to be based on the endogenous money supply theory, that is, the base money of central bank or the cash money does not produce the bank lending, the bank lending induces the deposit and the base money of central bank, in other words, the starting point of the bank industry is not the base money of central bank or the cash money but the bank lending(deposit creation), SNA bank industry output or sale is not the financial intermediation service but the lending service, and SNA bank industry output volume is not the interest margin(lending interest minus deposit interest) but the lending interest, that is, the lending service fee. This lending service in the bank industry is certainly market output. Lastly, I will point out that the endogenous money supply theory makes the bank output measurement method non-hypothetical or clear as compared with FISIM hypothetical measurement method, and also it makes industrial structure analysis in the SNA and I-O effective and useful. I think that if SNA abandons the consideration of the endogenous money supply theory in the bank output measurement, the confusion of SNA bank output measurement method will continue everlastingly.

2. Propagation of Economic Shocks through Input-Output Network: A Case of Thailand

Rangsima SRISAWAT (Thammasat University)

This paper examines the vulnerability in the economy through input-output network connecting economic sectors of Thailand. Specifically two quantitative methods based on network theory have been applied to the input-output tables of Thailand during 1975-2010. The first method investigated the propagation of an exogenous shock of final demand within the economic system . The second technique examines impacts of changes in linkages among economic sectors by using the adaptation of diffusion model. The results obtained from the first method indicate that other foods and its related sectors such as restaurants and hotels, processing and preserving of foods mostly generate the largest impacts during 1975-2010. This outcome is very similar to the rank of backward multipliers (i.e.Leontief multipliers), indicating that foods and related

industries have the biggest impacts. The results obtained from the second computation identify that change in the production technology of textile industry could lead to the highest impact on Thai economy in 1975. Also the other manufacturing production could influence the largest impact in 1980. During 1990 -2005, public works and other construction was the sector creating the largest impact. These results indicate the key sectors of Thai economy and they would be very useful for future policy formulation and for disaster alleviation.

3. Compilation and estimation of EEIOT based on SEEA-CF

Keiji UJIKAWA (Yokohama National University)

The introduction of 2008SNA (Systems of National Accounts) to Japan can influence on the compilation of a wide variety of input-output tables and statistics. After the publication of SEEA-CF (the System of Environmental -Economic Accounting-Central Framework), as to the Environmental Satellite Accounts, the Cabinet of Japan began to examine and estimate as JSEEA-Water. And concerning to the estimation of supply and use tables and input-output tables of SEEA, We can refer the social Accounting Matrix multiplier models adopting the estimation of Hybrid accounts in Japan according to SEEA2003. In this research, firstly we clarify a wide variety of notions according to the change of SEEA versions. Secondly we compare the theoretical framework of supply and use tables and input-output tables. Thirdly we clarify the features of SEEA, Hybrid Accounts and SEEA-CF in Japan. Finally we try to calculate of Environmentally Extended I -O of SEEA.

Venue C, 6th session
Thursday, March 29, 15:30-17:30
Compilation and Theory of I-O, SNA or SAM 2

1. A Network Analysis of Thai Macroeconomic Fluctuation through Input-Output Model

Pirapat PAREERATANASOMPORN (Thammasat University)

The aim of this paper is to examine the role of microeconomic interactions in shaping Thai macroeconomic fluctuation by using network analysis. As standard argument views microeconomic behavior to be idiosyncratic and symmetric by nature, sectoral shocks generated from microeconomic activities are generally being averaged out as a single aggregate effect that impacts macroeconomy. This paper, in turn, argues that microeconomic activities can generate sizable aggregate effect if the economic structure is not in its balance form. Based on the theoretical foundation provided by Acemoglu et al. (2012), if the outdegree distribution of transactions exhibits power law distribution, the economy may not be balance and intersectoral linkages may be the origin of aggregate fluctuation. Thai economic structure is being investigated through the lenses of input-output model and the data used in this study is 58 sector version of Thai input-output data, spanned from 1975 to 2010 with five-year intervals (except for the year 1998). The first outdegree and second outdegree are being calculated from intersectoral transactions to estimate scaling parameters of power law distribution. The baseline value of scaling parameters must be between 1 to 2 to confirm the existence of both power law distribution and the origin of aggregate fluctuation. The scaling parameters are estimated based on three different approaches, namely: OLS (Ordinary Least Square) estimation, Nadaraya-Watson kernel (nonparametric) regression, and ML (Maximum Likelihood) Hill type estimation. Out of three estimation techniques, it is found that ML Hill-type estimation yields the most consistent estimates of scaling parameters while OLS estimates and NW estimates are subject to bias and inconsistency. The average scaling

parameters of both first and second outdegree distributions based on ML Hill-type estimation are 1.74 and 1.06, respectively, which confirms that relatively overtime Thai economic structure is not balance and intersectoral shocks from Thai industries can generate aggregate fluctuation.

2. Creating a Financial and Social Accounting Matrix Using an Excel-based Computable General Equilibrium Model

Yusuke FUKUSHIMA (Kyoto University)
Kwangmoon KIM (Kyoto University)

This research shows a first approach to build a FSAM based CGE modeling for national wide macro economy in Japan. It is proposed a methodology to build real FSAM and T-accounts for capital and financial sector and construct Computable General Equilibrium (CGE) modeling of Japan which integrates real and financial sectors, and to apply it to a quantitative evaluation of the impacts on the national wide macro economy caused by such external and internal shocks as oil price changes, fiscal and financial (foreign exchange rate) policies, tax policies and technological changes from the point of view of comparative statics in SNA. In particular, we will that excel function can used as transparency of procedure for model calibration.

3. Empirical Analysis of Economic Interdependencies in the GMS Based on a Five-Nation International Input-Output Table

Hidefumi KANEKO (Association of Regional Econometric and Environmental Studies)
Kwangmoon KIM (Kyoto University)
Secretario FRANCISCO (Association of Regional Econometric and Environmental Studies)

With the growing international economic relations among countries in the Greater Mekong Sub-region (GMS), notably in terms of crossborder trade, investment, and labor mobility, this paper attempts to measure and analyze the economic interdependencies, based on a five nations international input-output (FNIIO) table constructed by linking the five countries of China, Thailand, Lao PDR, Vietnam, and Cambodia where IO data are made available for the latest 2005. The result of analysis, which is the multiplier effects of backward and forward linkages, the spillover and feedback effects, the impact on production, and the impact on import, is that the economic interdependencies linking China, Thailand, Lao PDR, Vietnam and Cambodia in the year 2005 were very weak in terms of the much difference of economic development stage or industrial structure in spite of the remarkable traffic development. Furthermore, the spillover and feedback effects were found to be almost negligible because of the much lower values of their bilateral trade transactions.

Venue D, 1st session
Wednesday, March 28, 10:00-12:00
Organized session by Korea KESRA-KIET

1. A Generalized Measure of Bilateral Trade

Bawoo KIM (Korea Institute for Industrial Economics and Trade)

Several bilateral similarity measures in international economics literature have used Minkowski distance with parameter 1 without explicit justification. Depending on market structure and quality heterogeneity, a result regarding similarity of bilateral trade may mislead the interpretation. To tackle this problem, a generalized measure of similarity concept is given. As an example, the extended concept of similarity is applied to ESI and a simulation with various Minkowski parameters is given to verify usefulness of parameter. It shows Minkowski parameter can change the order of similarity among pairs and cautious choice is needed. Heterogeneity in quality also accounted in the generalized parameter. For simplicity, a cumulative distribution from actual data has chosen to proxy relative quality of a country's export of given product. It is possible to alternate the methodology. Kernel density is a good candidate and digging the technology-quality curves may enhance the accuracy of analysis. The concept also can be applied to any micro data such as a firm level data.

2. Analysis on Production Ripple Effects between Large and SME (Small and Medium Enterprises): Focusing on the Trickle Down and Up Effects

Youngho LEE (Korea Institute for Industrial Economics and Trade)
Jaejin KIM (Korea Institute for Industrial Economics and Trade)

Social polarization in Korea has been intensified. A trickle down and up effects have been recently highlighted as solutions of social polarization. The trickle down effect has been discussed before, while researches focusing on the trickle up effect have been cited relatively low. Thus, this study shows that the production structure of industry is based on a close relationship among agents, and it is appropriate to look at the trickle down and up effects at the same time. For a comprehensive analysis of the trickle down and up effects, the scope of activity was limited to production, and the scope of producers was limited to large and SMEs (small and medium enterprises). In addition, the study analysed the path and scale of the ripple effect by separating production ripple effects into the direct effect and the cross(trickle down and up) effect. Furthermore, it examined how labour and capital, primary economic production factors, can impact on the direct effect and the cross(trickle down and up) effect. The results of this study show that the direct effects are significantly higher than the cross effect, which is divided into the trickle-down and -up effects, and that the linkage between large and SMEs has been gradually weakening. In addition, it cannot find the one-way effect that the economic ripple effect caused by production toward either one of the large and SMEs. It cannot be a realistic growth strategy for economy that one-sided growth and investment spread through other sides.

3. Analysis on Creating of Value Added in Korea Electronics Industry using WIOT

Taehyun KWON (Bank of Korea)
Youngho JUNG (Bank of Korea)

1 Overview of Korea electronic industry

2 Structural analysis on electronic industry with WIOT

3 Result of Analysis

a) Production side

b) Demand side

c) Inducement of production and value-added

d) Effect on each countries and sectors

e) Measuring TiVA

4 Implications

4. A New Approach for the Size Estimation of Sports Market

Joonho KANG (Seoul National University)
Hwaseob KIM (Korea Institute for Industrial Economics and Trade)

As the sport industry has been combined with a variety of industries such as manufacturing, broadcasting and tourism, new types of business in the sport industry started to appear As a results, in the developed countries like Japan and USA, there is new classification approach, which classifies the sport industry and attempts to understand its attributes. This is because understanding the characteristics of the sport market is efficient for policy development. However, classification standard related to the sport industry in Korea are still based on the provider's perspective, which makes it difficult to understand interrelation between industries in the sport market and to find new types of business and its background. It also disturbs making and fulfilling proper policies for the sport industry. Accordingly, this paper will suggest sport market value network as the classification system, which can help grasp its attributes and the market condition, also increase the efficiency and effectiveness of a policy. This paper especially attempts to suggest the market-based approach that considers not only the consumer's position but the supplier's for golf market in Korea.

Venue D, 2nd session
Wednesday, March 28, 13:00-15:00

Organized session by Meiji University

1. A Study of Industrial Structure in France

Rintaro MATSUDA (Meiji University)

The aim of this analysis is to examine the evolution of French Industries. Based on I-O tables provided by OECD, WIOD and Eurostat, we will analyze the structural changes in French Industries. More specifically, we will try to find out what are the crucial factors for the structural change in French Industries by DPG Analysis.

2. A Study of Structural Changes in Japanese Industries

Tsutomu YOSHIOKA (Meiji University)

The aim of this paper is to examine the structural changes of Japanese industries by using Input-Output Table for Japan. We will evaluate structural changes of Japanese industries from the view point of deviations from proportional growth. In this paper, I focus on service sectors which have large shares in output.

3. Input-Output Table and Pasinetti's Macroeconomic Condition

Jun OMATA (Meiji University)

In this presentation, we will apply the macroeconomic condition of Pasinetti's structural economic dynamics to Input-Output Tables for Japan. In Pasinetti's model, full employment of labor force is consistent with full expenditure of national income, and unemployment is explained by the lack of effective demand. In case that unemployment exists, the macroeconomic condition is not satisfied. We will use the model in which the production process of consumption goods and of capital goods are separated. And we will construct the vertical integrated system from the Leontief's model in order to check the macroeconomic condition.

Venue D, 3rd session
Wednesday, March 28, 15:30-17:30
Organized session by China CIOA

1. Urban Transformation as An Adaption to Resource and Environmental Constraints Based on A Case Study of Beijing: From Efficiency Priority Strategy to Total Control Strategy

Zhuoying ZHANG (Chinese Academy of Sciences)
Xiaoling ZHANG (City University of Hong Kong)
Minjun SHI (Renmin University of China)

In conjunction with its economic and population growth over the past decades Beijing has been experiencing an increasing water shortage that is likely to become a choke point impeding its future development as a sustainable city. This study conducts an optimization analysis in an input-output framework to investigate Beijings urban transformation as an adaptive measure in response to water resource constraints. The results show that urban transformation is currently affecting the severity of water resources and the constraint on water resources has become a hard constraint affecting industrial development in restricting economic development in different phases. The study verifies the great potential of industrial restructuring for water saving as well as economic growth and the need for a change in industrial structure transformation strategy from one of simply prioritizing efficiency to one of total control by cutting down the scale of industry. The study contributes to a better understanding of the transformation of Beijings industrial structure the associated impacts on water resources and the possible actions that can be taken for their amelioration to maintain sustainable development in the future.

2. Exploring the Role of Real Estate Sector in Economy Based on Input-Output Analysis

Xiuting LI (University of Chinese Academy of Sciences)
Jing HE (University of Chinese Academy of Sciences)
Jichang DONG (University of Chinese Academy of Sciences)
Zhi DONG (University of Chinese Academy of Sciences)

Real estate plays an important role in the socio-economic development of all countries around the world. Scientifically understanding the socio-economic effects of the real estate sector will help the government reasonably formulate real estate development plan, effectively regulate the real estate market and promote steady economic development. Based on the input-output tables of 43 countries (regions) published in WIOD database from 2000 to 2014, we estimate the inter-sectoral linkages and macroeconomic effects of real estate sector in various countries, then analyzes the longitudinal development trends of economic effects of real estate sector in China as well as the differences compared with other countries. Furthermore, panel model is used to empirically analyze the impact factors of economic effects of real estate sector. The findings are as follows: 1) The related sectors with real estate in various countries show a shift from traditional material industries to emerging service-oriented industries. 2) Compared to other countries, China's real estate sector has a high proportion of financial consumption. 3) The key factors affecting the economic effects of the real estate sector include the level of national economic development, the level of financial sector development and regulatory policies. Based on the above findings, we propose the planning and management strategies of real estate sector around the coordinated development of real estate sector and social economy.

3. Measuring the Generalized Global Industry Relocation: Based on World Input-Output Model

Xiang GAO (Chinese Academy of Sciences)
○Cuihong YANG (Chinese Academy of Sciences)

The financial crisis in 2008 prompted the restructuring of the global value chain, and global industry relocation presented more diversified features. Therefore, the researches on the measurement and mechanism of industry relocation become increasingly important. This paper put forward an approach to measuring the value of generalized industry relocation based on world input-output model. In empirical part, this paper measured the value of generalized industry relocation during the periods 2000-2007 and 2007-2014. The results revealed the features about industry relocation, some of which are consistent over time; the others present the heterogeneity between these two periods and among different economies.

4. The Compilation Method on China’s Multi-regional Input-output Model

Yaxiong ZHANG (State Information Center)
Jianqin YUAN (State Information Center)
Jifeng LI (State Information Center)

This paper introduces the method and procedures on how to build the China’s multi-regional input-output (CMRIO) models of 2002,2007 and 2012, with highlighting the new features on the 2012 model compilation. The entire development work for CMRIO is based on 31-province classification, with relying on each province’s IO table and using the national table as the control totals. We propose a

specific model based on entropy maximizing and gravity models to estimate the interregional trade coefficients. The entrepot trade is taking into account in order to compile the import-inflow non-competitive provincial tables. At the same time, the discrepancies of the CMRIO is discussed and the suggestions on future improvement are given.

Venue D, 4th session
Thursday, March 29, 10:00-12:00
Organized session by India E3 Model Team

1. Modelling the Power Sectors of East Asia in 2050 using E3ME-FTT: Power

Soocheol LEE (Meijo University)

In this paper, we apply the power mix obtained from the simulation results under the policy scenarios of regulations on nuclear and coal power generation through 2050 to estimate and confirm the impact on the economy (GDP, employment, etc.) and environment (CO2 emissions) by using E3ME(Energy, Economy, Environment Macro Econometric Model). E3ME was developed by Cambridge Econometrics and Cambridge University and has widely used to evaluate EU energy and climate policies.

To ascertain what power mix is desirable from a social perspective, it is necessary to scientifically assess the effects of various power mixes on the economy and environment, via quantitative analysis and evaluation using a reliable estimation model. Restricting nuclear and coal-fired thermal power in East Asia would increase power generation costs and exert a negative influence on the economy (particularly the GDP), but we show the effect of investment demand into alternative power sources, that is, the construction of renewable energy power plants, and a reduction in imports of fossil energy would ameliorate the negative impacts over time. Regarding CO2 emissions, the study highlighted considerable reductions although the amounts will differ between countries.

2. Modelling Impacts of Scaling up Energy Efficient Cleaner Technologies for Thermal Comfort in India using E-3 India

Surabhi JOSHI (E3-India Initiative)

Demand Side energy efficiency can go a long way in changing the trajectory of energy transitions in emerging economies like India. This paper compares impacts of technology interventions for providing a more energy efficient thermal comfort alternatives for Indian households. Ceiling fan are universally penetrated technology providing thermal comfort in Indian households and commercial spaces. The product thus has strong integration of manufacturing within Indian economy. The study captures impacts of mass introduction of more efficient ceiling fans for the Indian households. We compare and analyse the impacts of more efficient fans not only on energy sector but also the economy and environment at the regional level using E3-India model. The comparison is drawn for various incentives to manufacturers and households for the technology switch and its overall impact on the economy providing a holistic policy prescription using an integrated modelling framework.

3. Regional Impacts of Renewable Energy Targets on the Indian Economy: Application of E3-India Model

Kakali MUKHOPADHYAY (Gokhale Institute of Politics & Science and McGill University)
Partha Pratim Ghose (St. Xaviers college)

The renewable energy's contribution to total energy source in India is account for 17.5% as of April 2017. India's overall installed capacity has reached 329.4 GW, with renewables accounting for 57.472 GW. A nationwide campaign has been launched to achieve five times more renewable capacity by 2022 and 40% by 2030. The mission also aims to achieve grid parity and parity with coal-based thermal power by 2030 and feed 100 GW of solar power by 2022. The government has enhanced its aspiration by amending the targets from 40 GW to 60 GW for wind power, 10 GW of biomass and 5 GW of small-scale hydropower by March 2022. Additionally, hydro power and biomass power mandates are set by the government resulting into 175GW of Renewable Energy in 2022. In terms of meeting its ambitious 2022 targets, as of 31 March 2017, wind power was more than halfway towards its goal, whilst solar power was below 13% of its highly ambitious target, although expansion is expected to be dramatic in the near future. Bio energy was at just above 80% mark whilst small hydro power was already 85% of the way to meet its target. Overall India is at 33% towards meeting its 2022 renewable installed power capacity target of 175 GW. Even though the nation is trying to expand its renewable use, however, country's coal-fired fleet remains strong with a 59 percent share in the total energy mix which is a major source of carbon emission. In this effort, India has voluntarily pledged to the UNFCCC to reduce emission intensity of Gross Domestic Product by 33-35% below 2005 levels in 2030.

Given this backdrop, the current study attempts to evaluate the economic and environmental impacts of the Renewable Energy (RE) production mandates in 2030 at national and regional level in India using E3 model. For this, several scenarios based on the targets are developed and further compared with the Business As Usual conditions. The results indicate the increases in industrial output and employment as well as reductions in prices of other sectors and carbon dioxide and other GHG emissions.

The government of India through Ministry of New and Renewable Energy (MNRE) is playing a proactive role in promoting the adoption of renewable energy resources by offering various incentives such as generation-based incentives, capital and interest subsidies, viability gap funding, concessional finance, fiscal incentives etc.

Venue D, 5th session
Thursday, March 29, 13:00-15:00
Organized session by Nagoya University 1

1. Inter-province Carbon Transfers of ETS Covering Sectors in China

Yiyi JU (Nagoya University)

Emission trading scheme (ETS) is an essential option of climate policy instruments implemented in many countries. China has been operating eight pilot markets since 2013. Its nationwide emission trading scheme, the world' s largest emission trading market, was established at December 19th, 2017, with a market size of

RMB 45 billion (US$ 7.1bn), covering around 4 Gt CO2 per year in electricity supply sector. However, this emerging instrument has been growing under multiple policy goals by different inter-dependent systems (to cut down the current overcapacity in certain sectors by industry policy makers, to restructure energy consumption from energy policy makers, to strengthen China' s influence on global carbon pricing by foreign affairs policy makers, etc.). To ensure CHN-ETS to develop effectively, efficiently and fairly in this complicated context, this paper aimed to explore solutions in terms of ETS market design, specifically by providing reference on adjusting allowance allocation at province level. An adjustment based on Multi-Regional Input-Output (MRIO) analysis may enable ETS to cover inter-province carbon leakages via trade. This paper found that in 2012, the inter-province transfer-out paths with the largest embodied emissions are from Inner Mongolia to Beijing (87.20mt), from Shanxi to Beijing (79.18mt) and from Anhui to Beijing (16.91mt). An adjustment matrix was reached by the net inter-province transfer-out emissions. Further, an ENA (Ecological Network Analysis) model was utilized to figure out which sectors controlled the electricity supply sector and to provide references for a possible expansion of CHN-ETS in the future. Finally, based on the unique features of electricity supply sector in China, this paper explored the mechanism that emission abatement cost of electricity supply sector could be transferred to other sectors as incentives to mitigate from the consumption side.

2. Income Distribution Effects of Carbon Tax in Chinese Provinces

Yuzhu WANG (Nagoya University)

With the progress of industrialization and urbanization in China, greenhouse gas emissions due to large amount of energy consumption are rapidly increasing. This research considers introducing carbon tax as one measure to reduce carbon dioxide emissions. The introduction of carbon tax is expected to raise energy prices, reduce consumption, and promote energy-saving technology. However, the extent to which household burden will be influenced by the introduction of carbon tax remains unresolved. By referring to the residential areas and consumption pattern as reflected in the China Multi-Regional Input-Output Table 2012 and China Family Panel Studies 2012, this research aims to calculate how much household burden is imposed on each province as according to different income groups.

3. The Role of Agro-processing Industries in Promoting Economic Growth in Vietnam

Trang Hong VU (Nagoya University)

Vietnam has been adopting the industrialisation and export-led growth model for economic development since the enactment of Doi Moi (Economic Reform) Policy in 1986, which has resulted in the remarkable growth rates of the gross domestic product and per capita income. In recent years, there has been a shift in the export structure as the proportion of agro-processed commodities reduces while that of electronic equipment and other high technical content products rises as a response to the trends in international markets. This study, hence, attempted to assess whether this change in the role of key industries is in fact most effective in promoting economic growth. This study focused on the agro-processing industries as the potential strategic sector for spurring production, demonstrated by its backward linkage effect. The research adopted Input-Output analysis to determine the output multipliers of these industries on the final production

of the economy, then compared them with those of other sectors to depict the order of magnitude of their stimulus power. The study covered all sectors in the economy as specified in the Input-Output tables of Vietnam. The industries of focus are food processing, beverage production, and tobacco production. The analysis used five Input-Output tables from 1989 to 2012, a time range covering over two decades of economic development and two economic recessions in 1997 and 2007. The 2012 table was the latest data constructed by the General Statistics Office of Vietnam at the time of this research. The findings reveal that agro-processing industries produce strong effects on inducing the production of the entire economy. The food processing industry has the largest growth stimulating impact, surpassing that of all other sectors including primary productions, services, and manufacturing sectors, some of which are currently key components of Vietnam's exports. This power has persisted for over two decades of economic development. Beverages and tobacco industries are also among the most effective in terms of promoting economic growth. The results generated from this study provide an empirical evidence for suggesting policy measures to boost the growth of Vietnam by stimulating the expansion of agro-processing industries, particularly food processing, in both scale and the added value. Suggested strategies are (i) promote export of agro-processing products, and their domestic consumption if accompanied by import-substitution strategies; (ii) create policies to facilitate participation in global value chains; (iii) improve the competitiveness and capabilities of agro-processing enterprises; (iv) increase investment in research and development to promote innovation of production technology; and (v) improve the capital market to grant agro-processing businesses the access to sufficient credit to expand and upgrade production.

Venue D, 6th session
Thursday, March 29, 15:30-17:30
Organized session by Nagoya University 2

1. Outward Foreign Direct Investment and Employment in Japanese Manufacturing

Huijie GU (Nagoya University)

This paper uses the Input-Output analysis to investigate the impact of Japanese outward foreign direct investment on domestic employment in the manufacturing industry. There is a fear that production of overseas affiliates will replace export and output of parent countries. As a consequence, it will cause job losses, especially in labor-intensive manufacturing industry. On the other hand, outward FDI also has export promotion effect on domestic economy of the home country. Parent enterprises need to export capital and intermediate goods for the construction and production of affiliates abroad in the early stage of outward FDI. This effect will enhance the export and employment of home country. The results of this paper suggest that the negative impact of export substitution effect and import inverse effect is greater than the positive impact of export promotion effect from 2000 to 2014, which means that the total effect of Japanese outward FDI is negative and it causes the decrease of domestic production in Japanese manufacturing industry. As a result, it leads to the unemployment of Japan, which is called the hollowing-out effect. Also, this paper compares the calculation result of period 2000-2014 with period 1990-1999, and finds that the hollowing-out of Japan has become more serious with the increase of Japanese outward FDI. It is necessary to change the structure of employment in Japan to alleviate the unemployment caused by outward FDI.

2. A Spatial Autoregressive Stochastic Frontier Model for Panel Data Incorporating a Model of Technical Inefficiency

Takahiro TSUKAMOTO (Nagoya University)

By integrating Battese and Coelli's (1995) model and the spatial autoregressive model, we develop a spatial autoregressive stochastic frontier model for panel data, which simultaneously estimates the factors of technical inefficiency. The proposed model is nested with many existing models, and then we conduct an empirical analysis and compare it with these existing models. We find that the proposed model is statistically supported. Our findings suggest that the estimates in the existing models can be biased due to the lack of the technical inefficiency factors and spatial lag.

3. A Meta-analysis of Management Forecast

Xiaobai ZHANG (Nagoya University)

The research studies about management forecast has been a heat topic in accounting/finance area among the world. There is a considerable volume of research on management forecast focusing on various issues such as the information content, forecast bias/accuracy, disclosure regulation, etc. In particular, extant research has focused extensively on the role of management forecast in the functioning of capital markets. The findings suggested a variety of explanations related to management forecast accuracy and/or bias. Some studies confirmed similar results, while the others stay inconclusive. Thus it drew a call for systematic review in this field. Meta-analysis collects and synthesizes results from individual studies to estimate an overall effect size. This paper conducts a meta-analysis of management forecast by investigating empirical research studies to provide an integration of previous research accumulation. In this study, it is expected that meta-analysis will achieve a quantitative generalization of the association between management forecast accuracy/bias and the determinants.

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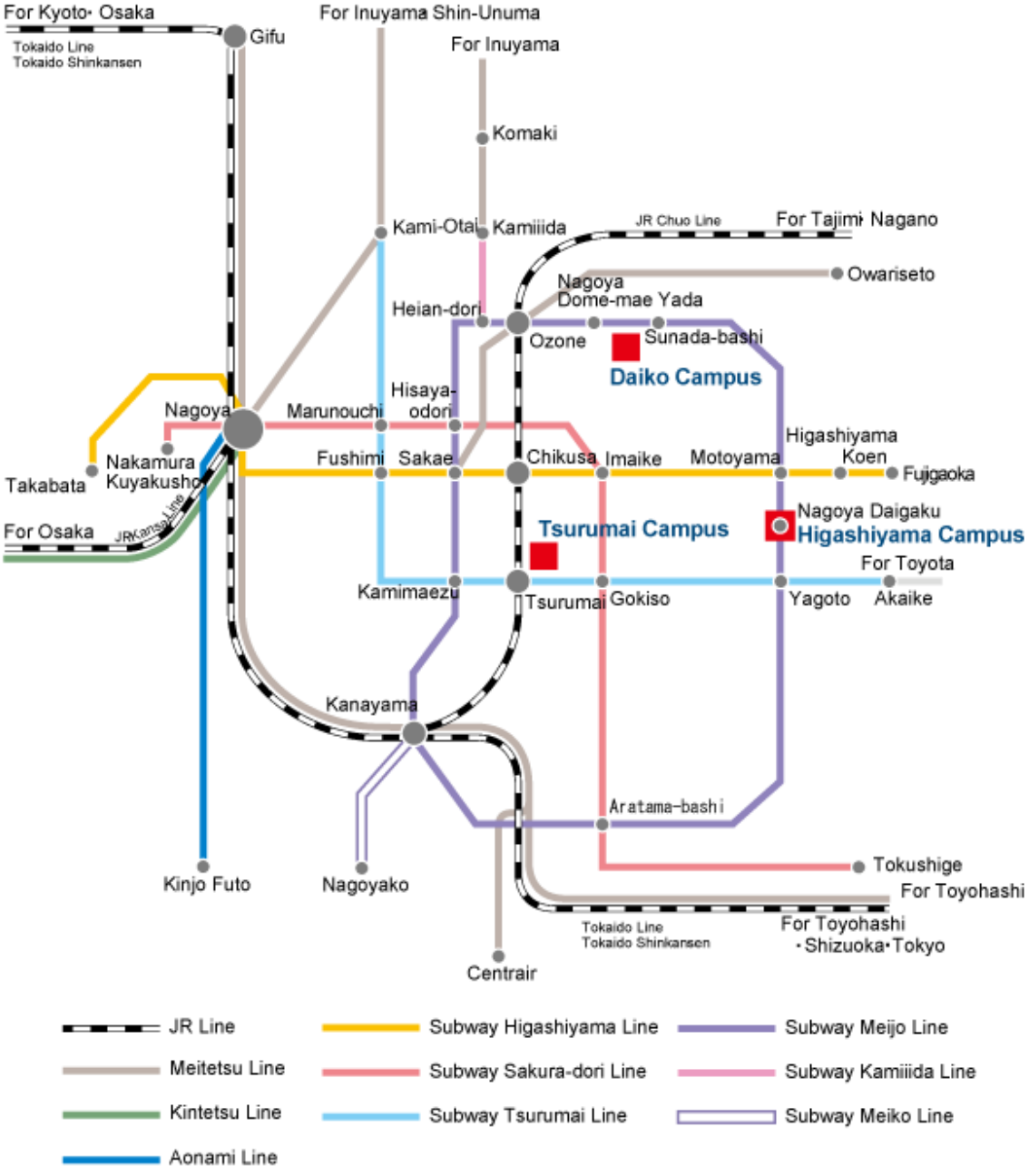

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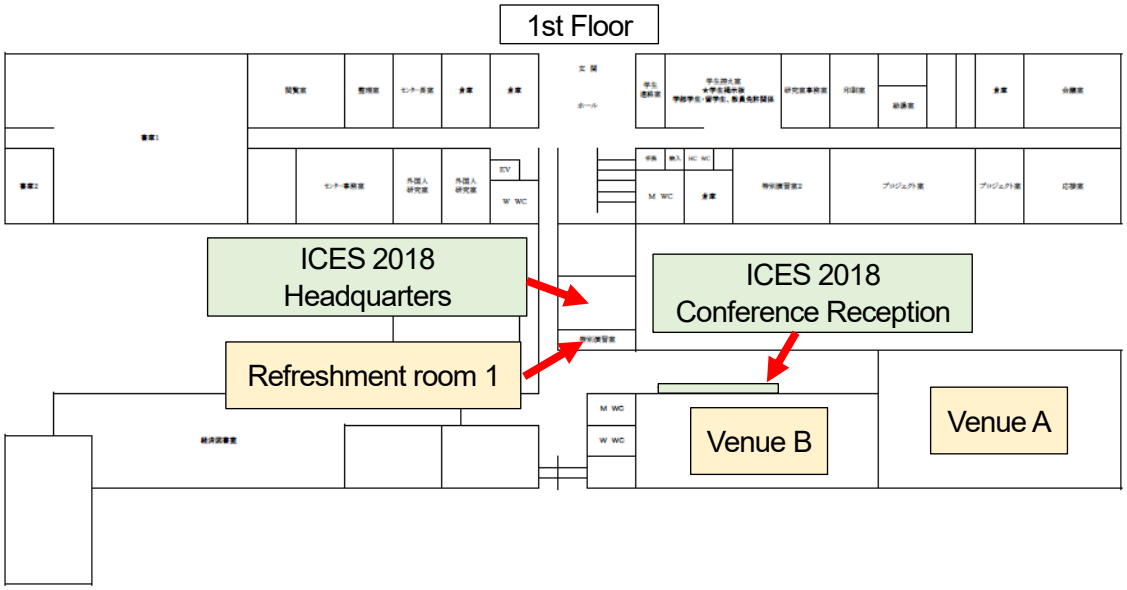

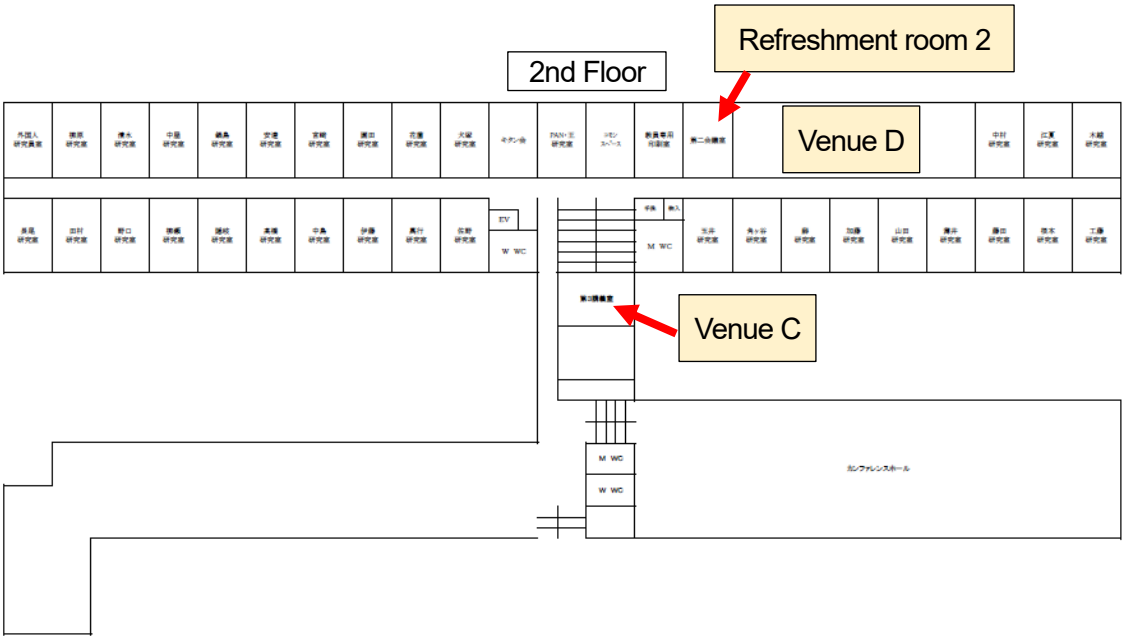

International Conference on Economic Structures 2018
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