# Newsletter

CIRJE

Center for International Research on the Japanese Economy

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# Introduction

The Center for International Research on the Japanese Economy (CIRJE) was established in April 1998. Its objective is to pursue international joint research on the Japanese economy and to collect and disseminate data and historical material on economic activities in Japan. The Center is a unit of the Graduate School of Economics and many faculty members of the School participate in its research, in addition to the Center members.

The first director of the CIRJE, Akiyoshi Horiuchi, laid the foundation of the Center, organizing a wide spectrum of joint research projects and inviting a number of prominent scholars from many different countries. He stepped down as the director to become the Dean of the Graduate School of Economics in the end of September 1999. In October 1999, the Center entered a new phase with the second director, Yoshitsugu Kanemoto, and two new faculty members, Fumio Hayashi and Tatsuo Hatta. Both of them, having served as full professors at prominent universities in the United States, Columbia and Johns Hopkins respectively, bring extensive research experience and international networks to the Center. The Center members also include three research associates, Tsuyoshi Nakamura, Hiroshi Saito, and Tetsuya Shimokawa, and two support staffs, Tsukasa Atsuya and Hitomi Tomii, who joined the Center earlier in April 1999.

Major additions to joint research projects are (1) the Macroeconomics Project organized by Fumio Hayashi, (2) Global Environment and Energy Industries headed by Masahiro Okuno-Fujiwara, (3) the Role of the Government in Network Industries headed by Yoshiro Miwa, (4) the Japanese Economy Tobin Project organized by Hiroshi Yoshikawa and James Tobin (a Nobel laureate), (5) Changes in Industrial Structure and Economic Growth organized by Hiroshi Yoshikawa and Masanao Aoki (UCLA).

Great importance is placed on interaction with visitors from foreign countries. We are fortunate enough to have many distinguished visitors in a wide range of research areas: Professor Edward John Driffill (Birkbeck College, University of London, macroeconomics and labor economics), Professor Murali Agastya (University College London, game theory and auction theory), Professor Hak kil Pyo (Seoul National University, comparative productivity analysis), Professor Harumi Ito (Brown University, industrial organization), Professor Chiaki Moriguchi (Harvard University, comparative economic and business history, and comparative institutional analysis), Professor Douglas W. Diamond (University of Chicago, financial markets), Professor Takeo Hoshi (University of California, San Diego, Japanese economy and monetary economics).

The Center also sponsors international conferences to facilitate communication among researchers who study various aspects of the Japanese economy. Among them are *International Conference on Social Security Reform in Advanced Countries*, September 6-7, 1999, organized by Toshihiro Ihori (University of Tokyo) and Toshiaki Tachibanaki (Kyoto University), the latter of whom is a Visiting Professor at the CIRJE; *The First CIRJE-TCER Macro Conference*, September 11, 1999, organized by Fumio Hayashi and Charles Yuji Horioka (Osaka University); *CIRJE-NBER-TCER Japan Project Meeting*, December 15, 1999, organized by Fumio Hayashi and Anil Kashyap (University of Chicago).



CIRJE Conference, September 6-7, 1999

Center for International Research on the Japanese Economy Faculty of Economics, The University of Tokyo

# Conferences

# Social Security Reform in Advanced Countries

September 6-7, 1999 at Sanjo Conference Hall, the University of Tokyo

Organizers: Toshiaki Tachibanaki,

Toshihiro Ihori

The Center for International Research on the Japanese Economy (CIRJE) held an international conference on social security reform in advanced countries, on September 6-7, 1999 in Tokyo, JAPAN. Prof. Toshihiro Ihori (University of Tokyo) and Prof. Toshiaki Tachibanaki (Kyoto University) were the organizers.

The conference was aimed at investigating and discussing various issues of social security reform which takes place in many advanced countries under the condition that many countries suffer from the deteriorated financial budget in social security due largely to aging population.

Several reforms are proposed in various countries. For example, (1) Privatization of social security system, (2) A shift from pay-as-you-go system to funded system, (3) A cut in benefits and an increase in contributions, (4) Introducing tax revenues as a subsidy, or integrating social security system and tax system, and (5) Other reforms.

Besides such big institutional reforms in social security there are important technical reforms which do not necessarily accompany big reforms. For example, (1) the treatment of indexation, (2) the allocation of social security contributions between employees and employers, (3) the starting age of benefits, (4) the criteria to determine the benefit level, for example, whether the wage of the final year or the average wage during the career, (5) the relationship between enterprise pension system and public pension system, (6) the treatment of not-working people (largely household wives), *etc.* 

These factors affect the budget condition of social security, the living standard of retired people, the financial burden of working people, the retirement behavior of employees, etc. Equity and efficiency arguments can be taken into consideration when these factors and reforms are evaluated.

Our main concern in the conference was public pension system. We, however, discussed several studies for medical cares, income support programs, enterprise pension system (*i.e.*, occupational pension system), *etc.* Enterprise pension system, in particular, is an important subject because it has direct relationships with public pension system. There are several subjects in this field such as (1) defined contribution versus defined benefit systems, (2) portability, (3) the effect of taxation, *etc.* 



Each country has her own cultural, historical and institutional background which does not necessarily accept a policy reform recommended by such theoretical results. North America, Europe and Asia are considerably different in these aspects. Also, attitudes towards public policies, and family ties are different. Thus, it is likely that each country has it own best policy reform. It is an interesting subject to inquire into international difference in social security reform.

The conference collected both theoretical (*i.e.*, normative) papers, and empirical studies for North America, Europe and Japan, and discussed various issues argued above extensively and constructively among invited participants based on these papers. We plan to publish the papers presented at the conference as a form of a book.

#### PROGRAM

Opening Address: Akiyoshi Horiuchi (Director, CIRJE)

Part I Chair: Tatsuo Hatta (University of Tokyo)
Presenter: Kai Konrad (Free University of Berlin)
"Geography of the Family"

Discussant: Yasuo Maeda (Osaka University)

Presenter: Hideki Konishi (Tokyo Metropolitan University)
"Public Pension Reforms and Welfare in an Economy with
Adverse Selection"

Discussant: Koichi Koyama (Hokkaido University)

Part II Chair: Toshihiro Ihori (University of Tokyo)
Presenter: Olivia Mitchell (University of Pennsylvania)
"Managing Pensions in the 21st Century: Design Innova-

tions, Market Impact, and Regulatory Issues for Japan" Discussant: Noriyuki Takayama (Hitotsubashi University)

Presenter: Mats Persson (Stockholm University)
"Five Fallacies in the Social Security Debate"
Discussant: Hiroshi Yoshida (Tohoku University)

Presenter: Toshiaki Tachibanaki (CIRJE/ Kyoto University) "Integration of Social Security and Tax Systems"
Discussant: Yukinobu Kitamura (Hitotsubashi University)

Presenter: Ashwin Kumar (Department of Social Securities, U. K. Government)

"Pension Reform in the U. K.: from Contribution to Participation"

Discussant: Naohiro Yashiro (Sophia University)

Part III Chair: Hiroshi Yoshikawa (University of Tokyo)
Presenter: Gary Burtless (The Brookings Institution)
"Social Security Privatization and Financial Market Risk:
Lessons from U. S. Financial History"
Discussant: Tetsuo Fukawa (National Institute of Population and Social Security Research)

Presenter: Erik Hernes (University of Oslo)
"Early Retirement and Economic Incentives among Married Men"

Discussant: Atsushi Seike (Keio University)

Presenter: Tatsuo Hatta (University of Tokyo)
"Switching the Japanese Social System from Pay as You Go
to Actuarially Fair: A Simulation Analysis"
Discussant: Eiji Tajika (Hitotsubashi University)

Part IV Chair: Akiyoshi Horiuchi (University of Tokyo)
Presenter: Toshihiro Ihori (University of Tokyo)

"Pension Contributions and Capital Accumulation under

Modified Funded System"

Discussant: Fumio Ohtake (Osaka University)

Presenter: John Piggott (The University of South Wales)
"Private Mandatory Retirement Provision: Design and
Implementation Challenges"

Discussant: Yasushi Iwamoto (Kyoto University)



The Sixth Mitsui Life Symposium on Economic Freedom and Development (Mitsui Life Financial Research Center at the University of Michigan Business School/ Co-sponsored by CIRJE)

June 16,17, and 18, 1999

at the University of Tokyo and Keidanren Kaikan Organizers: Takaaki Wakasugi, E. Han Kim, David Weinstein

About sixty people including speakers and commentators participated and developed discussions this year. This conference is a regular activity of the University of Michigan Business School's Mitsui Life Financial Research Center, and the first output of the memorable cooperation between the Center with CIRJE.

#### **PROGRAM**

Wednesday, June 16th Preliminary Meeting

#### Thursday, June 17th

Welcoming Remarks by Professor Takaaki Wakasugi and David Weinstein

Surgit Bhalla, "Hayek Reconsidered: Economic Freedom is it!" Yingyi Qian, "The Road to Economic Freedom, Chinese style"

Keynote Speech: Jagdish Bhagwati (Columbia University) Chairperson: E. Han Kim (University of Michigan)

Panelists: Surgit Bhalla (Oxus Research), David Henderson (Hoover University), Peter Rosendorff (Georgetown University), Vijay Singal (University of Michigan), Shang-Jin Wei (Harvard University), David Weinstein (University of Michigan)

#### Friday, June 18th

Shang-Jin Wei, "Corruption in Economic Development: Beneficial Grease, Minor Annoyance, or Major Obstacle?"

E. Han Kim and Vijay Singal, "Open Capital Markets and Corporate Governance"

Peter Rosendorf, "Do Democracies Trade More Freely?"

David Henderson, "Let Capital Flow Freely"

David Weinstein: Summary

Discussants: Akiyoshi Horiuchi, Katsuhito Iwai, Tetsuji Okazaki, Noriyuki Yanagawa, Toshiaki Tachibanaki, Serdar Dinc (University of Tokyo)

#### Conferences continued from page 3

### The First TCER-CIRJE Macro Conference September 11, 1999

at Sanjo Conference Hall, the University of Tokyo Organizers: Fumio Hayashi, Charles Yuji Horioka

The first TCER (Tokyo Center for Economic Research)-CIRJE conference on macroeconomics was held at the University of Tokyo on September 11, 1999. The aim of the conference series is to stimulate and promote empirical research on the Japanese economy. More than 30 economists, from universities, government institutions, and think tanks, participated. Six papers were presented. They focused on various aspects of the Japanese economy, including household saving, monetary policy, and the accuracy of consumer price index. Prof. Fumio Hayashi and Prof. Charles Yuji Horioka organized the conference.

#### **PROGRAM**

Keiko Shimono (Nagoya City University), Hideaki Otsuki (Nanzan University), Miho Ishikawa (Imai Accounting Group)
"Estimating the Size and Distribution of Bequests in Japan"
Discussant: Yukinobu Kitamura (Hitotsubashi University)

Nobuko Nagase (Ochanomizu University)

"Experiments with Matched Sample Drawn from Different Sources: Costs of Children on the Effect on Family Structure of Asset Formation and Wife's Employment Status" Discussant: Fumio Ohtake (Osaka University)

Miki Kohara, Fumio Ohtake, Makoto Saito(Osaka University)

"A Test of Full Insurance Hypothesis: The Case of Japan"

Discussant: Fumio Hayashi (University of Tokyo)

Atsushi Maki (Keio University)

"The Statistical Price Index as an Approximation of the Constant-Utility Price Index: An Empirical Analysis using Japanese Data-Sets"

Discussant: Shigenori Shiratsuka (Bank of Japan)

Ryuzo Miyao (Kobe University)

"The Effects of Monetary Policy in Japan: A Tentative Assessment"

Discussant: Tsutomu Watanabe, Masato Tanaka (Hitotsubashi University)

Etsuro Shioji (Yokohama National University)

"Public Capital and Regional Output Dynamics: A US-Japan Comparison"

Discussant: Shin-ichi Fukuda (University of Tokyo)

### NBER/TCER/CIRJE Japan Project Meeting December 15, 1999

at International House of Japan Organizers: Fumio Hayashi, Anil Kashyap

There is a group of economists affiliated with National Bureau of Economic Research (NBER) doing research on the Japanese economy. The CIRJE co-organized 1999 annual meeting which was held at the International House in Roppongi, Tokyo. Five NBER economists presented their empirical work on Japan. Dozens of Japanese scholars participated. Prof. Anil Kashyap of University of Chicago and Prof. Fumio Hayashi were the co-organizers.

#### **PROGRAM**

Heather Berry and Mariko Sakakibara (UC, Los Angeles)

"Resource Accumulation and Overseas Expansion by Japanese Multinationals: An Empirical Analysis of the Internalization Theory"

Discussant: Kyoji Fukao, Hitotsubashi University

Pinelopi Goldberg (Columbia University and NBER) Michael Knetter (Dartmouth College and NBER)

"International Rivalry in the Consumer Imaging Industry: Kodak v. Fuji"

Discussant: David Weinstein (Columbia University and NBER)

Hiroshi Ono (Stockholm School of Economics)

"The Cost-Benefit Analysis of College Education in Japan: Is RONIN a Good Investment?"

Discussant: Naohiro Yashiro (Sophia University)

Joseph Peek and Eric Rosengren (Federal Reserve Bank of Boston)

"Have Japanese Banking Problems Stifled Economic Growth?" Discussant: Makoto Saito (Osaka University)

Jun-Koo Kang (Michigan State University)
Anil Shivdasani (University of North Carolina)
Takeshi Yamada (Hong Kong University of Science and Technology)

"The Effect of Bank Relations on Investment Decisions: An Investigation of Japanese Takeover Bids"

Discussant: Takeo Hoshi (UC, San Diego)

# Workshops

Workshop schedules are posted on the CIRJE HOMEPAGE (http://www.e.u-tokyo.ac.jp/cirje/index.htm).

### The Workshop on Modern **Business Organizations**

The purpose of the workshop is to promote communication among researchers in the area of corporate strategy and organizational behavior. The workshop accomplishes this purpose through providing those researchers with a communication place for presenting and discussing their research works. Although formal research conferences play the role of being such a place, this small-group meeting is particularly important for the research activities in their developing stage. Through participating in the workshop, researchers exchange their ideas and develop mutual understanding of the research in the area, which will eventually contribute to the enhancement of our knowledge on business organizations.

The workshop was organized in June 1995 by faculty members in the field of Business Administration, Division of Economics, the University of Tokyo. Those are Professor E. Daito, Professor Y. Umezawa, Professor K. Wada, Professor H. Katahira, Professor T. Fujimoto, Professor N. Takahashi, Associate Professor J. Shintaku and Associate Professor M. Kasuya. Other members of the workshop are graduate students and alumni of the division and researchers outside the university who are interested in business organizations. The total number of the members is about thirty at present. The workshop is held twice a month in average during a semester. In principle, the time is from three to six o'clock on Wednesday, and the place is the audiovisual room.

In each session of the workshop, one or several members present their own research work in the first half of the time, and then others participate in the discussion in the left time. Members are diverse in their approach to and interest in the strategic or organizational issues of business organizations. Their empirical studies cover firms in various industries: the automobile industry, the electric and electronic industries, the communication industry, the synthetic fiber industry, the chemical industry, the pharmaceutical industry, venture businesses, and so on. The followings are examples of the topics presented in the workshop in 1999.

- Determinants of Effective Product Cost Management during Product Development.
- Complementary Resources and Dynamic Corporate Learning in an International Partnership.

The Structures and Adaptation Processes of Inter-firm Coordination in the Product Development of Automobile Parts. The Japanese Distribution System in the Toiletry Industry. Multi-project Strategy in Autoparts-suppliers.

Event History Analysis on the International Joint Ventures.

### **Urban Economics Workshop**

This workshop is organized by the faculty members and graduate students at the University of Tokyo specializing in urban economics, regional economics, transportation economics, and economics of regulation. The workshop sometimes invites outside researchers on urban economics and related fields such as environmental economics and public economics. It is usually held every month during the academic year. The recent schedules of this year are as follows:

- April 27: I. Isono (U. Tokyo) "Spatial competition under uncertainty", N. Hashibe (U. Tokyo) "Repeated procurement and unverifiable quality", T. Fujiwara (U. Tokyo) "Provision of local public good by private government", Y. Murata (U. Tokyo) "Rural-urban Interdependence and Industrialization"
- May 25: Y. Sato (U. Tokyo) "Labor heterogeneity, the extent of the market and unemployment rate", T. Fujiwara (U. Tokyo) "Information technology and the city"
- June 8: R. Arnott (Boston C.) "The Corridor problem"
- June 29: J.-F. Thisse (CORE) "Competition and social externalities"
- July 6: N. Hashibe (U. Tokyo) "Repeated procurement and unverifiable quality", T. Fujiwara (U. Tokyo) "Provision of local public good by private government"
- July 21: R. Dekle (U. Southern California) "Industrial concentration and regional growth in Japan"
- July 28: Y. Kanemoto, R. Kurima, T. Fujiwara, H. Saito, T. Ago, S. Sato (U. Tokyo) "Information technology and the
- September 1: Y. Murata (Kyoto U.) "Rural-urban interdependence and industrialization", Y. Inoue (Kyoto U.) "Ruralurban labor migration and land market"
- October 4: N. Hashibe (U. Tokyo) "Repeated procurement and unverifiable quality"
- October 29: Y. Sato (U. Tokyo) "A search model of rental housing market in a monocentric city", Y. Murata (U. Tokyo) "Structural change and agglomeration"

### The Research Group on the Asian Automobile Industry

This has been a very busy year for The Research Group on the Asian Automobile Industry. During the last year (November 1998 - October 1999), we held 9 regular meetings. Here is the list of the lectures.

November 1998 "Formation and Structure of Enterprise Groups in Chinese Automobile Industry: A Case of The First Auto Works", by Ms. Cho (Nihon University)

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- **December** "The Korean Automobile Industry and Its Recovery from the Crisis", by Mr. Ariyama (Automobile Specialist) and Mr. Rha (Hyundai Motor Company)
- March 1999 "Introduction of ISO 9000 Series in China", by Prof. Kaneko (Soka University)
- April "Production Systems at Korean Auto Industry: Its Characteristics and Issues", by Dr. Oh (University of Tokyo)
- May "Production System and Human Resource Development in Chinese Car Makers: A Case of Citroen", by Ms. Ma (University of Tokyo)
- June "The Present Situation of Chinese Automobile Industrial Policy", by Mr. Marukawa (Asia Keizai Kenkyu-sho)
- July "The Malaysian National Car Companies", by Prof. Kumon (Hosei University)
- September "On APEC Automobile Dialog", by Mr. Mise (MITI) "Shifting from Domestic to Export Production Base: Japanese Automobile Makers in Australia and Thailand", by Mr. Orihashi (University of Tokyo)
- October "Motorcycle Supplier Systems in China", by Mr. Ohara (Asia Keizai Kenkyu-sho)

The number of attendants also increased significantly-over 40 people participated in some of the meetings, and we had hard time finding a room that is large enough for the audience. Mr. Y. Konno and Ms. J. Ma worked hard as organizers for the group (by Prof. T. Fujimoto).

As the Asian economy is recovering from the 1997-98 crisis, it has increasingly become important for practitioners and academic researchers in this field to maintain and strengthen international networks of empirical researches like this one.

#### **Macroeconomics Workshop**

This workshop's main focus is macroeconomic theory and macroeconomic empirical analysis, but it has a wider scope than a traditional macroeconomic workshop in incorporating, for example, money and banking, industry analysis, and labor economics, so long as they have a macroeconomic perspective. The workshop is usually held on Thursday from 4:50pm to 6:30pm at the audiovisual room on the 5th floor of Econ. Building throughout the academic year. The participants are mainly faculty members and graduate students of the University of Tokyo, but the workshop is open to all economists who are interested in the topic. A bulletin of the future workshop schedule is routinely circulated among other universities and research institutions. Professors Hiroshi Yoshikawa, Kiyohiko G. Nishimura, Masayuki Otaki, and Shin-ichi Fukuda organize this year's workshop.

The following are speakers and their titles in the seminars

- up until November 4, 1999.
- April 22: Kenya Fujiwara (Kobe University), "Managerial Organization of Japanese banks and its Lending Behavior"
- May 6: Ryoichi Imai (Nagoya Commerce University), "Onthe-Job Search with Heterogeneous Agents"
- May 13: Tsutomu Watanabe (Hitotsubashi University), "Asymmetric Effects of Monetary Policy: Japanese Experience in the 1990s" (with Ryo Kato and Takashi Ui)
- May 20: Shin-ichi Hirota (Waseda University), "Does Credit Market Competition Destroy Lending Relationships?: Evidence from the Japanese Main Bank System"
- May 27: Masanao Aoki (UCLA), "Stochastic Views on Diamond Search Model: Asymmetrical Cycles and Fluctuations" (with Yoshimasa Shirai)
- June 3: Naoki Shintoyo (University of Tokyo), "On-the-Job Training and Outside Labor Markets"
- June 10: Masayuki Otaki (University of Tokyo), "On the Theory of Effective Demand: A Neoclassical Interpretation"
- June 17: Koichi Futagami (Osaka University), "Commodity Taxation and Economic Growth"
- June 24: Hak K. Pyo (University of Tokyo and Seoul National University), "A Test of the Convergence Hypothesis by Rates of Returns to Capital: Evidence from OECD countries" (with Kwang-Hee Nam)
- July 1: Tsunao Okumura (Northwestern University), "On Money as a Signal"
- July 8: Douglas W. Diamond (University of Chicago), "Liquidity Risk, Liquidity Creation and Financial Fragility: A Theory of Banking" (with Raghuram G. Rajan)
- August 17: Hyun Park (Essex University), "On the Dynamics of Growth and Fiscal Policy with Redistributive Transfers" (with A. Philippopoulos)
- September 30: (1) Hiroki Kondo (University of Tokyo), "Income Distributions in a Center-Local Regional Model", (2) Yoshiro Tamai (University of Tokyo), "Storable Goods and Price Rigidity" (with K. G. Nishimura), (3) Takashi Unayama (University of Tokyo), "Terms of Trade and Real Exchange Rate: The Blassa Samuelson Model Reconsidered"
- October 14: Kenji Wada (Keio University) , "Asset Pricing under Knightian Uncertainty"
- October 21: Shinji Takagi (Osaka University), "Measuring the Impact of Monetary Union in Okinawa, 1958 and 1972: What Lessons Do We Learn for EMU?"
- **November 1:** Christopher D. Carroll (Johns Hopkins University), "Saving and Growth with Habit Formation" (a joint paper with Jody Overland and David Weil)
- November 4: Hiroshi Tsubouchi (Hitotsubashi University), "Dynamic Stability of Households' Asset Holding under Imperfect Capital Market"

### **Microeconomics Workshop**

This workshop invites a broad range of speakers to discuss the latest research topics in microeconomics. The workshop is held on every Tuesday from 4:50pm to 6:30pm throughout the academic year. The faculty members and graduate students of the University of Tokyo regularly attend the workshop, but it is also open to all economists who are interested in the topic. The latest seminar schedule can be found on the homepage of CIRJE.

- Kyota Eguchi (U. Tokyo), "Effect of the Union under Moral Hazard"
- Hiroko Oura (U. Tokyo), "Imperfect Information and Endogenous Capital Flight"
- Zaifu Yang (Yokohama National U.), "Existence of Equilibrium in the Capital Asset Pricing Model with Heterogeneous Beliefs"
- Chiaki Hara (Cambridge U., UK), "Prices of the Market Portfolio in the CAPM with Incomplete Asset Markets"
- Takuya Nakaizumi (U. Tokyo), "Efficiency of Hard Budget Constraint by Managerial Replacement"
- Dao-Zhi Zeng (Kagawa U.), "A Migration Model of Capitalists and Residents", "Equilibrium Analysis for a Migration Model"
- Richard Arnott (Boston College, U.S.A.), "The Corridor Problem: No-Toll Equilibrium"
- Harumi Ito (Brown U., U.S.A.), "The Structure of Adjustment Costs in Mainframe Computer Investment"
- Yoshiro Miwa (U. Tokyo), "Corporate Governance in Transitional Economies: Lessons from the Pre-War Japanese Cotton Textile Industry" (with J. M. Ramseyer)
- Jacques Thisse (CORE, Belgium), "Competition and Social Externalities"
- Kiminori Matsuyama (Northwestern U., U.S.A.), "Endogenous Inequality"
- Chiaki Moriguchi (Harvard Business School, U.S.A.), "The Evolution of Employment Systems in the US and Japan: A Game-Theoretic Approach to History"
- Murali Agastya (University College London, UK), "Collusion among Bidders Benefits the Seller" (with Arupratan Daripa)
- Hiroshi Mukunoki (U. Tokyo), "Technology Transfer through Multinational Corporations and North-South Product Cycles"
- Toru Fujiwara (U. Tokyo), "Competition Between "Public" and Monopolistic "Private" Governments"
- Katsuya Kobayashi (U. Tokyo), "Koumuin-no Amakudariniyoru Koukigyou-no Keiei-doryoku-heno Eikyou (Effects of government officials' Amakudari on managerial efforts of public-related business)"
- Takeshi Momi (U. Tokyo), "Excess Demand Functions with Incomplete Markets: A Global Result"

- Larry Qiu (Hong Kong University of Science and Technology), "Export, Foreign Direct Investment and Local Content Requirement"
- Toshihiro Matsumura (U. Tokyo), "Endogenous Role in Mixed Markets: A Two Production Period Model"
- Eizo Akiyama (Keio U.), "Dynamic Games: Application to Social Dilemma"
- Mamoru Kaneko (U. Tsukuba), "Epistemic Logic and Game Theory: Tutorial"
- Noriyuki Yanagawa (U. Tokyo), "Responsibility and Formal Authority: An Effect on Communication"
- Tatsuo Hatta (U. Tokyo), "A Theory of Revenue-Constrained Optimal Tariff"
- Fumitoshi Mizutani (Kobe U.), "The Role of Private Provision in Transport Markets"
- Takashi Ui (U. Tsukuba), "Contagious Financial Crises"
- Tomoya Mori (Kyoto U.), "Skills, Agglomeration, and Segmentation"
- Haruo Imai (Kyoto U.), TBA

### The Applied Statistics/ Financial Engineering Workshop

The Workshop including Econometrics and Economic Statistics

The main purpose of this workshop is to promote communication among researchers in the area of the Applied Statistics and the Financial Engineering. We interpret the Applied Statistics in the broadest sense and this workshop covers important fields of Applied Statistics including Econometrics and Economic Statistics with its close connection to Statistics, Economics, and Finance. One of distinct aspects of this workshop is to invite researchers as speakers not only from universities but also from the research sections of governments and private organizations who have been involved in real problems and applications.

This workshop was organized in June 1999 by several faculty members in the fields of Statistics, Econometrics, and Finance. The organizers in this academic year are Professor Naoto Kunitomo and Professor Takao Kobayashi.

The other regular members within the Faculty of Economics are Professors Akimichi Takemura, Yoshihiro Yajima, and Tatsuya Kubokawa. The other participants are graduate students who are interested in the fields of statistics, econometrics, finance, and economics. This workshop has been open to other members of the University of Tokyo and others who are interested in the related fields. The workshop is usually held on Friday from 4:30pm to 6:00pm twice or three times in a

# Workshops continued from page 7—

month. A bulletin of the schedule has been circulated among the registered members and some other people by e-mail.

The following are the names of speakers and the title of their talks presented in this workshop up until the beginning of November. There are several additional talks by the distinguished guests in this academic year.

- June 25: Kimiaki Aonuma (Tokyo-Mitsubishi Bank), "On Credit Derivatives"
- July 9: Hajime Takahashi (Hitotsubashi University), "Interaction Between Financial Markets: The Limit of the Option Pricing Theory and Arbitrage Trading Strategy"
- August 2: Guo-ying Li (Chinese Academy of Sciences), "Robust Estimation of Multivariate Location and Dispersion"
- October 8: Masaaki Maruyama (Economic Planning Agency), "On Quick Estimation of GDP in Japan"
- October 22: Yuji Morimoto (Bank of Japan), "On Merging Insurance and Finance"
- November 5: Yuzo Honda (Osaka University), "An Estimation of the Investment Threshold Measured by Tobin's Q"
- November 19: Masaaki Kijima (Tokyo Metropolitan University), "Valuation of Credit Risk for Marketed Assets"

#### **Political Economy Workshop**

The purpose of this workshop is to promote communication among researchers in the area of political economy. The participants are mainly faculty members and graduate students of the University of Tokyo, but the workshop is open to all political economists who are interested in the topic. Professors Michiaki Obata and Tokutaro Shibata organize this year's workshop. The seminars from December 1998 to June 1999 were as follows:

- **December 2:** Fumiki Ishizuka (Graduate School of Economics, University of Tokyo), "Structural Change of the Capitalist Economy and the Wage-Bargaining System of Federal Republic Germany".
- December 16: Yutaka Furuya (Graduate School of Economics, University of Tokyo), "On the James Steuart's Theory of Interest".
- June 6: Peter Temin (MIT), "Lessons of the Great Depression" (held with Economic History Workshop and the Japanese Association of America Studies).

# The Research Group on the Contemporary World Economy

In the 1990s we live in a historical transition period. First, Pax Russo-Americana was over because of the breakdown of the Soviet Union. Second, the "Golden Age" of modern capitalism in Pax Americana was also over in the 1970s. We don't have a stable political and economic system any more. From the viewpoint of the present transition period, how can we formulate a historical transformation of modern capitalism in the twentieth century?

The purpose of this research group is to promote cooperative research works on the structural change in the contemporary world economy. It has five small research groups; (1) on the international trade and finance, (2) on the US economy, (3) on the economy of Europe, (4) on the Japanese economy, and (5) on the world economy and business cycle.

The number of members is now twenty five. The research meeting is held, on principle, four times in every year. In the meeting, one of the group members gives a presentation, followed by members' discussion on the issues raised from it. The meetings from December 1998 to November 1999 were as follows:

- **December 26 :** Tokutaro Shibata (University of Tokyo), "On the Japanese Depression in the 1990s".
- March 20: Tetsuji Kawamura (Musashi University), "On the Transformation of the European Firm System".
- July 24: Motoo Haruta (Nihon University) and Tokutaro Shibata (University of Tokyo), "On the American Economy in the 1990s'".
- **November 13:** Atsushi Shimizu (Musashi University), "On the Currency Unification in the European Union".

Through these meetings, an idea to work out a series of books on the contemporary world economy has grown. A Publisher, Nihon-hyoronsha is interested in the idea, and agrees to publish five books in a series.

# The Research Group on Growth and Industrial Structure

This group consists of six members, namely Professors Shin-ichi Fukuda, Masayuki Otaki, and Hiroshi Yoshikawa of University of Tokyo, Prof. Kazumi Asako of Hitotsubashi University, Prof. Tsutomu Miyagawa of Gakushuin University, and Prof. Joji Tokui of Shinshu University. The monthly meeting was held during the year. Some graduate students regularly participate in the meeting.

The principal research interest of this group is in the relation between industrial structure and economic growth. Yoshikawa has conducted a joint research on this problem with Prof. Masanao Aoki of University of California, Los Angels. The research has resulted in the discussion paper of the Center entitled "Demand Creation and Economic Growth" (CIRJE-F-43). The abstract of the paper is as follows:

In the standard literature, the fundamental factor to restrain economic growth is diminishing returns to capital. The paper presents a model in which the factor to restrain growth is saturation of demand. We begin with common observation that growth of an individual product or sector grows fast at first, but its growth eventually declines to zero. The economy sustains growth by the introduction of new products/industries. Preferences are endogenous in this model. The introduction of new products/industries affects preferences, and creates demand. By so doing, it induces capital accumulation, and ultimately sustains economic growth.

Fukuda's main interest is in East Asia's Economic Growth. Miyagawa studies the relation between growth and finance. Tokui is interested in the theoretical and empirical relationship between technical progress and the real exchange rate. Asako and Otaki study the effects of fiscal policy on the economy.

In addition to the regular member meeting, the group also invited outside speakers. In July, Prof. Taizo Motonishi visited the group to discuss the role of financing constraints. On August 17, Prof. Hyun Park of Essex University presented his paper entitled "On the Dynamics of Growth and Fiscal Policy with Redistributive Transfers." The abstract of his paper is as follows:

The paper formalizes the effects of redistributive transfers on economic growth and the design of fiscal policies. The focus is on uniqueness and determinacy, and how this is affected by distributive and allocative activities on the part of the government.

# **CIRJE Projects**

#### **Macroeconomics Project**

This is the inaugurating year of the Center's macroeconomics project. Its aim is to promote empirical research on the macroeconomic aspects of the Japanese economy. The Japanese economy is in transition. For the economics profession to become relevant in this critical age and capable of providing logically consistent policy recommendations, it is important that there is an accumulation of knowledge on the important parameters of the economy. For example, a reform of the public pension system is not possible unless we know how household saving would respond to changes in incentives that would accompany the reform. Such knowledge can be obtained only through serious empirical work well grounded in economic theory and appropriate methodology. This project aims to create a critical mass of researchers who share the same objective of empirical macroeconomics.

As director of the project, I (Fumio Hayashi) plan to accomplish this aim in two ways. First, the Center will, in collaboration with the TCER (Tokyo Center for Economic Research), organize a domestic conference series on empirical macroeconomics. The conference will be held once or twice a year. It is open to all economists and policymakers. Each time, a few months prior to the meeting, the Center will send out and post on the Center website a call for papers. Anybody can submit his or her work. The paper can be in Japanese or in English. Professor Charles Horioka (Osaka University) and I will select five or six papers for presentation at the meeting. Those selected papers will be critically discussed by designated discussants. The meeting will be conducted in Japanese, unless there is a significant representation of the audience by foreigners. This academic year, the Center organized the first meeting on September 11, 1999. More than 30 economists from universities, government research arms, and think tanks participated.

The second means to promote empirical research is to collaborate the NBER (National Bureau of Economic Research), the most prestigious U.S. think tank, and the CEPR (Center for Economic Policy Research), which is the European equivalent of the NBER. This academic year, the Center organized a meeting between a group of NBER researchers working on the Japanese economy and Japanese researchers. The meeting was held on December 15, 1999 at the International House. Starting year 2000, the Center --- along with the NBER and the CEPR --- will organize an annual international conference series on the Japanese economy. It is envisioned that researchers from Japan, the U.S., Europe, and East Asia will meet once a year either in Europe or in Japan. If the meeting is in Japan, the Center will host it.

# CIRJE Projects continued from page 9

# Global Environment and Energy Industries

#### <Project members>

Okuno-Fujiwara, Masahiro (University of Tokyo)

Kiyono, Kazuharu (Waseda University / University of Tokyo)

Kuroda, Masahiro (Keio University)

Shimpo, Kazushige (Keio University)

Yoshioka, Kanji (Keio University)

Ohtsuka, Keijiro (Tokyo Metropolitan University)

Konishi, Hideki (Tokyo Metropolitan University)

Suzumura, Kotaro (Hitotsubashi University)

Ishikawa, Jota (Hitotsubashi University)

Tadenuma, Kohichi (Hitotsubashi University)

Futagami, Kohichi (Osaka University)

Shibata, Akihisa (Kyoto University)

#### <Issues for research>

In this project, we plan to give economic evaluations of the so-called Kyoto mechanism as multilateral cooperative measures against global warming. The mechanism is proposed to reduce the total green-house gas emission, at least among the advanced countries, up to the level in the year 1990 by the year 2010, using (i) international emissions trading and (ii) international transfer of better environment technologies not only to the advanced countries (Joint Implementation, JI) but also to the developing countries, presently not participating in the mechanism (Clean Development Mechanism, CDM).

We plan (and have already advanced) to tackle the issue from both empirical and theoretical aspects.

#### <Empirical analysis>

We plan to discuss the relation between the global environment and the socio-economic and technological environments, particularly with regard to energy demand. More specifically we plan to clarify how destruction of the natural environment including the global one damages the economy and is likely to hamper its sustainable growth, and what systems need to be designed for avoiding or mitigating those economic costs. The following specific issues have been discussed and are planned to be explored more in detail:

Economic development and natural environment --- Markets, government, and commons, by Ohtsuka

Environment problems and technological possibilities, by Yoshioka

Global warming and its long-run effects, by Kuroda

Short-run effects of global warming --- shadow prices of abatement and its international comparison, by Shimpo

#### <Theoretical analysis>

We plan to give theoretical reevaluations of the Kyoto mechanism as well as the domestic environment regulations from the viewpoints of public economics, international trade, economic development, and welfare economics. The following specific issues have been discussed and are planned to be explored more in detail:

Second-best model of domestic emission regulation, by Konishi and Kiyono.

Second-best model of international cooperation against global warming, by Okuno-Fujiwara and Kiyono

Global warming and international trade, by Ishikawa and Kiyono Intergenerational equity and sustainability, by Suzumura and Tadenuma

Environment technology transfers and international cooperation, by Futagami and Shibata

#### <Plans of the projects>

1st conference; already held in September, 1999. 2nd conference; planned in April, 2000.

The result of the project is planned to be published by the University of Tokyo Press.

# The Role of the Government in Network Industries

#### <Project members>

Miwa, Yoshiro (University of Tokyo, project leader)

Hatta, Tatsuo (University of Tokyo)

Kanemoto, Yoshitsugu (University of Tokyo)

Kidokoro, Yukihiro (University of Tokyo)

Kiyono, Kazuharu (Waseda University / University of Tokyo)

Matsumura, Toshihiro (University of Tokyo)

Obinata, Takashi (University of Tokyo)

Wada, Kazuo (University of Tokyo)

This is a three year research project, 1999-2001, to study practical issues on regulating network-type industries, particularly the electric power industry. During the past several decades the Japanese government placed the electric power industry under its strict control: dividing Japan into 9 territories, to each of which it maintains local monopoly. Until very recently, most Japanese believed that this system would not change in the near future. The mid-1990s in Japan is a period of deregulation, however, and suddenly and unexpectedly to most observers, strong wind for deregulation blew also in this in-

dustry, resulting in the 1999 revision of the Electricity Industry Act. With this, opening the door to new entry into the industry firstly from generation, the government turned the basic regulation policy from complete control to market supply under appropriate regulation. After several years under heated, politicized discussion, the revision pulled the industry toward deregulation much further than most had expected, and also declares that in three years the government will review the regulatory scheme entirely.

We organized this project, agreeing that, even after the radical change in the regulatory scheme, we lack both in well-organized information about the industry and in careful research on electricity regulation. Fortunately enough, relevant parties with various interests, electric power companies, actual and potential new entrants, large power users, and the regulatory agency, agree to cooperate with this project. Some of the project members actually took part in the reviewing process.

The first year, 1999, was designed both to collect relevant information about the industry, such as business, technology, regulation, and politics and to understand the basic regulatory issues. By the end of November, we had 8 fruitful meetings primarily for hearings and discussion, including a visit and discussion with engineers in power plants. The name of the project comes from our view that the industry characteristic most basic to its regulation is the network-externality in distribution. Also we recognize the electric power industry today is not isolated from other industrial sectors, and 'Project on the Electric Power Industry' will arouse confusion.

We will determine the further details of the project in the second year.

# **Research Staff**

CIRJE has accepted the following researchers during the fiscal year of 1999.

### **Director** Yoshitsugu Kanemoto

(Faculty of Economics, University of Tokyo), from October 1, 1999

Early work was concentrated on theoretical developments in urban economics. Contributions on urban economics are concerned with second best land use in the presence of unpriced congestion, optimal city size, and urban dynamics. I have since worked on a variety of fields such as optimal discount rates



in the presence of asymmetric information in the credit market, labor contracts with unverifiable firm-specific human capital, and regulation of the urban railway industry. My current research involves a variety of aspects of Japanese cities, e.g., urban agglomeration, land and housing markets, and the impact of information technology on cities. I also work on public policy issues in construction and network industries.

#### **Professors**

Fumio Hayashi (Faculty of Economics, University of Tokyo), from October 1, 1999

My research has traditionally been on the empirical study of household saving and corporate investment in Japan and the U.S. Its output in the 1990s has been published in various academic journals such as *Econometrica*, *Journal of Political Economy*, and *American Economic Review*, as well as in the form of book



chapters. More recently, I have been working on two projects. One is to write a book on econometrics that could be used as a textbook for first-year graduate students and also as a handbook for empirical researchers. The other is to study the Japanese interbank markets for overnight loans. Those projects are nearly done. In the near future, I plan to do empirical research on the Japanese macroeconomy.

#### Research Staff continued from page 11 "

**Tatsuo Hatta** (Center for Spatial Information Science, University of Tokyo), from August 1, 1999

TATSUO HATTA is Professor of Economics at Center for Spatial Information Science, University of Tokyo. He is jointly appointed as Professor at CIRJE. He received Ph. D. in Economics from the Johns Hopkins University. He was Professor of Economics Department at the Johns Hopkins University before returning Japan as Professor of



Institute of Social and Economic Research at Osaka University. He was appointed to the current position in August 1999. His research fields are public economics, trade theory and urban economics. His most recent book is *Nenkin Kaikaku Ron: Tsumitate Housiki e Ikouseyo* (Public Pension Reform to an Actuarially Fair System) Nikkei Press, 1999, written jointly with Noriyoshi Oguchi. At CIRJE, Professor HATTA is scheduled to give a seminar on a paper entitled, "A Theory of Revenue-Constrained Optional Tariff" on November 30, 1999.

Hak Kil Pyo (College of Social Sciences, Seoul National University), from September 1, 1998 to August 31, 1999

During the period of one-year appointment on leave from Seoul National University, Professor Pyo taught a course, Contemporary Analysis on Korean Economy, at the Faculty of Economics and engaged himself in researches on comparative productivity analysis on East Asian economies and an analysis on the financial crisis in Korea. The result of the first research was presented at Economic Planning Agency Workshop in May and at the University of Tokyo Macroworkshop on June 24, 1999. It was published by the Center as CIRJE-F-51, "A Test of the Convergence Hypothesis by Rates of Return to Capital: Evidence from OECD Countries". The result of the second research was presented at MITI/RI Workshop organized by Professor Okuno-Fujiwara. He also participated in researches on long-term growth accounting of Korean Economy and a comparative estimation of human capital between Japan and Korea under COE projects at Hitotsubashi University. Both research papers are presented at COE Workshops and are published by the Institute of Economic Research, Hitotsubashi University in late 1999 or early 2000.

### **Visiting Professors**

**Kazuharu Kiyono** (School of Political Science and Economics, Waseda University), from April 1, 1999 to March 31, 2000

Major research fields: International trade and applied microeconomics

I am now engaged in the following research topics in the CIRJE as a research fellow.

- International public economics approach to the global warming problem, i.e., theoretical evaluation of the so-called Kyoto mechanism for international cooperation against global warming by using the theories of games and international public and environment economics.
- 2) Strategic trade and industrial policies towards oligopoly such as welfare analysis on the market choices of the types of firms and direct regulations in international trade like local content requirements and the rule of origin principle.

#### Major and recent publications:

- Economic analysis of industrial policy (with Professors M. Itoh, et al.), University of Tokyo Press, 1986 (in Japanese)
- Economics of regulation and competition, University of Tokyo Press, 1992 (in Japanese)
- A voluntary subsidy scheme for the accounting rate system in international telecommunications industries (with Professor K. Domon), forthcoming in *Journal of Regulatory Economics*

Murali Agastya (Department of Economics, University College London), from June 20 to September 20, 1999

Since my Ph.D. in 1995 (from University of Western Ontario, Canada), I have worked on the following:

Learning in Games: My contributions on learning are "Adaptive Play in Bargaining Situations" (Review of Economic Studies), and "Perturbed Adaptive Dynamics in Coalition from Games" (Journal of Economic Theory). These papers are unique in the literature as they view general bargaining situations from a learning perspective. They also provide the learning based foundations for the core. I have also considered matching models within this paradigm and these results could be useful for labor economics.

Auctions: I have written two papers on auctions. The first of these, titled "Winner's Curse vs. Loser's Nightmare" deals with treasury auctions. The bidders in these markets are intermediaries and there is a secondary market. This leads to a phenomenon called the loser's nightmare, in addition to the familiar winner's curse. The tradeoff between these two effects leads to some very interesting conclusions. The second paper on auctions is titled "Collusion among Bidders Benefits the Seller". Here we consider auctions with externalities that are applicable to corporate takeover battles and other vertical

contracting problems. We find that the seller if the seller can not charge lump sum participation fees, as is often the case in reality, she increases expected revenue by inviting a single joint bid.

**Edward John Driffill** (Birkbeck College, University of London), from October 1 to December 31, 1999

Over the years, my research interests have mostly involved macroeconomics and aspects of labour markets. I have published papers on human capital and labour supply, time inconsistency and the credibility of monetary policy, and on corporatism and economic performance. In recent years I have worked on the implications of economic integration for labour markets, and on stochastic regime-switching in financial markets. During my visit to the CIRJE I have continued to work on a paper on "A Structural Economic Model for Monetary Transmission in Germany" (with Andreas Beyer, European University Institute, Florence). I have finalised proofs of a book, a British/European adaptation of Joseph E. Stiglitz's introductory economics textbook (to be called Economics and the British Economy) to be published by W.W. Norton and Co. early in 2000. I plan to begin new work in connection with a new research project on Financial Market Imperfections, Cycles, and Growth. As part of this, I wish to use the opportunity afforded by being here in Tokyo to examine recent experience of the Japanese economy, and to discuss these issues with local experts. I presented a paper at the macroeconomics workshops at the University of Tokyo ("A Structural Economic Model for Monetary Transmission in Germany") on 11 November. Another paper, "No Credit for Transition: EMU and German Unemployment" (with Marcus Miller, Warwick), was presented at a labour economics workshop in Osaka on 26 November.

### Visiting Professor, Tokio Marine Chair

**Toshiaki Tachibanaki** (Institute of Economic Research, Kyoto University), from October 1, 1998 to March 31, 2000

Toshiaki Tachibanaki is Professor of Economics at Kyoto University, Japan. He has taught at several universities and had research positions in Europe and the USA, and had several visiting positions at various research institutions of the Japanese government such as EPA, MOF, MITI, etc. and the Bank of Japan. His main interest is labour, finance and public economics, and he has contributed numerous articles in these fields. He has published two books in English, Wage Determination and Distribution in Japan, and Public Policies and the Japanese Economy as well as many books in Japanese. He has also edited books in both English and Japanese including Labour

Market and Economic Performance: Europe, Japan and the US, Wage Differentials: An International Comparison, and Who Runs Japanese Business. He has served on the editorial board of several academic journals such as Economics of Education Review, Labour Economics: An International Journal, etc.

#### Research Associate, Tokio Marine Chair

**Serdar Dinc** (Department of Finance, Business School, University of Michigan) from October 1, 1997 to September 31, 1999

I stayed at CIRJE for two years since October 1997 mainly to assist Professor Horiuchi to promote empirical and comparative study of the Japanese financial system in the perspective of global capital markets. I also accumulated financial data of Japan's major companies and commercial banks to investigate what influence their relationships exerted on industrial development in Japan.

I have also started to examine Japanese banks' lending behavior during the so-called "bubble period" of the late 1980s. The following is the abstract of my most recent analysis the title of which is "The Shareholding Structure of Japanese Banks and Their Real Estate Lending in the 1980s: How Were Bank Managers Protected from Shareholder Discipline?":

Japanese banks in particular, and the Japanese economy in general, have suffered greatly in the 1990s from the nonperforming real estate loans made in the 1980s. This paper studies the effects of bank shareholding structure on the real estate lending by Japanese banks in the 1980s. It is shown that large shareholders tried to restrain bank managers from real estate lending. However, cross-shareholding and lending relationships between large banks and the members of the financial groups (financial keiretsu) led by these banks prevented some shareholders from effectively monitoring bank managers. These shareholders also protected bank managers from the discipline of other shareholders. A similar pattern with other high-risk loans and an opposite pattern with low-risk loans suggest that increased bank lending to the real estate sector was part of a pattern of broader risk taking by Japanese banks in the 1980s.

I hope this paper will be published in any academic Journal in the near future. I sincerely appreciate my colleagues at Faculty of Economics, University of Tokyo for their warm hospitality. In particular, I thank Professor Horiuchi, Director of CIRJE, and charming ladies who helped me greatly with respect to various matters in CIRJE.

# Research Staff continued from page 13 -

#### **Short Term Visitors**

**Harumi Ito** (Economics Department, Brown University), from June 9 to August 7, 1999

The Role of the Main Bank System in the Japanese Subcontracting Relationships and the Impact of Current Banking Crisis

Economic and business researchers have extensively documented that Japanese subcontracting practices foster long-term relationships in order to mitigate commitment problems between buyers and sellers. The financial health of involved parties are often critical for long-term relationships and Aoki (1988, 1990) has argued that Japanese main banks' ability to rescue firm at the time of financial distress helped firms to commit to such long-term relationships.

During the prolonged economic recessions in the 1990s, the financial health of some Japanese automobile producers and their main banks has significantly deteriorated. The goal of our research is to find out the implications of such financial distress on the buyer-supplier relationships. We use this empirical opportunity to test our hypotheses about the complementarity between financial and industrial organization in the vertical relationships. In particular, we expect that a supplier will reduce its reliance on a particular buyer as this buyer and its main banks experience more serious financial distress. We test this hypothesis using various measures of financial distress.

Finally, we also explore the implications of the weakening buyers-supplier relationships in terms of the shareholding patterns.

#### Chiaki Moriguchi (Harvard Business School), from June 28 to July 18, 1999

The Evolution of Employment Relations and Labor Policies in Prewar Japan

The goal of the project is to provide better understanding of the historical evolution of employment institutions in the two countries by integrating a game-theoretic framework into a historical analysis. By examining the endogenous strategic interactions among labor, management, and government induced by unanticipated shocks, the work offers an empirical analysis of the dynamic process of equilibrium selection and institutional path-dependence. In particular, I identify the early 1930s as the "period of bifurcation" during which institutional trajectories in the U.S. and Japan began to diverge and evolve respectively towards what I call "explicit contract equilibrium" and "implicit contract equilibrium." I argue that different magnitude and duration of the Great Depression in the two countries induced different responses from management and labor in the respective countries, which, in turn, led to the formation

of distinctive labor policies by the respective governments. In this research project, I focus on studying the interwar period of Japan, during which we observe the emergence and institutionalization of long-term employment contracts, corporate welfare benefits, and factory committees in private manufacturing firms. In particular, I investigate the process of labor policy formation during the period of "Imperial Democracy," and more broadly, to examine the nature of interactions between private players and the government in prewar Japan.

#### Research Associates

**Tetsuya Shimokawa** (CIRJE, University of Tokyo), from April 1, 1999 to March 31, 2000

Tetsuya Shimokawa is a part-time researcher at the CIRJE. His expertise is in the areas of economic growth and fiscal policy. His recent research paper is on the periodicity and indeterminacy of equilibrium paths with external effects. He is currently researching the optimal tax-subsidy policy and public investment, as well as the complexity of equilibrium growth paths.

# **Tsuyoshi Nakamura** (CIRJE, University of Tokyo), from April 1, 1999 to March 31, 2000

Tsuyoshi Nakamura's main fields of interest are macroeconomics and industrial organization. His current researches focus on empirical analysis of technological progress. The objects of his studies are to examine the impact of licensed foreign technology import and university-firm joint research on knowledge spillover, the determinants of entry into Japanese biotech industry, the role of firm's R&D diversification, and the relation between firm size and features of knowledge spillover.

# **Hiroshi Saito** (CIRJE, University of Tokyo), from April 1, 1999 to March 31, 2000

Hiroshi Saito's main research areas are regional and urban economics, especially industrial agglomeration economies including dynamic externalities of urban industries. His current research is an econometric analysis of optimal city sizes using panel data. Optimal urban configuration or growth considering aging and income distribution is a future research program.

# **Discussion Paper Series**

Discussion Papers (latest five years with some exceptions) are available at the CIRJE HOMEPAGE. Visits are welcome. http://www.e.u-tokyo.ac.jp/cirje/index.htm

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# CIRJE Newsletter

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