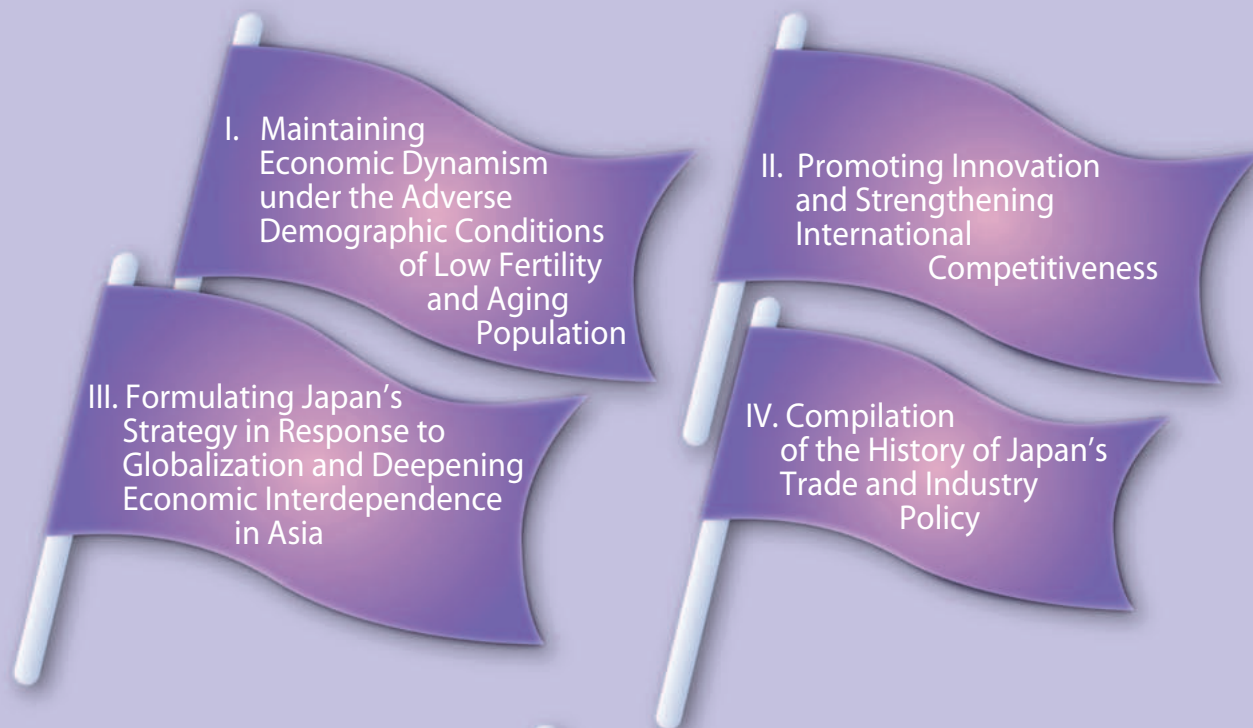


## Major Policy Research Domains



## Adjacent Basic Research Areas



The Ministry of Economy, Trade and Industry (METI) has identified four Policy Research Domains for which RIETI should continually carry out research through the second mid-term period (FY2006 – 2010). Furthermore, RIETI is conducting its research in the Adjacent Basic Research Areas in which RIETI can choose newly emerging relevant policy issues from a medium- to long-term perspective in a more timely and flexible manner by responding to changes in socioeconomic conditions.

Notes : The following pages list main research projects. Fellows' titles are applicable for FY2009.

Most research results shown in the following pages are downloadable from RIETI's website.

Abbreviations are on the reverse of the front cover.

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I-7) An Empirical Study on Open Innovation	MOTOHASHI Kazuyuki, FF	9
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II-5) Investigation and Research on Innovation Processes in Semiconductor Industries—Case study and analysis of electron microscopies, resist and packaging technologies	CHUMA Hiroyuki, FF	13
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A-2) Empirical Analysis of Japan's Labor Market: Policy responses to fertility decline and population aging	KAWAGUCHI Daiji, FF	25
A-3) Economic Analysis of Organizations and Institutions: The design of organizations and institutions to enhance corporate performance and growth	TSURU Kotaro, SF	25
A-4) Research into Measures to Provide Efficient Public Services by Means of Government and Private-sector Collaboration, Premised on Small Government	YAMAUCHI Naoto, FF	26
A-5) The Frontier of Corporate Governance Analysis: Evolution of the corporate system in Japan and the impact of the world financial crisis	MIYAJIMA Hideaki, FF	26
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A-12) The Design of an International Institution to Prevent Global Warming	FURUSAWA Taiji, FF	29
A-13) Empirical and Internationally Comparative Institutional Analysis of the Forms of Administrative and Financial Systems for Utilizing Infrastructure Assets to Invigorate Local Economies in an Era of Decentralization and International Competition: A study of the administrative and financial systems and governance systems in operation at regional ports	AKAI Nobuo, FF	29
A-14) Globalization, Innovation, and Competition Policy	KAWAHAMA Noboru, FF / OHASHI Hiroshi, FF & NISHIGAKI Atsuko, SF	30
A-15) Supply of Risk Capital in Japan and Related Policy Issues	MURAMOTO Tsutomu, FF / YOSHINO Naoyuki, FF	30
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Adjacent Basic Research Area C Compilation of Micro Panel Data on Firm Activities, Trade, Energy, and the Elderly; and Model Building and Operation		
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C-2) Research and Development for Next Generation Energy Statistics and for Analytical Systems of Supply and Demand Trends	KAINOU Kazunari, F	34



## Maintaining Economic Dynamism under the Adverse Demographic Conditions of Low Fertility and Aging Population

Japan is faced with a challenging task of achieving sustainable economic growth at a time of unparalleled declining fertility and aging population. In order to help policymakers meet this challenge, RIETI will undertake comprehensive and integrated research on means of promoting structural change in the economy; increasing labor force participation rates of women, the elderly and young people; increasing productivity of both labor and capital; identifying a social security system that can secure an optimal intergenerational and intra-generational balance of benefits and contributions under the public pension system; and designing effective fiscal policy and restoring the nation's fiscal balance.

### Introduction of Research Projects

#### I-1) Economic Growth under Conditions of Low Fertility and Aging Population

Project Leader / Sub-Leader: YOSHIKAWA Hiroshi, RC & FF / OKAZAKI Tetsuji, FF

##### <Overview>

To sustain Japan's economic growth under conditions of a declining population, research on productivity growth and innovations is vital. The present project focuses on the role of product innovations which the standard growth accounting or measurement of total factor productivity (TFP) does not fully capture. We also study other neglected aspects of technical progress and innovations. The labor participation of women and working hours are also examined.

##### <Major Research Results>

###### Discussion Papers

- Wages and Productivity in Firms using Foreign Trainees (HASHIMOTO Yuki) (DP No. : 10-J-018)
- Simulation Analysis of Community Farming: Is there any room for growth in Japanese rice farming? (SAITO Keiji, OHASHI Hiroshi and NISHIMURA Kiyohiko) (DP No. : 10-J-009)
- Product Innovation and Economic Growth (YOSHIKAWA Hiroshi, ANDO Koichi and MIYAKAWA Shuko) (DP No. : 10-J-006)
- Demand Driven Innovation and Uncertainty: Evidence from diffusion of flat panel TV (UNAYAMA Takashi and KEIDA Masayuki) (DP No. : 10-J-005)
- Marriage Rate and Female Labor Participation Rate: Evidence from Japanese prefectural cross-section (UNAYAMA Takashi) (DP No. : 10-J-004)
- Discrepancy between Saving Rates in SNA and Family Income and Expenditure Survey and its Implications (UNAYAMA Takashi) (DP No. : 10-J-003)
- A Study about the Job Training Expenditure of Japanese Firms in the 1990s (SUGA Yutaka) (DP No. : 10-J-002)
- Changes of Industrial Structure and Post-war Economic Growth in Japan (YOSHIKAWA Hiroshi and MIYAGAWA Shuko) (DP No. (09-J-024)
- Stock Ownership and Corporate Performance in Japan: Corporate governance by institutional investors (SHINADA Naoki) (DP No. : 10-E-005)
- Pension Benefit and Hours Worked (MIYAZAWA Kensuke) (DP No. : 10-E-004)
- Agglomeration or Selection? The Case of the Japanese Silk-reeling Industry, 1909 – 1916 (ARIMOTO Yutaka, NAKAJIMA Kentaro and OKAZAKI Tetsuji) (DP No. : 10-E-003)
- Knowledge Spillover on Complex Networks (KONNO Tomohiko) (DP No. : 10-E-002)
- A Stochastic Model of Labor Productivity and Employment (FUJIWARA Yoshi and AOYAMA Hideaki) (DP No. : 10-E-001)

###### CARF-RIETI Policy Symposium

"Financial Crisis and the Future of the Japanese Economy" (2009/7/3)



I-1) Economic Growth under Conditions of Low Fertility and Aging Population  
CARF-RIETI Policy Symposium  
"Financial Crisis and the Future of the Japanese Economy" (2009/7/3)

## Introduction of Research Projects

**I-2) Building a New Macroeconomic Model and Policies in Times of Economic Crisis**

Project Leader: KOBAYASHI Keiichiro, SF

**<Overview>**

This project aims to develop a quantitative business-cycle model (macroeconomic model) for analyzing macroeconomic policies during a global financial crisis. Financial problems including those with the financial system and asset-based lending will be explicitly incorporated into the model. The goal of research is to contribute to the evaluation of macroeconomic policies by performing simulations with the model. As an attempt to develop new theories, search theory and monetary theory (particularly, the framework of Lagos and Wright) will be used to develop a new general equilibrium model capable of describing banking and financial crises. In addition, further research will be pursued on business cycle accounting (BCA) in an ongoing effort that began in fiscal 2005 (April 2005 through March 2006). In order to improve the usefulness of BCA as a practical analytical tool, research will be undertaken to explore its limitations and find possible ways for overcoming them. With the collapse of the post-Cold War pattern of economic growth, in which the financial sector-led U.S. economy continued to drive the global economy by serving as the ultimate consumer, global economic management is expected to undergo drastic changes in both practical and conceptual terms. In light of this prospect, this project aims to undertake broadly based research to explore possible future growth mechanisms for the global economy, thereby indentifying the role of East Asia in that framework and setting the direction for Japan in rebuilding its economic and industrial structures.

Research themes addressed by this project are broadly classified into the following four categories:

- 1) Development of a quantitative business cycle model and business cycle accounting (BCA)
- 2) Comparative weighing of financial stabilization policies derived from the banking crisis model and macroeconomic policies
- 3) Policies in times of economic crisis and economic structural changes in times of transition
- 4) Other related studies.

**<Major Research Results>**Discussion Papers

- How Were Monetary Policies Implemented before and after the Showa Depression?—Interpretation based on the Taylor Rule and the McCallum Rule (HARADA Yutaka and SATO Ayano) (DP No. : 09-J-025)
- Asset-price Collapse and Market Disruption—A model of financial crises (KOBAYASHI Keiichiro) (DP No. : 09-E-045)
- A Monetary Model of Banking Crises (KOBAYASHI Keiichiro) (DP No. : 09-E-036)
- Quantitative Significance of Collateral Constraints as an Amplification Mechanism (INABA Masaru and KOBAYASHI Keiichiro) (DP No. : 09-E-035)
- The Role of Investment Wedges in the Carlstrom-Fuerst Economy and Business Cycle Accounting (INABA Masaru and NUTAHARA Kengo) (DP No. : 09-E-030)
- The Impact of Immigration on the Japanese Economy: A multi-country simulation model (SHIMASAWA Manabu and OGURO Kazumasa) (DP No. : 09-E-020)

RIETI Policy Symposium

“Industry Related Government Policy and the Global Economic Crisis” (2009/12/16)



I-2) Building a New Macroeconomic Model and Policies in Times of Economic Crisis  
RIETI Policy Symposium  
“Industry Related Government Policy and the Global Economic Crisis”  
(2009/12/16)

### I-3) Empirical Analyses Relating to IT and Productivity

Project Leader: MOTOHASHI Kazuyuki, FF

#### <Overview>

Productivity is essential in long term growth of Japan whose working age population is decreasing. In this study, the role of IT on productivity growth is identified by empirical analysis. It is found that the impact of IT on productivity in Japanese firms is smaller than that in U.S. firms. Both macro and micro level analysis is conducted in this project to investigate the reason why IT is under utilized in Japanese firms as compared to U.S. counterparts.

#### <Major Research Results>

##### Discussion Papers

- IT Innovation and Economic Growth: The importance of Moore's Law in productivity from a macro perspective (MOTOHASHI Kazuyuki) (DP No. : 09-J-016)
- A Two-dimensional Analysis of the Impact of Outward FDI on Performance at Home: Evidence from Japanese manufacturing firms (OBASHI Ayako, HAYAKAWA Kazuo, MATSUURA Toshiyuki and MOTOHASHI Kazuyuki) (DP No. : 09-E-053)
- Software Patent and its Impact on Software Innovation in Japan (MOTOHASHI Kazuyuki) (DP No. : 09-E-038)

##### Project URL

Comparative Analysis of Information Technology Management in Japanese, U.S., and Korean Enterprises—Questionnaire survey results—(<http://www.rieti.go.jp/jp/projects/it-management/index.html>) (Japanese)

### I-4) Toward a Comprehensive Resolution of Social Security Problems: A new economics of aging

Project Leader / Sub-Leader: ICHIMURA Hidehiko, FF / SHIMIZUTANI Satoshi, CF

#### <Overview>

As Japan experiences the aging of its society at a pace unprecedented worldwide, it is essential to build a sustainable social security system that ensures that the elderly do not suffer a decline in quality of life. Our research transcends the bounds of the traditional field-specific approach that addresses the health care, long-term care, and pension fields separately, and of simulation analysis with the use of macro models, and instead adopts a "new" microscopic yet comprehensive, market-oriented approach that is premised on the diversity of the elderly. Based on pilot studies already conducted in previous years, and with the intellectual support of the analogous studies of the elderly (the U.S. HRS [Health and Retirement Study], ELSA [English Longitudinal Study of Ageing] in the UK, and SHARE [Survey of Health, Ageing and Retirement in Europe] in Continental Europe), our research has inaugurated a world-standard panel study on population aged over 50. We are gathering data that is both multi-faceted, covering such aspects as health condition, economic situation, family relationships, employment status, and social participation, and that is also capable of international comparison. Our intention in doing this is to help ensure that "evidence-based policy-making" based on an abundance of microdata becomes an established feature in the sphere of social security policy in Japan, and that Japan's experience can be taken advantage of by other countries in their policy-making.

#### <Major Research Results>

##### Discussion Papers

- JSTAR First Results 2009 Report (ICHIMURA Hidehiko, SHIMIZUTANI Satoshi and HASHIMOTO Hideki) (DP No. : 09-E-047)

### I-5) Stabilization Policy for the Incomplete Market

Project Leader: NAKAJIMA Tomoyuki, FF

#### <Overview>

As the global financial crisis persists, the gap in income and wage differentials in Japan and other countries continues to expand. While the labor system constitutes an important issue in income disparity, from a macroeconomic perspective, "market incompleteness" is also thought to be a major cause in the increasing disparity. This project examines how market incompleteness affects overall business conditions (through inefficiency in the labor markets) and considers the possibility that macroeconomic policies (stabilization policies) under conditions of market incompleteness can have a greater impact than previously assumed.

#### <Major Research Results>

##### Discussion Papers

- Optimal Monetary Policy When Asset Markets are Incomplete (R. Anton BRAUN and NAKAJIMA Tomoyuki) (DP No. : 09-E-050)

## Introduction of Research Projects

**I-6) International Comparison of Measures to Improve Work-Life Balance and Consideration of Challenges Facing Japanese Companies**

Project Leader: TAKEISHI Emiko, FF

**<Overview>**

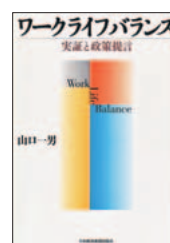
While firms have an important role to play in the realization of work-life balance (WLB) in Japan, the actual introduction of WLB-related measures by firms entails various problems and challenges. The purpose of this project is to examine these problems and consider the means necessary to facilitate the introduction of these measures. Specifically, the following matters will be examined: 1) Analysis of the cost-benefit structure of the introduction of WLB-related measures by firms; 2) Operational problems facing firms when introducing WLB-related measures and possible solutions; and 3) Challenges affecting initiatives for the establishment of WLB-related measures in the workplace and harmonization of work and life and the possible solutions. The project will conduct an empirical analysis and evaluation of current conditions based on questionnaire surveys and hearings from firms and workplaces, while also referring to the corresponding systems and measures in various foreign countries. Having identified the relevant problems and challenges, the project will then attempt to develop necessary policy recommendations.

**<Major Research Results>**Discussion Papers

- The Over-employment of Regular Employees and their Work-family Conflict (YAMAGUCHI Kazuo) (DP No. : 10-J-008)
- A Macrocounterfactual Analysis of Group Differences: An application to an analysis of the gender wage gap in Japan (YAMAGUCHI Kazuo) (DP No. : 10-E-006)

Publications

*"Work Life Balance: Empirical analysis and policy recommendations,"* written by YAMAGUCHI kazuo, Nikkei Publishing Inc., December 2009 (Korean translation version published from Korea Institute for Health and Social Affairs, 2010)

**I-7) An Empirical Study on Open Innovation**

Project Leader: MOTOHASHI Kazuyuki, FF

**<Overview>**

The innovation system in Japan is characterized as “in-house compartment style,” but a shift to an “open innovation style” is becoming imperative in a world of stiff innovation competition due to technological progress and globalization. However, Japanese companies are still lagging behind their U.S. and European counterparts in this regard. In addition, it is important to take into account the differences in innovation processes across industries to analyze R&D collaborations. For example, the licensing of chemical compounds is important for pharmaceutical firms, while the formation of an “innovation ecosystem” is necessary for the electronics industry, in which the territory of products and business has become increasingly complex. Furthermore, in order to create an innovation system network where dynamic R&D collaborations are formed, the issue of how to promote high-tech startups bridging the “valley of death” between industry and academia is an important issue. This project endeavors to explain the process of “open innovation” in Japan through the quantitative analysis of patent datasets, licensing, and firm level performance.

**I-8) The Japanese Economy under Low Fertility and Aging Population: From the perspectives of economic growth, productivity, labor force, and prices**

Project Leader / Sub-Leader: YOSHIKAWA Hiroshi, RC &amp; FF / UNAYAMA Takashi, FF

**<Overview>**

This project analyzes the impacts of low fertility and aging population on the Japanese economy, in particular from the aspects of economic growth, productivity, labor force, and prices. Technological progress is widely acknowledged as the key to economic growth under low fertility and aging population. And although product innovations are particularly decisive, the measurement of total factor productivity (TFP), which focuses on the supply side and “value added,” does not fully capture the impacts of product innovations on economic growth. This project researches product innovations both theoretically and practically. Additionally, productivity, human capital accumulation, household labor supply, and prices are also examined in the light of low fertility and aging population.

## I-9) Macroeconomic and Fiscal Simulation Analysis toward a Sustainable Public Pension System

Project Leader: NAKATA Daigo, F

### <Overview>

The Japanese public pension system was revised in 2004, but this did not eliminate the public's skepticism concerning the sustainability of the system. Likewise, there has been no sign of any improvement in the public's faith in other social security systems, such as health and nursing care. One of the reasons for this is, the lack of public confidence in the financial projections for social security finance that are based on simulations of pension finances conducted by the Ministry of Health, Labour and Welfare. Lack of confidence has been augmented by limited opportunities to verify the Ministry's projections and run additional simulations based on different sets of assumptions. The purpose of this project is to examine the following three points, using an expanded version of the simulation model for pension finance (RIETI model) developed by the project leader:

- 1) Pension finance simulation analysis based on assumptions that are consistent with a general equilibrium approach;
- 2) Estimation of the base rate using microdata, and application of the base rate in re-evaluating proposals for the integration of pension systems; and
- 3) Development of a simulation model for very long-term projections of finances for pensions, health and nursing care.

### Other research results in Domain I

#### <Research results belonging to research projects prior to fiscal 2008>

Project Title: [Idiosyncratic Risk and Economic Fluctuation](#)    Project Leader: NAKAJIMA Tomoyuki, FF

#### Discussion Papers

➤ [Optimal Monetary Policy with Imperfect Unemployment Insurance \(NAKAJIMA Tomoyuki\) \(DP No. : 09-E-014\)](#)

## II

**Promoting Innovation and Strengthening International Competitiveness**

Continuous innovation is vital for strengthening the international competitiveness of Japanese companies. However, the effects of innovation and the policies that promote it are extremely difficult to quantify. In undertaking research in this field, it is vital to have an analytical framework, both theoretical and empirical, that clarifies the correlations between innovation at the corporate and industry levels and total factor productivity (TFP). RIETI will evaluate and analyze conditions surrounding Japanese industry and specific industrial and technological policies to provide findings that the government can utilize to promote innovation policies.

## Introduction of Research Projects

**II-1) The Structural Characteristics of Research and Development by Japanese Companies, and Issues for the Future**

Project Leader: NAGAOKA Sadao, RC & FF

**<Overview>**

This project aims to conduct an in-depth empirical analysis of the innovation process in Japan as well as implement policy-oriented research to shed light on policy issues aimed at improving innovation performance. We will utilize data from the inventor surveys conducted in 2007 and 2008 (the follow-up survey) in this research project as well as patent data and the other related statistics such as the Basic Survey on Japanese Business Structure and Activities. Our main tasks will include: 1) name-matching the inventors, who responded to our surveys, to the inventions attributable to them, so we may begin analyzing the careers of inventors in Japan; 2) holding the RIETI international workshop, "Science for Innovation" with a view to analyzing the linkage between science and industrial innovation, including human capital development; and 3) promoting international collaborative research as well as research exchanges between the U.S. and Japan and Europe and Japan, including the publication of the comparative statistical tables of the inventor surveys in Japan and the U.S.

**<Major Research Results>**Discussion Papers

- Backward Patent Citations and Inventors' Recognition of Differential Influences (WADA Tetsuo) (DP No. : 10-J-001)
- Managerial and Policy Agenda for Improving Japanese R&D: Inventors' views (NISHIMURA Junichi, Tingting Wang and NAGAOKA Sadao) (DP No. : 09-J-031)
- Who Invents?: Evidence from the Japan-U.S. inventor survey (John P. WALSH and NAGAOKA Sadao) (DP No. : 09-E-034)
- How "Open" is Innovation in the U.S. and Japan?: Evidence from the RIETI-Georgia tech inventor survey (John P. WALSH and NAGAOKA Sadao) (DP No. : 09-E-022)

RIETI Policy Symposium

"Innovation under the Current World Economic Crisis—Capability enhancement and institutional reform" (2009/7/2)

RIETI International Workshop

"Science for Innovation: Exploiting and strengthening the linkage" (2010/3/23)

RIETI International Seminar

"The Recent Development of the European Innovation System with a Focus on Patent System Reform" (2010/1/18)



II-1) The Structural Characteristics of Research and Development by Japanese Companies, and Issues for the Future  
RIETI International Workshop  
"Science for Innovation: Exploiting and strengthening the linkage" (2010/3/23)



II-1) The Structural Characteristics of Research and Development by Japanese Companies, and Issues for the Future  
RIETI International Seminar  
"The Recent Development of the European Innovation System with a Focus on Patent System Reform" (2010/1/18)

## II-2) Organizational and Strategic Challenges for R&D Internationalization of Japanese Firms: A managerial approach

Project Leader: ASAKAWA Kazuhiro, FF

### <Overview>

Recent changes in trends in R&D internationalization underscore the limited explanatory powers of existing “conventional theories.” It can be said that a tectonic shift is occurring in global R&D systems encompassing both the advanced and developing regions of the world (Asakawa and Som 2008). We need to re-examine “conventional theories” in order to develop a new analytical framework that corresponds to existing conditions. With this issue in mind, this project seeks to identify new trends in R&D internationalization using the latest data available from questionnaire surveys conducted in the R&D headquarters of Japanese firms and their overseas R&D centers. In particular, the project aims to analyze current conditions and issues related to organizational and strategic aspects. The micro-level analysis of firms and their overseas R&D centers developed by this project and the macrodata developed by the OECD and other organizations are expected to be complementary to each other.

### <Major Research Results>

#### Discussion Papers

- Agenda for R&D Globalization of Japanese Firms: From an organizational and strategic perspective (ASAKAWA Kazuhiro) (DP No. : 10-J-007)

## II-3) Productivity of Industries and Firms and Japanese Economic Growth

Project Leader: FUKAO Kyoji, FF

### <Overview>

For the Japanese economy to retain its vitality under conditions of decreasing population and the aging of society, it will be essential to achieve economic growth based on accelerated productivity growth. With this challenge in mind, this project, as a rule, annually updates the Japan Industrial Productivity Database (JIP), a basic source of data for analyzing Japan’s economic growth and changes in its industrial structure, and analyzes the trends in TFP on a detailed industrial level with their determinants. In addition, by participating in “EU KLEMS,” a joint international project on productivity in the European Union (EU), we compare Japan’s industrial structure and productivity growth by industry with that of other industrialized countries, including the United States, the EU member countries and South Korea. Finally, we analyze the impact of the globalization of firms and their accumulation of intangible assets on their productivity. This is done using the JIP Micro Database, which covers most Japanese firms including those in the non-manufacturing sector, and microdata from government statistics.

### <Major Research Results>

#### Discussion Papers

- Working Hours of Part-timers and the Measurement of Firm-level Productivity (MORIKAWA Masayuki) (DP No. : 10-J-022)
- Do Large Scale Investments Improve Corporate Performance? (TANAKA Kenji and MIYAGAWA Tsutomu) (DP No. : 09-J-032)
- Productivity Disparities Between Self-Employed Workers and Employees (TOKUI Joji, MAKINO Tatsuji and TAKAHASHI Yoko) (DP No. : 09-J-018)
- Resource Reallocation and Zombie Lending in Japan in the ‘90s (Hyeog Ug KWON, NARITA Futoshi and NARITA Machiko) (DP No. : 09-E-052)
- Technological Externalities and Economic Distance: A case of the Japanese automobile suppliers (TAKEDA Yosuke and UCHIDA Ichiro) (DP No. : 09-E-051)
- International Production Networks and Export/Import Responsiveness to Exchange Rates: The case of Japanese manufacturing firms (ANDO Mitsuyo and IRIYAMA Akie) (DP No. : 09-E-049)
- Globalization, Productivity and Plant Exit—Evidence from Japan (INUI Tomohiko, Richard KNELLER, MATSUURA Toshiyuki and Danny MCGOWAN) (DP No. : 09-E-048)
- Estimates of Multifactor Productivity, ICT Contributions and Resource Reallocation Effects in Japan and Korea (FUKAO Kyoji, MIYAGAWA Tsutomu, Hak K. PYO and Keun Hee RHEE) (DP No. : 09-E-021)

#### Project URL

Japan Industrial Productivity Database 2009 (JIP 2009) (<http://www.rieti.go.jp/jp/database/JIP2009/index.html>)

## II-4) An Empirical Analysis on the Increasing Complexity of Artifacts, Design Processes and Product Architectures

Project Leader: FUJIMOTO Takahiro, FF

### <Overview>

Today, with advanced technologies for digitization and modularization, product designs under loose constraints will immediately be commoditized. Japan’s design sector should, for its own survival, collectively and continuously address challenging design issues to take a leading position in the world’s design field. In Japan, organizational strengths for integrated manufacturing are unevenly distributed for historical reasons. One way to correct this would be to face the challenges and continue to work on artifacts that have rigid functional requirements and constraints, namely products and processes incorporating complex integral architecture. In order to do this, it would be necessary to amalgamate different approaches to support the design of management, control and other systems in a complementary manner, which means providing full support for frontline designers. Japan’s industry, government and academia must be united in delivering this support.

## Introduction of Research Projects

**II-5) Investigation and Research on Innovation Processes in Semiconductor Industries—Case study and analysis of electron microscopies, resist and packaging technologies**

Project Leader: CHUMA Hiroyuki, FF

**<Overview>**

Through joint research conducted with the scientists and engineers of manufacturers of semiconductor devices and electron microscopes, this project examines, from an economics and business perspective, the historical background that gave rise to significant inventions and innovations and reasons why these inventions and innovations emerged primarily from venture-capital laboratories in Germany and the United Kingdom (and not from Japan, which is reputed as the most advanced in electron microscope).

**<Major Research Results>**Discussion Papers

➤ JSR Challenges Increasing Market and Technology Complexities: In search of its radical transformation process (CHUMA Hiroyuki) (DP No. : 09-J-033)

RIETI-TIER Workshop

“The Global Economic Crisis and the Future Course of the High-tech Industry” (2009/11/30)

**II-6) Empirical Research into Software Innovation**

Project Leader / Sub-Leader: TANAKA Tatsuo, FF / SUZUKI Jun, FF

**<Overview>**

Japan's competitiveness in the software industry is perceived as being weak. In the software industry as a whole there is an overwhelming import surplus, while exports are less than 10% of the value of imports. Among high-value-added high-tech industries it is rare to find any in which Japanese competitiveness is so overwhelmingly lacking. Additionally, this fact may have a negative impact on innovation in business processes that use information technology (IT). Why is this? Why has such a disparity in competitiveness arisen? Is it possible to devise policy remedies that will enhance competitiveness? The objective of our research is to empirically study various hypotheses that may answer these questions, and in so doing to identify the current state of software innovation in Japan, and to seek policies to enhance the competitiveness of software industries and promote business innovation through the use of software.

**<Major Research Results>**Discussion Papers

➤ Knowledge Base of Software Innovation (SUZUKI Jun) (DP No. : 09-J-019)

**II-7) Study on Intangible Assets in Japan**

Project Leader: MIYAGAWA Tsutomu, FF

**<Overview>**

This research project on intangible assets in Japan began in 2007 and to date we have estimated aggregate intangible investments in Japan and conducted an interview survey on management practices in Japanese firms. Based on the aforementioned research, we will focus on the following five studies in 2009 and 2010: 1) effects of human resource management on firm performance; 2) determinants of excellent management practices at firm level; 3) determinants and effects of organizational reforms; 4) effects of intangible assets on capital formation and R&D investment; and 5) financial side of investment in intangible assets. If we are able to secure the necessary research funds, we will extend our interview survey to other Asian and European firms.

**<Major Research Results>**Discussion Papers

➤ Management Practices and Firm Performance in Japanese and Korean Firms—An empirical study using interview surveys (MIYAGAWA Tsutomu, Keun LEE, KABE Shigesaburo, Junhyup LEE, Hyoungjin KIM, YoungGak KIM and EDAMURA Kazuma) (DP No. : 10-E-013)

International Conference

“Comparative Analysis of Enterprise Data” (2009/10/2)



II-7) Study on Intangible Assets in Japan  
International Conference  
“Comparative Analysis of Enterprise Data” (2009/10/2)

## II-8) Research on Productivity Growth in Service Sector

Project Leader: Hyeog Ug KWON, FF

### <Overview>

The purpose of this project is to grasp productivity trends in the service sectors and then to inform the government on the best way to boost productivity in these sectors, which have seen poor productivity relative to the U.S. and EU. Specifically, we construct a productivity database at firm level using microdata from government statistics and identify features and problems in Japan's service sectors compared with the manufacturing and construction sectors. In addition, we undertake concrete empirical analysis regarding the effect of ICT, human capital, new entrants and deregulation policies on productivity in the service sectors and provide specific policy implications based on our empirical findings.

### <Major Research Results>

#### Discussion Papers

- Does Material and Service Offshoring Improve Domestic Productivity? Evidence from Japanese manufacturing industries (ITO Keiko and TANAKA Kiyoyasu) (DP No. : 10-E-010)
- The Effect of Relaxation of Entry Restrictions for Large-scale Retailers on SME Performance: Evidence from Japanese retail census (MATSUURA Toshiyuki and SUGANO Saki) (DP No. : 09-E-054)
- Measurement of the Consumer Benefit of Competition in Retail Outlets (MATSUURA Toshiyuki and SUNADA Mitsuru) (DP No. : 09-E-015)

#### Policy Discussion Papers

- RIETI Productivity Studies: A survey for policy planners (MORIKAWA Masayuki) (DP No. : 10-P-003)

## II-9) Construction of Eco-system for the Creation, Growth and Agglomeration of New Technology-based Firms (NTBFs)

Project Leader: NISHIZAWA Akio, FF

### <Overview>

How can product innovation based on university research be achieved? The global trend is to adopt policies to facilitate the creation of many "New Technology-based Firms" (NTBFs), and to generate hi-tech industries in the geographic vicinities of universities through growth and agglomeration of these NTBFs. However, in Japan, this approach has not yet yielded successful results. Indeed, a pioneering project referred to as the "Sapporo Valley" is said to be losing its growth momentum. Against this backdrop, this project addresses the following two questions about Japan: Why has the model for the establishment of hi-tech industries based on innovation generated through the process of NTBF creation, growth and agglomeration failed to function even in the areas with prominent research universities? What factors are obstructing the process of NTBF creation, growth and agglomeration? The purpose of this research project is to analyze these questions from both empirical and theoretical perspectives, and to formulate benchmarks for the building of eco-systems in the regions.

### <Major Research Results>

#### Discussion Papers

- Construction of Eco-system for NTBFs to Thrive, Grow and Agglomerate (NISHIZAWA Akio, Wakabayashi Naoki, SABURI Masataka, KUTSUNA Kenji, HIBARA Nobuhiko and KANAI Kazuyori) (DP No. : 10-J-24)

## II-10) Differentiated Services and Productivity: Productivity analysis based on the monopoly competition model

Project Leader: KATO Atsuyuki, F

### <Overview>

The theme of this project is the "analysis of the productivity of firms providing differentiated services." Productivity research based on firm- and business establishment-level data normally uses sales (or value-added computed from sales) as the output and an industry-level deflator. This is because product-level data on production volumes and prices is hardly obtainable due to statistical limitations. These limitations are particularly restricting in service industries because of the difficulty in quantitatively defining production volumes. Moreover, the impact of product (service) diversification on the estimation of productivity is ignored. Furthermore, because estimated productivity fluctuation includes markups and demand shocks (changes in consumer preferences, etc. on the firm level), such estimates may not correspond with productivity fluctuations in the strict sense. In light of these problems, this project focuses on the following objectives:

- 1) Productivity estimation by using a model that explicitly incorporates product (service) differentiation under the actual limitations on the usage of price and volume data for individual products (services); and
- 2) The results obtained will be compared with results from prior research (on economies of scale, productivity dynamics, etc.), and the effects of corporate characteristics and strategies and industrial policies will be analyzed.

### <Major Research Results>

#### Discussion Papers

- Productivity and Characteristics of Firms: An application of a bootstrapped data envelopment analysis to Japanese firm-level data (KATO Atsuyuki) (DP No. : 09-E-027)

## Introduction of Research Projects

**II-11) Micro Econometric Analysis of Performance in the Service Industry**

Project Leader: KONISHI Yoko, F

**<Overview>**

As a first step in analyzing service industries, this project has set the beauty industry—specifically hairdressing salons—as the targeted area of analysis due to their relatively simple production structure. Almost all businesses in Japan’s hairdressing industry are under individual management. Nationwide, there are more than 200,000 hairdressing salons in operation. Until the late 1990s, the industry adhered to standardized operating days, hours and charges that were effectively maintained through union activities and laws. Much of this has changed in recent years due to the abolition of laws, reduction in unionization and the emergence of charismatic hairdressers. As a result, the industry has experienced severe price wars and the difference between salons and available services continues to grow. To understand productivity in service industries, it is necessary to define the equivalent of the production function in a manufacturing industry. A model for this purpose must be sensitive to changes in demand; it must be restricted by “floor area, number of employees and business hours;” and it must also allow for an upper limit on supply volume. This project involves collecting extremely detailed information regarding finance, customers, and labor from six hairdressing salons to be used in investigating the structures of supply and demand in the beauty industry.

**II-12) Evaluation of Corporate Tax**

Project Leader: NIREI Makoto, FF

**<Overview>**

The corporate sector is the major source of economic growth and employment, and the taxation on its various activities calls for a careful and systematic evaluation of such policy intervention. To provide such an evaluation scheme, this project builds a numerical dynamic general equilibrium model tailored for Japanese policy environments, and aims to provide some estimates that characterize the impacts of taxation on corporate activities. Our goal is to contribute to the public discussion on the upcoming reform of tax credit schemes and the corporate tax rate.

**II-13) Exploring New Economic Indicators based on Multi-tiered Network Analysis Indicators**

Project Leader: TAMADA Schumpeter, FF

**<Overview>**

We investigate various kinds of interactions among firms in order to understand mechanisms creating innovations. Concretely, we will take the following approaches in this study:

- 1) We analyze networks that include one million Japanese firms as nodes and four relationships defined by joint-patent applications, stock-sharings, transactions and director-interlockings;
- 2) We calculate statistics based on topologies of the networks and discuss how the statistics are related to economical statistics; and
- 3) We re-define new nodes that are sets of firms and analyze the new networks. This enables us to understand what kinds of boundaries among firms are suitable for dividing firms from the view point of network topologies.

**II-14) Review and Future Issues of Intellectual Property Strategy**

Project Leader: KUGAI Takashi, SF

**<Overview>**

Alarmed by the prolonged economic stagnation in the 1990s and the decline in the international competitiveness of Japanese industry, the Japanese government developed an intellectual property strategy at the initiative of the Prime Minister’s Office in 2002. All ministries and agencies have since been pursuing the strategy. An intensive range of initiatives were adopted to facilitate the creation, protection and utilization of intellectual property. These initiatives include: the establishment of the Intellectual Property High Court; JPO’s program for accelerating patent examinations; actions for collaboration between the industrial and academic sectors, such as the establishment of intellectual property offices at national universities; efforts to combat counterfeit goods and piracy; steps for promotion of patent distribution; legislation to protect new plant varieties and local brands; and a series of amendments to the Copyright Act to expand the content industry market. This study reviews the progress of the major action taken under the Intellectual Property Strategy at a time when four to five years have passed since these first measures were instituted. It also investigates new policy issues concerning intellectual property that are emerging amid subsequent changes in the economic environment, such as intensifying economic globalization, advances in technological innovations, and the rapid worldwide expansion of business using the Internet.

## III

## Formulating Japan's Strategy in Response to Globalization and Deepening Economic Interdependence in Asia

As the world economy becomes increasingly globalized, and particularly as Asian countries rapidly grow more economically integrated, Japan needs to establish a comprehensive strategy for implementing policies that respond to international trade rules—such as those under the WTO and FTAs—and facilitate trade and investment. RIETI will contribute to the formulation of Japan's strategy for trade and other policies by conducting analysis on the value chain of trade, direct investment, and technological development in Asia, as well as on the transformation of Asia's monetary and foreign exchange systems, thereby presenting policy proposals for Asia and the world. RIETI will investigate and sort out cases of actual implementation of trade rules, analyze the economic conditions and trade strategies of Japan's major economic partners, and conduct research on business environments and other factors that influence the successful operation of Japanese companies in the global arena.

### Introduction of Research Projects

#### III-1) Research on Changes in Multinational Corporations, Trade Structures, and Market Institutions

Project Leader: WAKASUGI Ryuhei, RC & FF

##### <Overview>

In recent times, China has accomplished remarkable economic development and among developing countries has the strongest economic relationship with Japan. China is now Japan's largest trading partner and Japan is the third largest trading partner for China. Japan is also the second largest provider of foreign direct investment into China. It is this close economic relationship between the two countries that prompted policymakers and researchers to clarify the mechanism that supports China's current economic development. RIETI and the Development Research Center (DRC) of the State Council of the People's Republic of China concluded an agreement for research cooperation in 2006, which has allowed RIETI to conduct in-depth analyses of the Chinese economy. This research project thus conducts various empirical analyses using industrial and firm-level data from China and Japan to uncover the important aspects of the Chinese economy such as the spillovers from the increased presence of foreign invested enterprises (FIEs) or the internationalization of indigenous Chinese firms.

##### <Major Research Results>

###### RIETI Policy Symposium

"Global Recession and International Economy—Japan's challenge and approach" (2009/7/16)

###### DRC-RIETI Workshops

"Spillover from the R&D of Affiliates of Foreign Firms to Chinese Industries and the Internationalization of Chinese Firms" (2010/3/18)

"Workshop in Beijing" (2009/6/19)

"The Growth of Chinese Industries in the Global Economy" (2009/5/22)



III-1) Research on Changes in Multinational Corporations, Trade Structures, and Market Institutions  
DRC-RIETI Workshop  
"The Growth of Chinese Industries in the Global Economy" (2009/5/22)



III-4) The Foreign Aid Governance  
International Workshop  
"Poverty and Vulnerability in Developing Countries" (2009/09/15)

## Introduction of Research Projects

**III-2) Comprehensive Research on WTO Subsidy Rulings**

Project Leader: KAWASE Tsuyoshi, FF

**<Overview>**

Subsidies are widely used throughout the world as a standard tool for the achievement of domestic policy goals. However, subsidies can create distortions in resource allocation as seen in the impact of export subsidies on international trade. For this reason, subsidies are subject to regulation under the WTO Subsidies and Countervailing Measures (SCM) Agreement and Agriculture Agreement. Since the establishment of the WTO, more than 30 adjudications have been handed down on the issue of subsidies by WTO Panels and Appellate Body. Moreover, the number of subsidy-related disputes referred to the WTO is expected to increase with the expiration of provisions temporarily suspending the application of related agreements ("Peace Clause"). This project has the following three objectives: to research the interpretations and applications of relevant rulings made under the SCM Agreement and Agriculture Agreement; to examine the problems that may exist in the subsidy systems of Japan and Japan's major trading partners from the perspective of the WTO Agreement; and to gain insight into how Japan can develop its subsidy and countervailing duty systems while assuring compliance with the WTO Treaty.

**<Major Research Results>**Discussion Papers

➤ Can the WTO Law be Applied Indirectly in Municipal Courts? Analysis of the trade remedies cases in the United States and NAFTA (ITO Kazuyori) (DP No. : 10-J-019)

Policy Discussion Papers

➤ Fisheries Subsidy Negotiations at the WTO: An analysis from the perspective of environmental standards (YAGI Nobuyuki) (PDP No. : 09-P-001)

**III-3) Promoting East Asian Production Networks, the Unwinding of Global Imbalances, and the Resolution of the Economic Crisis**

Project Leader: Willem THORBECKE, SF

**<Overview>**

This year's research seeks to understand Asian production networks and Asia's trade with the rest of the world. It also considers policy measures to promote recovery and bring stability to East Asia. Some of the work involves presenting an analytical description of production networks and investigating how exchange rate changes and changes in income in the rest of the world affect Asian trade. For example, one policy implication is that exchange rate stability in East Asia would be desirable because exchange rate volatility would interfere with the slicing up of the value-added chain. Another policy implication is that East Asian countries should stimulate demand domestically to reduce their exposure to a slowdown outside of the region. Some of the work looks at previous agreements between world leaders to resolve global imbalances and to promote recovery. Other work considers how Federal Reserve monetary policy can be effective in the face of changes in inflation.

Finally, the work considers a new development model for China and East Asia. The question is whether East Asia can be an engine of growth for the world economy, given that demand in Western economies has collapsed. The evidence indicates that if East Asia shifts to a domestic demand-led growth model, it could contribute significantly to growth in the rest of the world.

**III-4) The Foreign Aid Governance**

Project Leader: SAWADA Yasuyuki, FF

**<Overview>**

International discussions on development aid have come to a major turning point. This reflects the transition from aid for economic growth to direct aid for poverty reduction, from project-based aid to budget support aid, from loan-centered to debt reduction aid and grants, and from bilateral to multilateral aid. The aim of the "Foreign Aid Governance Project" implemented during fiscal 2006-08 was to systematically identify the differences in the macroeconomic impact of aid in Asia and Africa based on available evidence, and to measure the impact of the aid allocation behavior of donors and the effectiveness of technical assistance. Using the results obtained from this research, this project will pursue the following objectives during fiscal 2009: 1) Basic research on developing insurance schemes to manage and cope with disaster risks through international cooperation; and 2) Clarification of the cause and effect relationship in the impact of aid on promoting economic growth.

**<Major Research Results>**Discussion Papers

➤ Entropy Characterisation of Insurance Demand: Theory and evidence (NAKATA Hiroyuki, SAWADA Yasuyuki and TANAKA Mari) (DP No. : 10-E-009)

➤ Asking Retrospective Questions in Household Surveys: Evidence from Vietnam (NAKATA Hiroyuki, SAWADA Yasuyuki and TANAKA Mari) (DP No. : 10-E-008)

➤ Aid Effectiveness, Governance and Public Investment (KASUGA Hidefumi and MORITA Yuichi) (DP No. : 09-E-055)

➤ Consumption Insurance against Unforeseen Epidemics: The case of avian influenza in Vietnam (TAMURA Sakuya and SAWADA Yasuyuki) (DP No. : 09-E-023)

International Workshop

"Poverty and Vulnerability in Developing Countries" (2009/09/15)

Project URL

The Foreign Aid Governance ([http://www.rieti.go.jp/jp/projects/development\\_aid/index.html](http://www.rieti.go.jp/jp/projects/development_aid/index.html)) (Japanese)

### III-5) Monetary Cooperation and an Optimal Exchange Rate Basket in East Asia

Project Leader / Sub-Leader: ITO Takatoshi, FF / OGAWA Eiji, FF

#### <Overview>

In the aftermath of the global financial crisis of 2007-2009, the key currency status of the U.S. dollar has been questioned. Several proposals have been made to reform the international monetary system. One of the main focuses of our project "Monetary Cooperation and an Optimal Exchange Rate Basket in East Asia" has been to create a basket currency (unit) in the East Asian region, with the presumption that making the intra-regional exchange rates stable, at around the basket currency unit, is desirable for the region. Research has been conducted on policy issues, including monetary and exchange rate policy, and private sectors' reactions to monetary and exchange rate changes, including behaviors that affect the pass-through of the exchange rate to domestic prices. We have published the Asian Monetary Unit (AMU) and its deviation indicators on the RIETI web page since 2005, contributing to research on the exchange rate coordination and trade invoicing in the region.

#### <Major Research Results>

##### Discussion Papers

- Analysis on  $\beta$  and  $\sigma$  Convergences of East Asian Currencies (OGAWA Eiji and YOSHIMI Taiyo) (DP No. : 09-E-018)
- Determinants of Currency Invoicing in Japanese Exports: A firm-level analysis (ITO Takatoshi, KOIBUCHI Satoshi, SATO Kiyotaka and SHIMIZU Junko) (DP No. : 09-J-013)

##### Project URL

Asian Monetary Unit (AMU) and AMU Deviation Indicators (<http://www.rieti.go.jp/users/amu/en/index.html>)

### III-6) FTA Study

Project Leader: URATA Shujiro, FF

#### <Overview>

A free trade agreement (FTA) is an arrangement, under which trade barriers such as import tariffs on trade between FTA members are eliminated. FTAs increased sharply in the early 1990s and the pace of the increase has accelerated since the establishment of the World Trade Organization in 1995. Slow progress in multilateral trade negotiation is a very important factor behind the rapid increase of FTAs. The objective of this research project is to discern the impacts of FTAs on the foreign trade of FTA members. The analysis process is two-fold. First, researchers examine the usage of FTAs by companies, and then they investigate the impacts of FTAs on foreign trade. The countries selected for this study are Japan, China, South Korea, Thailand, and Australia.

#### <Major Research Results>

##### Discussion Papers

- Trade Creation and Diversion Effects of Regional Trade Agreements on Commodity Trade (URATA Shujiro and OKABE Misa) (DP No. : 10-E-007)
- Impacts of FTAs in East Asia: CGE simulation analysis (ANDO Mitsuyo) (DP No. : 09-E-037)
- On the Use of FTAs by Japanese Firms: Further evidence (TAKAHASHI Katsuhide and URATA Shujiro) (DP No. : 09-E-028)

##### Publications

"Free Trade Agreements in The Asia Pacific," edited by Christopher FINDLAY and URATA Shujiro, World Scientific Publishing, December 2009

##### RIETI Workshop

"Workshop on the Use of FTAs in East Asia" (2010/3/26)



III-6) FTA Study  
RIETI Workshop  
"Workshop on the Use of FTAs in East Asia" (2010/3/26)

## Introduction of Research Projects

**III-7) Trade Agreements and Tax Systems**

Project Leader / Sub-Leader: KOTERA Akira, FF / MATSUMOTO Kayo, F

**<Overview>**

The purpose of this project is to empirically assess and analyze the impact and effect of trade policies on the behavior of firms and structure of industries. Traditional research in this field often assumes the existence of a representative firm and has focused mainly on the evaluation of economic welfare. More recent research attempts to put more emphasis on the aspects of firm heterogeneity while allowing for strategic interactions among firms. In a globalized economy, firms will not necessarily respond passively to trade policies. For instance, it is known that firms will take a strategic approach to influencing policymaking processes. On the other hand, empirical analyses aimed at determining the validity of this theoretical possibility have only been recently started. Against the backdrop of the increased globalization of corporate activities and the expansion and development of East Asian business networks, this project will focus on analyzing firm behavior while empirically evaluating the impact of international trade systems and trade policies.

**III-8) Empirical Analysis of Trade Policy and Corporate Behavior**

Project Leader : OHASHI Hiroshi, FF

**<Overview>**

The purpose of this project is to empirically assess and analyze the impact and effect of trade policies on the behavior of firms and structure of industries. Traditional research in this field often assumes the existence of a representative firm and has focused mainly on the evaluation of economic welfare. More recent research attempts to put more emphasis on the aspects of firm heterogeneity while allowing for strategic interactions among firms. In a globalized economy, firms will not necessarily respond passively to trade policies. For instance, it is known that firms will take a strategic approach to influencing policymaking processes. On the other hand, empirical analyses aimed at determining the validity of this theoretical possibility have only been recently started. Against the backdrop of the increased globalization of corporate activities and the expansion and development of East Asian business networks, this project will focus on analyzing firm behavior while empirically evaluating the impact of international trade systems and trade policies.

**III-9) Study on Offshore Outsourcing by Japanese Firms**

Project Leader: TOMIURA Eiichi, FF

**<Overview>**

In recent years, firms in advanced economies have been increasingly relocating a broad range of operations and functions including R&D activities and manufacturing processes to overseas sites (offshoring). Furthermore, these relocations are not only to divisions within their own multinational corporations but also to unrelated firms (outsourcing). As a result, identifying the current status of cross-border outsourcing has become critically important in formulating Japan's trade policies, regional economic policies and industrial policies. The aim of this project is to undertake an econometric analysis of corporate survey results in order to contribute to an understanding of the offshore outsourcing by Japanese firms, which has an important bearing on Japan's policies. In addition, offshore outsourcing is analyzed with an aim to verify new trade theories.

### III-10) Study on International Trade and Corporations

Project Leader / Sub-Leader: WAKASUGI Ryuhei, RC & FF / TODO Yasuyuki, FF

#### <Overview>

Theory of international trade has recently incorporated heterogeneity across firms, predicting that firms' productivity is an important factor, which influences the decision to engage in export and foreign direct investment (FDI). Accordingly, many empirical studies have tested this hypothesis, and most of the studies found support for the hypothesis. However, there has been a lack of research in relation to Japanese firms. Deepening the research on Japanese firms enables us to compare Japanese firms with firms in other countries such as the United States and Europe and thus to contribute to the literature. Moreover, since export and FDI are important channels of economic growth, research on how they are determined and how they can be promoted could provide policy implications for growth of the Japanese economy. This research project, applies new perspectives and methodologies to firm-level datasets for Japanese firms, and aims to contribute to both the academic literature and policies. In 2009, the project continues to engage in theoretical and empirical research on internationalization of firms based on theory of trade with firm heterogeneity. In particular, in order to analyze the internationalization of Japanese firms in and after the global financial crisis, we examine issues such as the impact of internationalization on domestic employment, the legitimacy of policies to foster export industries, complementarity between firms' internationalization, performance, and R&D activities, and structural changes in export industries since the crisis.

#### <Major Research Results>

##### Discussion Papers

- Intra-firm Trade and Contract Completeness: Evidence from Japanese affiliate firms (MATSUURA Toshiyuki and ITO Banri) (DP No. : 09-E-026)
- Firm Heterogeneity and FDI with Matching Frictions (SATO Hitoshi) (DP No. : 09-E-025)
- Firm Heterogeneity and the Choice of Internationalization Modes: Statistical evidence from Japanese firm-level data (WAKASUGI Ryuhei and TANAKA Ayumu) (DP No. : 09-E-024)
- Quantitative Evaluation of Determinants of Export and FDI: Firm-level evidence from Japan (TODO Yasuyuki) (DP No. : 09-E-019)

### III-11) Change in the Order among Big Powers and Japanese Diplomatic Issues

Project Leader: NAKANISHI Hiroshi, FF

#### <Overview>

Events occurring during 2008 and 2009 point to the advent of the most significant juncture in the restructuring of the international order since the end of the Cold War. These events include the launch of a new U.S. administration, changes taking place in China since the Beijing Olympics, and the resurrection of Russian diplomacy in the sphere of its influence. On the other hand, Japan's efforts to restructure its domestic order have lost speed and momentum, and Japan can be expected to continue to experience turmoil in its internal politics for some time to come. While Japan will have to engage in more fundamental discussions once the internal turmoil has settled, there is a need to analyze the ongoing changes in the international environment and to adopt diplomatic policies that correspond to these changes. This project suggests that the global international order has entered a period of change during 2008 and 2009, and seeks to identify the essential features of this change. The project also considers, on a very fundamental level, the question of how Japanese diplomacy should respond to these changes. Efforts will be made to formulate recommendations on practical policy issues as needed. (We believe that substantial discussion of changes occurring in the East Asian circumstances will become possible after the second half of 2009.)

### III-12) The Environment and Trade

Project Leader: YAMASHITA Kazuhito, SF

#### <Overview>

It has been pointed out that environmental problems and international trade are closely linked. In the past, trade disputes related to the "environment and trade" have frequently occurred within the GATT/WTO framework. The GATT panel ruling in the "dolphin and tuna case" was the first GATT ruling ever to be reported on the front page of the New York Times. Environmental groups upset with this ruling took to the streets to demonstrate against globalization. Under pressure from demonstrators, the WTO Ministerial Conference held in Seattle in 1999 ended in failure. As symbolized by these events, environmental groups began to criticize GATT/WTO during the 1990s, claiming that GATT/WTO undermined environmental interests and that trade liberalization leading to economic expansion would further contribute to environmental destruction. During the presidential election, President Obama advocated the adoption of a series of new rules in free trade agreements and for the WTO to prevent companies from gaining competitive power by sacrificing and degrading the environment. It is highly likely that debates concerning the issue of "environment and trade," which have been generally subdued in the past, will emerge as a central issue in WTO negotiations beginning next year. This project will consider "environment and trade" which is one of the key issues in international trade from a comprehensive and interdisciplinary approach, taking into account the perspectives of both law and economics.

#### <Major Research Results>

##### Discussion Papers

- Proposals for the Environment and Trade to the WTO (YAMASHITA Kazuhito) (DP No. : 09-J-030)
- Economic Analysis of the Environment and Trade (2)—Cross-border or global environmental problems and trade (YAMASHITA Kazuhito) (DP No. : 09-J-029)
- Economic Analysis of the Environment and Trade (1)—Environmental policies and trade policies (YAMASHITA Kazuhito) (DP No. : 09-J-028)
- Legal Analysis of the Environment and Trade (YAMASHITA Kazuhito) (DP No. : 09-J-027)

## Introduction of Research Projects

**III-13) Study on Business Strategy and Rules for Globalization in the Energy Business Sector**

Project Leader: SHIRAIISHI Shigeaki, SF

**<Overview>**

Thus far, this project has examined economic globalization as a multiple game and has identified its realities and challenges with the intent of developing effective policy recommendations for productivity improvement in the context of economic globalization. Building on these results, we will study the specific developments in the re-organization of European electric power and gas businesses through cross-border M&A from the perspective of business strategies. In addition, while taking into account the responses of the European Commission and member states to these developments, we will examine what may be considered to be a desirable framework for such rules. This project will be undertaken jointly with the OECD/IEA.

**<Major Research Results>**Report

Business Strategy and Rules for Globalization in the Energy Business Sector: Considerations on the re-organization of European electricity and gas industry and policy perspectives (SHIRAIISHI Shigeaki)

**III-14) Study of the U.S. Foreign and Security Policy under the Obama Administration**

Project Leader: KUBO Fumiaki, FF

**<Overview>**

The Obama administration faces a number of extremely serious and substantial problems both domestically and in the field of foreign policy. Foreign policy issues start with Iraq and Afghanistan but extend to North Korea, Iran, Israeli-Palestinian relations, and developments in Pakistan. However, these are but a sample of the urgent foreign policy issues facing the Obama administration. The purpose of this project is to elucidate the direction of U.S. foreign and security policies under the Obama administration by focusing on the foreign policy philosophies of policy makers. A review of the foreign and security policy staff of the Obama administration seems to reveal the following at the present time. The most left-leaning elements of the Democratic Party adhering to left and anti-war positions have been basically excluded and the staff is centered on moderates. Moreover, efforts have been made to include moderate Republicans and realists, such as Robert Gates and Brent Scowcroft. The project will aim to develop a fuller understanding of basic foreign policy positions reflected in these appointments. The project will also aim to deepen its analysis of specific policy areas, such as Asia, the Middle East and nuclear non-proliferation.

**III-15) Examination of Investments in China by Japanese Firms**

Project Leader: SHIBOTA Atsuo, SF

**<Overview>**

In the past, the Japanese business community tended to view China and its rapidly expanding economy as a threat. However, this is now being replaced by the view that the vitality of the Chinese economy can be effectively utilized to energize Japanese firms. The economic ties between Japan and China are being strengthened and Japanese-affiliated firms are upgrading the level of their commitment to China. But this implies that Japanese-affiliated firms will become increasingly susceptible to events and changes occurring in the Chinese economy. With this in mind, Japanese-affiliated firms are becoming keenly aware of China-related risks even as they increase their business exposure to China. The purpose of this project is to survey such current conditions in Japan-China economic relations from the perspective of foreign direct investment. First, developments in Japan-China investment will be surveyed in chronological order, followed by an analysis of Japanese foreign direct investment in China during 2007 and 2008. Next, Japan's position in China's total incoming foreign direct investment will be examined and a number of issues pertaining to foreign direct investment in China will be examined. Finally, we intend to make some projections concerning the future of Japan-China investment relations and will review some specific matters on the Chinese side that need to be understood in order to ensure smooth implementation of investment activities by Japanese-affiliated firms in China.

**<Major Research Results>**Policy Discussion Papers

➤ Japanese Companies' Investments in China (SHIBOTA Atsuo) (PDP No. : 09-P-004)

Publications

"Direct Investment in China by Japanese Companies," written by SHIBOTA Atsuo, Sanwa Shoseki, December 2009



### III-16) Research on the Internationalization of Corporate Activities and Competitiveness

Project Leader: YASHIRO Naomitsu, CF

#### <Overview>

The globalization of economic activity and the rapid catch-up of developing countries such as China and India have brought about a drastic change to Japan's economy and its enterprises. Japan needs to further intensify efforts to internationalize its economy and industry in order to utilize globalization as an opportunity to promote the development of Japanese firms and the economy as a whole. Previous studies have shown that firms engaged in exports or foreign direct investments enjoy higher performance than those that constrain their activities to the domestic market. This research aims to observe the internationalization of firms, not only by their trade or offshore production but from broader perspectives such as their innovation activities, to clarify the mechanism through which internationalization shapes such advantage. It also aims to provide a policy recommendation for the internationalization and growth of broader Japanese firms including small and medium enterprises.

#### <Major Research Results>

RIETI - Kyoto University Policy Symposium

"Diversity, Internationalization and Innovation: The new perspective of small and medium enterprise policy" (2010/2/15)

#### Other Research Results in Domain III

##### <Research results independent from any research project>

RIETI Special Seminar

"Global Economic Crisis and China—Structural change and future of RMB" (2009/10/08)

International Conference

"Institution Building in Asia for Peace and Development" (2009/8/28)

##### < Research results belonging to research projects prior to fiscal 2008>

Project Title: Trade, the Environment, and Food Safety Project Leader: JINJI Naoto, former FF

Discussion Papers

➤ An Economic Theory of the SPS Agreement (JINJI Naoto) (DP No. : 09-E-033)

Project Title: The Rise of China and the Transformation of the East Asian Regional Order Project Leader: SHIRAIISHI Takashi, former FF

Discussion Papers

➤ Rise of China and Its Neighborhood Diplomacy—Implications for Japanese foreign policy (TAKAHARA Akio) (DP No. : 09-J-012)

Project Title: Current Status of and Prospects for the Multilateral Trade System Project Leader: KOTERA Akira, FF

Publications

"The Future of Multilateral Trading System: East Asian Perspectives," edited by KOTERA Akira, ARAKI Ichiro and KAWASE Tsuyoshi, CMP Publishing, December 2009



III-16) Research on the Internationalization of Corporate Activities and Competitiveness  
 RIETI - Kyoto University Policy Symposium  
 "Diversity, Internationalization and Innovation: The new perspective of small and medium enterprise policy" (2010/2/15)

## IV

**Compilation of the History of Japan's Trade and Industry Policy**

Knowledge of the history of trade and industry policy provides the foundation for formulating future economic and industrial policy. RIETI is undertaking comprehensive, systematic research to compile Japan's history of trade and industry policy, seeking cooperation from external experts including economists and historians.

## Introduction of Research Projects

**IV-1) Compilation of the History of Japan's Trade and Industry Policy**

Project Leader: ODAKA Konosuke, Editor in Chief, HJTIP

**<Overview>**

This research project will compile the history of trade and industry policy in the late-20th century, with a particular focus on the period from 1980 to 2000, incorporating not only objective facts but also such areas as analytical and evaluative observations concerning the policy-making and implementation processes, effects on industrial and economic conditions that necessitated the formulation of certain policy, realization of intended policy goals, and industrial and economic conditions following policy implementation.

This history of trade and industry policy will consist of 12 volumes. Volume 1 will present a general overview with chapters dedicated to specific time periods, while the remaining 11 volumes (arranged similarly to the organizational structure of the Ministry of International Trade and Industry) will provide detailed accounts of different policy fields with chapters organized by policy theme. The compilation is slated for completion by March 2011.

**<Project Leadership and Staff>**

The project will be carried out under the leadership of the Committee on the History of Japan's Trade and Industry Policy (HJTIP Committee, Chairman: Editor in Chief; Committee Members: Deputy Chief Editors; Coordinating Lead Authors; Representative from METI) set up within RIETI.

List of HJTIP Committee Members

Editor in Chief ODAKA Konosuke (Professor Emeritus, Hitotsubashi University / Professor Emeritus, Hosei University)  
 Deputy Chief Editors TAKEDA Haruhito (Professor, Graduate School of Economics, the University of Tokyo)  
 NAKATA Tetsuo (Professor, Graduate School of Business, Doshisha University)  
 MATSUSHIMA Shigeru (Professor, Graduate School of Management of Science and Technology, Tokyo University of Science)

Coordinating Lead Authors (one designated for each volume)

- Vol. 1 General Overview  
ODAKA Konosuke (Professor Emeritus, Hitotsubashi University / Professor Emeritus, Hosei University)
- Vol. 2 Trade Policy  
ABE Takeshi (Professor, Graduate School of Economics, Osaka University)
- Vol. 3 Industrial Policy  
OKAZAKI Tetsuji (Professor, Graduate School of Economics, the University of Tokyo)
- Vol. 4 Distribution Policy / Consumer Administration  
ISHIHARA Takemasa (Professor, School of Business Administration, Kwansai Gakuin University)
- Vol. 5 Environment, Location, and Safety Policy  
TAKEDA Haruhito (Professor, Graduate School of Economics, the University of Tokyo)
- Vol. 6 Basic Industries  
YAMAZAKI Shiro (Professor, Faculty of Urban Liberal Arts, Tokyo Metropolitan University)
- Vol. 7 Machinery and Information Industries  
HASEGAWA Shin (Vice President and Professor of School of Business, Aoyama Gakuin University)
- Vol. 8 Consumer Goods Industries  
MATSUSHIMA Shigeru (Professor, Graduate School of Management of Science and Technology, Tokyo University of Science)
- Vol. 9 Industrial Science and Technology Policy  
SAWAI Minoru (Professor, Graduate School of Economics, Osaka University)
- Vol. 10 Natural Resources and Energy Policy  
KIKKAWA Takeo (Professor, Graduate School of Commerce and Management, Hitotsubashi University)
- Vol. 11 Intellectual Property Policy  
NAKAYAMA Nobuhiro (Professor Emeritus, the University of Tokyo / Professor, Organization for the Strategic Coordination of Research and Intellectual Property, Meiji University)
- Vol. 12 Small- and Medium-sized Enterprise Policy  
NAKATA Tetsuo (Professor, Graduate School of Business, Doshisha University)

**<Major Activities in fiscal 2009>**

- Held meetings of the HJTIP Committee
- Examined the first draft of the final report and organized peer review meetings (METI officials from each of the relevant bureaus were invited to the meetings for discussion)
- Exchanged opinions with those who were engaged in the planning and implementation of trade and industrial policy
- Collected data, etc.

## Institutions Related to Financial and Labor Markets, and New Corporate Law and Governance

RIETI will research the development of new economic institutions which allow for both risk-taking and stable growth.



### Introduction of Research Projects

#### A-1) Study Group on Changes in Financial and Industrial Structures

Project Leader / Sub-Leader: WATANABE Tsutomu, FF / UESUGI Ichihiro, CF

##### <Overview>

##### 1) Research project on financial and industrial networks

This project focuses on inter-firm as well as bank-firm networks, empirically examines their development over time, and evaluates their impact on economic activities including firm performance. We employ a unique firm-level database that identifies inter-firm and bank-firm networks for analysis. Current research interest of the project members is on the changes in these networks incurred by the recent economic downturn with a focus on: the effect of government interventions in the credit market on bank-firm relationships, the efficiency of the decision making process of financial institutions, and the impact of credit scoring loans which have been introduced by major financial institutions.

##### 2) Research project on price and wage dynamics

The inflation rate in Japan was close to zero even during the bubble period in the late 1980s but has remained below zero since the latter half of the 1990s. This clearly suggests that the nature of the inflation process has changed in a manner that has made high inflation less likely than in the 1960s and 70s. The purpose of this project is to study the causes and implications of such a change in the inflation process. The key idea is that a decline in the inflation rate at the macro level should be closely related to changes in firms' microeconomic behavior. Based on this understanding, we will employ high frequency scanner data to investigate changes in firms' price setting behavior, and then look into its implications for the Phillips curve relationship. This year we will focus on the analysis of deflation over the last ten years using micro price data.

##### <Major Research Results>

##### Discussion Papers

- The Current Status of SME Financing under the Financial Crisis: A summary of the Survey on the Status of Transactions between Businesses and Financial Institutions (Feb. 2008) and the Survey on the Status of Transactions between Businesses and Financial Institutions following the Financial Crisis (Feb. 2009). (UESUGI Ichihiro, UCHIDA Hiroshi, OGURA Yoshiyuki, ONO Arito, Peng XU, TSURUTA Daisuke, NEMOTO Tadanobu, HIRATA Hideaki, YASUDA Yukihiro, YAMORI Nobuyoshi, WATANABE Wakou and HOTEL Masaki) (DP No. : 09-J-020)
- Residential Rents and Price Rigidity: Micro structure and macro consequences (SHIMIZU Chihiro, NISHIMURA Kiyohiko G., and WATANABE Tsutomu) (DP No. : 09-E-044)
- Customer Relationships and the Provision of Trade Credit during a Recession (TSURUTA Daisuke) (DP No. : 09-E-043)
- Employment and Wage Adjustments at Firms under Distress in Japan: An analysis based upon a survey (ARIGA Ken and KAMBAYASHI Ryo) (DP No. : 09-E-042)
- Redistributive View of Trade Credit Revisited: Evidence from micro data of Japanese small firms (OGAWA Kazuo, Elmer STERKEN and TOKUTSU Ichiro) (DP No. : 09-E-029)
- Do Banks Have Private Information? Bank screening and ex-post small firm performance (HOSONO Kaoru and Peng XU) (DP No. : 09-E-016)
- Financial Crisis, Firm Dynamics and Aggregate Productivity in Japan (HOSONO Kaoru) (DP No. : 09-E-012)

## Introduction of Research Projects

**A-2) Empirical Analysis of Japan's Labor Market: Policy responses to fertility decline and population aging**

Project Leader: KAWAGUCHI Daiji, FF

**<Overview>**

This project covers the following six themes:

- 1) Figuring out the basic facts of Japan's labor markets;
- 2) Analysis of factors affecting the proliferation of non-regular employment;
- 3) Impact of non-regular employment on career development of young people and its welfare implications;
- 4) Theoretical and empirical analysis of the impact of long-term employment systems on corporate productivity;
- 5) Theoretical and empirical analysis of the impact of increased mobility in labor markets on corporate productivity; and
- 6) Empirical analysis of the use of non-regular employees based on corporate personnel data.

First, the basic facts of Japan's labor markets in recent years will be figured out using large-scale government statistics. Next, the project will focus on the proliferation of non-regular modes of employment, and will analyze the cause of its increase as well as the impact of this trend on young people's career development and related welfare implications. The project will evaluate how the shortening of the average years of employment caused by non-regular employment affects corporate productivity. Furthermore, the project will verify theoretically and empirically how greater labor mobility reduces employment mismatching and improves productivity. Finally, corporate personnel data will be used in analyzing the use of non-regular employees and their promotion to regular employee status.

**<Major Research Results>**Discussion Papers

- Volatility of Firm Performance and Atypical Employment: An empirical analysis using firm-level data (MORIKAWA Masayuki) (DP No. : 10-J-023)
- Do Education Vouchers Prevent Dropouts at Private High Schools? Evidence from Japanese policy changes (AKABAYASHI Hideo, ARAKI Hiroko) (DP No. : 10-J-016)
- Is Minimum Wage an Effective Anti-poverty Policy in Japan? (KAWAGUCHI Daiji and MORI Yuko) (DP No. : 09-E-032)

RIETI Policy Symposium

"Working Hours Reform in Japan" (2009/4/2)

**A-3) Economic Analysis of Organizations and Institutions: The design of organizations and institutions to enhance corporate performance and growth**

Project Leader: TSURU Kotaro, SF

**<Overview>**

The Japanese economy experienced a fifteen-year period of adjustment following the collapse of the bubble economy. As it now attempts to take off toward new frontiers, Japan needs to adopt organizational and institutional designs that will heighten and promote the potential growth and the process of innovation. In so doing, as a more essential requirement for the improvement of corporate innovation and therefore corporate performance, it is important to fundamentally review corporate organizational structures, the status of human resources, and the systems and institutions that function as the infrastructure of markets. This project starts by focusing on corporate mergers and acquisitions, which intensify in recent years, to more fully examine the following questions: 1) What are the motives and intent of M&A activities? and 2) Are the initially anticipated effects of M&A realized, and does corporate performance actually improve after the completion of corporate reorganization? In addition, countermeasures to hostile take-over bids and their implications will also be analyzed.

**<Major Research Results>**Discussion Papers

- Do Mergers Improve Corporate Performance? Analysis of corporate activities based on joint RIETI/METI survey (TAKIZAWA Miho, TSURU Kotaro and HOSONO Kaoru) (DP No. : 09-J-005)
- Mergers, Innovation, and Productivity: Evidence from Japanese manufacturing firms (HOSONO Kaoru, TAKIZAWA Miho and TSURU Kotaro) (DP No. : 09-E-017)

#### **A-4) Research into Measures to Provide Efficient Public Services by Means of Government and Private-sector Collaboration, Premised on Small Government**

Project Leader: YAMAUCHI Naoto, FF

##### **<Overview>**

Given the advent of an aging society with a declining population, plus major structural changes in the form of globalization and the intensification of international competition, in order to maintain economic vitality and to keep the size of the public sector within a scope that is sustainable, it is essential to implement reform toward establishing "small government." Our research activities will include the categorization of the forms of public-private partnership (PPP) such as private finance initiative (PFI), the designated administrator system, and market testing; the conduct of quantitative verification of the effects of reductions in fiscal expenditure; and the conduct of analyses of introduction incentives, including by means of surveys of local government bodies and non-profit organizations (NPOs). In this way we will put forward suggestions on how to shape policies for achieving efficient public services in Japan through PPP.

##### **<Major Research Results>**

###### Policy Discussion Papers

➤ Economic Analysis of Public-Private Partnerships (YAMAUCHI Naoto, SUZUKI Wataru, MATSUNAGA Yoshiho, HOTTA Satoko, IWATA Kenji, ISHIDA Yu and OKUYAMA Naoko) (PDP No. : 09-P-003)

#### **A-5) The Frontier of Corporate Governance Analysis: Evolution of the corporate system in Japan and the impact of the world financial crisis**

Project Leader: MIYAJIMA Hideaki, FF

##### **<Overview>**

This project aims to examine the most urgent and crucial issues on corporate governance in Japanese firms. In this project, we will primarily focus on: the causes and effects of increasing foreign institutional shareholders and the unwinding of cross shareholding, redesigning a contingent governance structure following the collapse of the main bank system, clarifying the complementary or substitutional relationship between internal- and external- governance, the control over business units or subsidiaries following the introduction of the holding company system, the regulation of financial institutions, and the theoretical reexamination of the complementarity of the various sub systems involved in corporate governance. By examining these topics, we are expecting to comprehensively clarify corporate governance in Japan which is now characterized as the hybridization or rather combination of two different modes of relationships: market-based governance and relationship-based organizational structures. In this project, we also try to address the impact of the world financial crisis on the evolution of corporate governance in Japan. The research results of our team will be published by the end of autumn 2010.

##### **<Major Research Results>**

###### Discussion Papers

➤ Main Bank Relationships in Japan: From monitoring to risk hedging (HIROTA Shinichi) (DP No. : 09-J-023)

➤ Pluralistic Evolution of the Japanese-Style Enterprise System: Toward the hybrid model (MIYAJIMA Hideaki) (DP No. : 09-J-017)

➤ Stakeholder-oriented Corporate Governance and Firm-specific Human Capital: Wage analysis of employer-employee matched data (ODAKI Kazuhiko and KODAMA Naomi) (DP No. : 10-E-014)

➤ Equity Markets and Institutions: The case of Japan (Julian FRANKS, Colin MAYER and MIYAJIMA Hideaki) (DP No. : 09-E-039)

###### Project URL

Developing the Research Frontier in Corporate Governance (<http://www.rieti.go.jp/jp/projects/cgp/index.html>)

#### **A-6) Changes in the Socioeconomic Structure and Tax Reform**

Project Leader / Sub-Leader: IWAMOTO Yasushi, FF / HASHIMOTO Kyoji, FF

##### **<Overview>**

Faced with the challenges of aging, globalization, global environmental issues and growing disparities, Japan's socio-economic structures are undergoing significant changes that necessitate fundamental reforms in the tax system. With this awareness, this project has utilized developments in tax theory to consider appropriate tax systems that correspond to socio-economic structural changes from a medium- to long-term perspective. During the current fiscal year, the project will expand upon the analysis undertaken in the previous year and will also take up new analytical issues. Specifically, the following critical issues will be considered and research themes will be selected from areas where academic contributions can be made: the relation between social security and taxation in an aging society; capital gains taxation in an environment of economic globalization; and systems of local taxation corresponding to advances in decentralization. Currently, the project has adopted four research themes:

- 1) Analysis of transfer and incidence of corporate taxes;
- 2) Economic impact of tax-based public pension systems: Simulation analysis using multi-sector overlapping generations model;
- 3) Analysis of social security and taxation; and
- 4) Local taxation corresponding to changes in socio-economic structures: In light of the relation between local taxes and local allocation taxes.

## Introduction of Research Projects

**A-7) Reform of Labor Market Institutions**

Project Leader: TSURU Kotaro, SF

**<Overview>**

In order to study a new “form” for Japan’s labor market institutions, and types of reform, we will organize a study group that will conduct theoretical and empirical research from various perspectives such as law, economics and management. While looking broadly at labor market institutions as a whole, we will also look into the interrelationships of each constituent part, and in particular will make suggestions regarding a comprehensive system of labor laws from a standpoint that transcends vertical segmentation and boundaries. When conducting our analysis we will fully embrace international viewpoints and methods of analysis, including experiences from Europe and elsewhere, and will attempt to elucidate the relationships between labor laws and institutions and the labor market and employment systems, and in turn the relationship (including the issue of non-regular employment) with economic performance.

**<Major Research Results>**Discussion Papers

- Measuring Social Exclusion of Non Regular Workers in Japan (KUME Koichi, OHTAKE Fumio, OKUDAIRA Hiroko and TSURU Kotaro) (DP No. : 10-J-025)
- Institutional Reform of Working Hours from a Workplace Standpoint: With a focus on incorporated national universities (KOJIMA Noriaki) (DP No. : 10-J-017)
- Legislative Issues of the Working Hours System for White Collar Workers (SHIMADA Yoichi) (DP No. : 10-J-015)
- Working Hours Reform: A bird's-eye perspective (TSURU Kotaro) (DP No. : 10-J-014)
- Is Work Sharing Effective? (KAWAGUCHI Daiji and TSURU Kotaro) (DP No. : 10-J-013)
- Legal Issues of Working Hours and the Direction of Reforms (MIZUMACHI Yuichiro) (DP No. : 10-J-012)
- Working Hours, Management, and Workers: What kinds of people in what kinds of companies feel their working hours are becoming longer? (MORISHIMA Motohiro) (DP No. : 10-J-011)
- Working Hours Policy From an Economics Standpoint (HIGUCHI Yoshio) (DP No. : 10-J-010)
- White Collar Exemption and Working Conditions: Impact of overtime regulations on hours worked and hourly wages (KURODA Sachiko and YAMAMOTO Isamu) (DP No. : 09-J-021)
- How are Hours Worked and Wages Affected by Labor Regulations?: The white-collar exemption and “name-only managers” in Japan (KURODA Sachiko and YAMAMOTO Isamu) (DP No. : 09-E-031)

Policy Discussion Papers

- How Long Do Japanese Work?—A comparison before and after the shorter work week (KURODA Sachiko) (PDP No. : 10-P-002)
- Effect of the White Collar Exemption in the Japanese Labor Market (KURODA Sachiko and YAMAMOTO Isamu) (PDP No. : 10-P-001)

Publications

“*Working Hours Reform: How to change the way Japanese work*”, written and edited by TSURU Kotaro, MIZUMACHI Yuichiro and HIGUCHI Yoshio, Nihon Hyoronsha Co., Ltd., March 2010

RIETIPolicy Symposium

“Working Hours Reform in Japan” (2009/4/2)

Project URL

Employment Crisis: A prescription for overcoming it ([http://www.rieti.go.jp/jp/projects/employment\\_crisis/index.html](http://www.rieti.go.jp/jp/projects/employment_crisis/index.html)) (Japanese)



A-7) Reform of Labor Market Institutions  
RIETI Policy Symposium  
“Working Hours Reform in Japan” (2009/4/2)

## A-8) Study of a Self-supporting Regional Economic System

Project Leader: NAKAMURA Ryohei, FF

### <Overview>

Achievement of regional economic autonomy in an open system requires abilities to utilize regional resources (comparative advantage), to attract funds into the region (export power), and to prevent the outflow of funds from the region (circulatory capacity). Furthermore, regional economic innovation is required for sustainable autonomy. Adopting this perspective, this project will conduct research focusing on the following three areas:

- 1) Analysis of regional agglomeration capable of achieving autonomy: The question of how to obtain funds from outside the region will be analyzed by considering the relation between the role of supply-side inputs and technological progress. The externalities of the following three major factors which can facilitate agglomeration will be quantitatively analyzed by using industry statistics and other microdata: "leakage of knowledge," "associative effects" and "sharing of factors;"
- 2) Analysis of necessary scale in achieving regional autonomy: The NEG model will be used to examine causal factors in regional disparity undertaken separately for market and supply potential. Furthermore, taking into consideration future possibilities for the adoption of a "doshusei" or regional administrative system, the potential impact of regional integration will be estimated; and
- 3) Endogenous resolution of regional disparities: Disparities among regions should be rectified through endogenous resolution based on exchanges of differences derived from comparative advantage between major metropolitan areas and outlying regions rather than relying on the implementation of policies that are exogenous to the region. One source of comparative advantage for the regions would be environmental assets. The project will use the NEG model to undertake simulation analysis and to identify relevant policy implications.

### <Major Research Results>

#### Discussion Papers

- Spatial Structure of Cities and Distribution of Retail Sales—Analysis based on a potential NEG model (NAKAMURA Ryohei and TAKATSUKA Hajime) (DP No. : 09-J-022)

## A-9) Enterprise Law Project—Institutional complementarities among markets and laws

Project Leader: SHISHIDO Zenichi, FF

### <Overview>

A firm is an incentive mechanism among those indispensable capital providers, i.e., shareholders and creditors as monetary capital providers, and management and employees as human capital providers. Markets and laws are two significant aspects of the infrastructure of the incentive bargaining of a firm. It is important to note that the law does not by itself affect the incentive bargaining among those four players, but rather affects it complementarily through markets. Also a specific law in many cases would not affect incentive bargaining independently, but rather complementarily through laws. The objectives of this project are to reconstruct legal systems such as the enterprise law, which affect the incentive bargaining of a firm, and to stimulate efficient incentive bargaining at the firm level.

### <Major Research Results>

#### Project URL

Enterprise Law as a Structure for Incentives ([http://www.rieti.go.jp/jp/projects/enterprise\\_law/index.html](http://www.rieti.go.jp/jp/projects/enterprise_law/index.html))

## A-10) Study of Entrepreneurs and Latent Entrepreneurs

Project Leader: YASUDA Takehiko, FF

### <Overview>

The level of entrepreneurial activity in Japan, as measured in terms of the start-up ratio, has increased slightly since the start of the 21st century, but still remains at the lowest level in international comparisons. Given the important link between entrepreneurial activity and innovation, the current situation needs to be rectified as quickly as possible. With this in mind, the government has introduced policy lending programs and various other measures to increase start-ups. Though such policy measures should presumably be based on the information like conditions affecting entrepreneurship and obstacles to the start-ups, not enough is known in Japan compared to the U.S. and Europe due to data constraints. In particular, almost nothing is known about "latent entrepreneurs" whose behavior determines the future level of a country's entrepreneurial activities. The purpose of this project is to investigate the current conditions of entrepreneurs and latent entrepreneurs in Japan. The microdata obtained from the investigation will be used in statistical analysis to determine how the level of entrepreneurial activity can be raised and where current problems and obstacles lie.

### <Major Research Results>

#### Discussion Papers

- Business Startups: An analysis of selection and post-startup performance (YASUDA Takehiko) (DP No. : 10-J-020)
- Firm Size and Business Startup Reasons of Japanese Workers (TSUCHIYA Ryuichiro) (DP No. : 10-E-012)

## Introduction of Research Projects

**A-11) Theoretical Examination of Climate Change Policy under Open Economies**

Project Leader: ISHIKAWA Jota, FF

**<Overview>**

Signatories of the Kyoto Protocol are considering and implementing various policies to achieve their reduction goals. Recently, there has been considerable activity in developing a new framework for after the first commitment period. Representative policies for countering global warming include emissions taxes and emissions quotas. These two policies generally yield equivalent results in a closed economy. However, recent theoretical research indicates that equivalency is not achieved in an open economy (for example, see Kiyono and Ishikawa, 2004 and Ishikawa and Kiyono, 2006). Particularly important is the problem of carbon leakage, which points out that while greenhouse gas reduction policies in one country may reduce that country's emissions, this may indirectly increase emissions in other countries. Furthermore, it cannot be said that adequate theoretical research has been conducted concerning the combination of emissions trading and emissions quotas. While emissions trading systems have been tried on various levels, with the exception of the EU, the establishment of large-scale emissions trading systems has been delayed. The purpose of this project is to examine and to gain new perspectives on issues related to the carbon leakage problem and emissions trading systems particularly within the framework of an open economy.

**<Major Research Results>**Discussion Papers

- Environmental Product Standards in North-South Trade (ISHIKAWA Jota and OKUBO Toshihiro) (DP No. : 10-E-011)
- Greenhouse-gas Emission Controls and International Carbon Leakage through Trade Liberalization (ISHIKAWA Jota and OKUBO Toshihiro) (DP No. : 09-E-008)

**A-12) The Design of an International Institution to Prevent Global Warming**

Project Leader: FURUSAWA Taiji, FF

**<Overview>**

It has proven difficult to take effective and concerted international action against global warming because of different interpretations of the mechanisms of global warming and because countermeasures require current generations to "sacrifice" themselves for future generations. Under these conditions, it is not enough for the international cooperative framework to include retaliatory and punitive provisions. Rather, it becomes necessary to maintain an incentive for cooperation by making a moral appeal. Hudec (1990) states that compliance with GATT laws is based on the two factors of "moral and political response to international obligations" and the "threat of retaliatory measures." The purpose of this project is to theoretically explore cooperation promoting systems that are based on the soft and hard imperatives of moral action and retaliation. As has been pointed out with respect to the Kyoto Protocol, building a mechanism to tackle global warming involves a free-rider problem. Issues related to participation in cooperative initiatives as examined by Maruta and Okada (2005) and Furusawa and Konishi (2008) will be taken into account in developing our model. Environmental policies (such as a carbon tax) and trade policies (such as import tariff) must be simultaneously considered in designing international systems to prevent global warming. A crucial issue in policy choice involves the question of whether optimal contracts will bind both environmental and trade policies or either of the two. The project will also consider these choices in light of Horn, Maggi and Staiger (2006).

**A-13) Empirical and Internationally Comparative Institutional Analysis of the Forms of Administrative and Financial Systems for Utilizing Infrastructure Assets to Invigorate Local Economies in an Era of Decentralization and International Competition: A study of the administrative and financial systems and governance systems in operation at regional ports**

Project Leader: AKAI Nobuo, FF

**<Overview>**

The maturation of society and the diversification of needs have made it necessary for Japan to adopt institutional reforms that will allow local governments to manage their administrative and fiscal systems more efficiently under their own discretion and responsibility. Such reforms require the proper division of functions and roles between central and local governments, governance by the citizens and administrative accountability, and the appropriate re-assignment of functions between the private and public sectors. In this context, ports and harbors constitute infrastructure assets with an important role to play in local economic management. However, this is an area where the division of functions between central and local governments remains ambiguous. Sufficiently flexible administrative and fiscal systems that would allow local governments, acting alone or in cooperation, to manage such facilities under their own discretion and responsibility for the purpose of revitalizing their local economies have yet to be developed. From a fiscal perspective, ports and harbors have been constructed under the financial supports of the central government's Port Development Special Account. However, to date, no analysis has been undertaken on the following matters: survey of the theoretical treatment of the impact of disbursements from special accounts; detailed review of the financial statements of the Port and Harbor Development Special Account; estimation of the potential redistribution effect of transfers to individual ports and harbors; and the impact of the central government's port and harbor development subsidies on ex-post management efficiency of regional ports and harbors. Adequate accounting indicators have not been developed for the financial accounting of regional ports and harbors. As a result, local citizens have not been provided with a full explanation of how these facilities are managed and operated (lack of accountability). Adequate theoretical and empirical analysis has not been conducted on how lack of accountability and government regulation of ports and harbors impacts modes of ownership, inter-regional cooperation, the operational efficiency of regional ports and harbors, and forward-looking activities of local governments. In this project, we adopt a different approach from past studies to examine various aspects of administrative and fiscal systems that would be conducive to efficient management of regional ports and harbors and to the revitalization of local economies.

**<Major Research Results>**Discussion Papers

- Financial Analysis of the Efficient and Effective Development and Operation of Ports and Harbors: Structural analysis of development, regulation and operation (AKAI Nobuo, UEMURA Toshiyuki, SAWANO Koichiro, TAKEMOTO Toru and YOKOMI Muneki) (DP No. : 09-J-010)

### A-14) Globalization, Innovation, and Competition Policy

Project Leader / Sub-Leader: KAWAHAMA Noboru, FF / OHASHI Hiroshi, FF & NISHIGAKI Atsuko, SF

#### <Overview>

Over the past few years, interest in competition policy based on the enforcement of anti-monopoly laws has grown very rapidly throughout Asian countries and other parts of the world. Faced with a new market environment characterized by economic globalization, countries throughout the world are being forced to radically change their positions on competition policy and the management of such policies based on competition laws. In the case of Japan, the role of the competition policy is becoming increasingly important because maintaining economic vitality under conditions of declining fertility and an aging population requires the promotion of innovation through the full utilization of market competition. The purpose of this project is to examine the competition policy in an environment where globalization and innovation have gained critical importance. This project will comprehensively examine the competition policy from the perspectives of law, economics and government administration, while taking into account related developments in other countries.

#### <Major Research Results>

##### Discussion Papers

➢Evaluating the Merger and its Remedies in a Dynamic Environment: Revisiting the 1970 Yawata-Fuji steel merger (OHASHI Hiroshi, NAKAMURA Tsuyoshi and MYOJO Satoshi) (DP No. : 10-J-021)

### A-15) Supply of Risk Capital in Japan and Related Policy Issues

Project Leader / Sub Leader: MURAMOTO Tsutomu, FF / YOSHINO Naoyuki, FF

#### <Overview>

The purpose of this project is to examine, from a policy perspective, how risk capital can be supplied to small and medium enterprises (SMEs) and local economies during the current financial crisis. Policy evaluation will be conducted with an aim to formulate policy recommendations to the extent possible. With these objectives in mind, the following questions will be analyzed from the perspective of SME-related policies: (1) how can funds be supplied to local economies and to local SMEs in particular? and (2) what should be the source of such funds? Under the existing systems, the supply of risk capital is clearly provided for in locally specific financing programs (relationship banking) in the form of financing and loans for startups. Because certain credit risks cannot be fully covered in indirect financing, efforts have been made to utilize capital funds and hybrid lending (upside return-type financing). However, the scale of these types of funding is extremely small compared to total lending by financial institutions. Under these conditions, it is critically important to analyze the feasibility of supplying risk capital through relationship banking. This project intends to examine the following issues:

- 1) Verification of local funding needs (defining the concept of "local" and gauging funding needs);
- 2) Conditions and effectiveness of funding provided by the Organization for SMEs and Regional Innovation;
- 3) Effectiveness of innovative financing (hybrid financing, securitization, etc.);
- 4) Government involvement in supporting local start-up businesses (role of the government-affiliated financial institutions, interrelation and competition among local financial institutions, etc.);
- 5) Methods essential to the development of relationship banking (intellectual assets as soft information, business evaluation of intellectual assets);
- 6) New types of local initiatives (resident-participatory projects, financial NPOs, nursing care businesses and other schemes for the introduction of private funds); and
- 7) Examination of advanced methods in foreign countries (revenue bonds, etc.).

### A-16) Financial Stability and Economic Structure

Project Leader: GOTO Yasuo, SF

#### <Overview>

The relationship between finance and the real economy has been one of the long-term discussion topics among economists. However, in recent times in particular, this relationship has attracted more attention in view of the impact of financial factors on the real economy. This research project aims to empirically analyze the relationship between finance and the real economy, using time-series data and panel data. In doing so, we will focus on financial stability and the like on the side of finance and medium- to long-term factors associated with economic structures on the real economy side.

### A-17) A Study on the Reform of Governance Structure in the 1990s and Transformation of the Parliamentary System

Project Leader: NISHIGAKI Atsuko, SF

#### <Overview>

The political structural reform that took place in Japan in the 90s (election system reform, Diet reform, and administrative reform) was based on the British parliamentary cabinet system (Westminster model). Now, Japan's parliamentary cabinet system is undergoing an overhaul. However, the formation process of the parliament and the legislation process are very different between the Parliament of England and Japan's traditional system. Furthermore, there are differences between the countries' two-house systems such as the role of the Parliament (Diet) and the Cabinet. Therefore, in order to move toward the intended direction of structural reform, we have highlighted the remaining areas of the current political system that still require reform. This project aims to point out the remaining issues and analyze the relation between the political mechanism and the basic structure of the parliamentary cabinet system by examining the constitution.

## Introduction of Research Projects

**A-18) International Cooperation for Improving Tax Compliance and How Japan Should Respond**

Project Leader: ISHII Michitoo, SF

**<Overview>**

With the globalization of economic and financial transactions, the use of aggressive tax planning (ATP) schemes using tax shelters in tax havens has become widespread. Needless to say, for countries across the world, ensuring tax compliance has become a very serious issue both in terms of ensuring tax fairness and safeguarding sound national finances. The move to seek international cooperation in this area has gained momentum particularly since 2008, following the revelation of cases of unprecedented international tax evasion and the outbreak of the global financial and economic crisis. In a series of international forums, including Group of Eight (G8) and Group of Twenty (G20) summits, as well as the Organization for International Cooperation and Development (OECD), world leaders and delegates have renewed their recognition of the importance of ensuring tax compliance and corporate governance. As the measures toward achieving that goal, the tax authorities of major countries have come to emphasize the importance of building an “enhanced relationship” with taxpayers that is firmly underpinned by mutual trust and understanding, rather than relying solely on enforcement measures against tax havens and taxpayers. This “enhanced relationship approach” is to improve compliance through the “real time solving” of tax problems in a prior confirmation-and-consent process after securing full disclosure and transparency of underlying transactions. Such an approach has already been adopted by the tax authorities of the United States and some European countries. Their experience has shown that the approach, in addition to contributing to the transparency and efficiency of both tax administration and taxpayers, also helps improve corporate governance through enhanced tax risk management on the part of companies. In Japan, this poses an important issue that should be considered not only by the administrative authorities but also by the whole society, including companies and individuals as well as financial and capital markets, as part of initiatives for improving compliance, efficiency, and transparency. This research project aims to review and identify the significance of these recent moves toward international cooperation in tax compliance and consider how Japan can and should respond in its policies in the future.

**A-19) Research Project on the Design for the Optimum Disclosure System**

Project Leader: KOGA Chitoshi, FF

**<Overview>**

This project aims to establish an optimum disclosure system that ensures accountability of Japanese companies following the adoption of the International Financial Reporting Standards (IFRS). To be specific, in this project, a comprehensive research taking into consideration of both the disclosure system of financial vs. nonfinancial information (rule sector), and the auditing and internal control system (assurance/corporate governance sector) will be conducted to provide a grand design for the optimum disclosure system which best fits the Japanese style of business.

**Other Research Results in Adjacent Basic Research Area A****< Research results belonging to research projects prior to fiscal 2008 >**Project Title: Universities of the Future from Social and Economic Perspectives Project Leader: TAMAI Katsuya, former FFDiscussion Papers

- Empirical Analysis of the Function of the National University System—For appropriate allocation of subsidies (SHIMA Kazunori) (DP No. : 09-J-034)
- Evaluation and Allocation of Resources in Higher Education: The potential and challenges of performance-based funding (TANAKA Hideaki) (DP No. : 09-J-008)
- Internal Governance and Financial Operation of National Universities: Does governance reform after incorporation improve university management? (AKAI Nobuo and NAKAMURA Yoshihiro) (DP No. : 09-J-007)
- Discussion of the Financial Systems of National Universities: Structural analysis of subsidies for operating expenses (AKAI Nobuo, NAKAMURA Yoshihiro and SENOH Wataru) (DP No. : 09-J-006)

# B

## Introduction of Research Projects

### B-1) Searching for Optimal Copyright Protection Levels

Project Leader: TANAKA Tatsuo, FF

#### <Overview>

The development of digital technologies and networks has led to the proliferation of copyright infringement. Robust copyright protection is now viewed as a prerequisite in many types of businesses. From this perspective, it can be argued that stronger protection contributes positively to a knowledge-based economy. On the other hand, new services are being created in areas of weak copyright protection, such as YouTube and search engines, and businesses are emerging from copyright grey zones. This underscores to the argument that copyright restrictions prevent the birth of new industries and businesses. From this perspective, it can be argued that weaker protection stimulates creativity and heightens economic welfare. So, which of these opinions is correct? A critical point in addressing this issue relates to the following question: At current levels of protection, what impact does the burning of personal copies have on the sale of the original product? If there is a serious reduction in sales, it would be better to strengthen copyright protection at the expense of hampering the emergence of new businesses. On the other hand, if sales are not seriously impacted, it would be better to ignore the burning of personal copies and promote the development of new businesses. The purpose of this project is to empirically verify this question. As considerable research has already been done in the area of music software, this project will focus on video content. Specifically, we will examine the extent to which coverage of television programs (animation) and music on YouTube, Nico Nico Douga and Winny negatively affect the revenues of copyright owners. A reduction in revenues could justify the introduction of stronger protection. However, if revenues have not declined, these new services should not be restricted, and from an economic perspective, it would be desirable to capitalize on the new business opportunities created by such services.

### B-2) Economic Analysis of Resource Management in the Fisheries Industry

Project Leader / Sub-Leader: TAKARADA Yasuhiro, FF / MANAGI Shunsuke, FF

#### <Overview>

The purpose of this project is to evaluate the performance and system of fishery resources management, primarily from an economic perspective, with the aim of contributing to the sustained use of Japan's fishery resources. With the reduction in fishery resources and ongoing changes in the international economic environment, the output of Japan's domestic fishery industry has dropped sharply in recent years. This situation calls for the implementation of new measures. This project will carefully examine and analyze the factors contributing to the declining output of Japan's domestic fishery industries in order to evaluate and analyze fishery resources management systems. In the past, Japan's fishery resources have been primarily evaluated and analyzed from the perspective of biological resource management, while limited attention has been paid to the economic perspective. Determining the economic impact of fishery resources management systems will enable the evaluation of various types of systems from an economic perspective, which will contribute to design and formulation of fishery resources management systems. By conducting quantitative evaluation and analysis for use in administrative reform discussions and by developing concrete policy recommendations, this project is expected to help establish new directions in fishery resources management systems with an emphasis on the economic perspective.

#### <Major Research Results>

##### Discussion Papers

- Efficiency of Individual Transferable Quotas (ITQ) Systems and Input and Stock Controls (HIGASHIDA Keisaku and TAKARADA Yasuhiro) (DP No. : 09-E-046)
- Transboundary Renewable Resource and International Trade (TAKARADA Yasuhiro) (DP No. : 09-E-041)
- Capacity Output and Possibility of Cost Reduction: Fishery management in Japan (MANAGI Shunsuke) (DP No. : 09-E-040)

## Introduction of Research Projects

**B-3) Progress in the Introduction of Nuclear Power Generation in East Asia and the Current Situation and Challenges in International Cooperation for Ensuring Nuclear Safety**

Project Leader: SAGARA Nozomi, SF

**<Overview>**

The world is currently in the midst of what has been called a renaissance in nuclear power generation. In the East Asian region, a total of 90 nuclear power plants are presently operating in Japan, China and South Korea. Among such emerging economies as Indonesia, Vietnam and Thailand, plans are moving forward for the introduction of nuclear power plants within seven to thirteen years. As such, nuclear power related policies have advanced to the point where they must be approached from a comprehensive perspective that covers all aspects of a nuclear power program, beginning in the planning stage and extending through to safety regulations in the operational stages. This requirement applies equally to domestic and international programs. Against this backdrop, activities for international policy harmonization in this field have been moving forward on a number of levels involving international organizations and sub-global, regional and bilateral initiatives. This project focuses on the East Asia region and attempts to determine the types of coordinating functions indispensable for international policy harmonization initiatives and the measures that Japan should implement to promote appropriate nuclear power generation introduction plans in the region while ensuring safety.

**<Major Research Results>**Policy Discussion Papers

- Changes in Japan's Atomic Energy Policy and Historical Considerations of International Policy Cooperation: Implications for the introduction of nuclear power generation in the East Asian region (SAGARA Nozomi) (PDP No. : 09-P-002)

**Other Research Results in Adjacent Basic Research Area B****<Research results independent from any research project>**Discussion Papers

- Assessment of Policies of Local Public Corporations to Improve Business Efficiency—The Case of Niigata prefecture's bureau of public enterprise management reform program (Industrial Water Project and Electricity Project) (KAINOU Kazunari) (DP No. : 09-J-026)
- Quantitative Assessment and Analysis of the Household Electricity Rates System (KAINOU Kazunari) (DP No. : 09-J-015)

**< Research results belonging to research projects prior to fiscal 2008>**

Project Title: Economic Analysis of Markets and Networks in Electricity Power Reform Project Leader: HATTA Tatsuo, former FF

Discussion Papers

- Settlement between Electric Transmission Companies under the Point of Connection Tariff or "Postal Stamp" System (HATTA Tatsuo) (DP No. : 09-J-011)



## Compilation of Micro Panel Data on Firm Activities, Trade, Energy, and the Elderly; and Model Building and Operation

Microdata will be reinforced and improvements will be made on model operation in the fields of trade, pensions, energy, and the environment. This will strengthen the necessary infrastructure for RIETI's research.

### Introduction of Research Projects

#### C-1) RIETI Data Management Project

Project Leader / Sub-Leader: TOMITA Hideaki, Research Coordinator / OZAKI Masahiko, SF; KONISHI Yoko, F; Quantitative Analysis and Database Team

##### <Overview>

The data in RIETI's possession can be categorized as follows: data available at relatively low cost, which research institutions would ordinarily be expected to have on hand; large-scale data sets purchased by individual research projects for use in their research; and data generated by these research projects (including the results of questionnaire surveys). The purpose of this project is to develop infrastructure for facilitating a more efficient utilization of these datasets by users. An additional purpose of this project is to serve as a forum for active discussion of related topics within RIETI, with an eye to considering the possibility as well as methods to make these datasets available to both researchers and the public at large as a source of new knowledge. Having accumulated considerable expertise in handling microdata being in the possession of METI, we will also try to create converters for statistics data matching that enable researchers to quickly access and analyze microdata. By enhancing our handling of data, we will be better equipped to deal with the new Statistics Act and improve the existing value and uniqueness of RIETI.

##### <Major Research Results>

Japan Industrial Productivity Database 2009 (JIP 2009) (<http://www.rieti.go.jp/jp/database/JIP2009/index.html>)

Asian Monetary Unit (AMU) and AMU Deviation Indicators (<http://www.rieti.go.jp/users/amu/index.html>)

RIETI-TID (<http://www.rieti.go.jp/jp/projects/rieti-tid/index.html>) (Japanese)

Long-term Inter-industry Input-output Database (<http://www.rieti.go.jp/jp/database/d01.html>) (Japanese)

Project for Quantitative Analysis of Microdata (<http://www.rieti.go.jp/jp/database/d02.html>) (Japanese)

#### C-2) Research and Development for Next Generation Energy Statistics and for Analytical Systems of Supply and Demand Trends

Project Leader: KAINOU Kazunari, F

##### <Overview>

General Energy Statistic for Fiscal Year 2005 and Energy Balances by prefectures for Fiscal 2006, both developed by RIETI, are currently used as official statistics to provide a basis for national energy and environmental policies. However, in recent years, the government has launched new statistical research initiatives to develop statistics on energy consumption in the tertiary industry and statistics on automobile fuel consumption in the transportation sector, whereby a solid and reliable data foundation is being built to enable further improvement of estimation methods. Against this backdrop, RIETI will develop next-generation comprehensive energy statistics and a supply-demand analysis system for adoption in 2012 when the first commitment period under the Kyoto Protocol ends.

#### Other Research Results in Adjacent Basic Research Area C

##### <Research results independent from any research project>

###### Discussion Papers

➤ A Comparison of Japanese and U.S. Nuclear Power Plants in Reactor Operating and Incident Rates (KAINOU Kazunari) (DP No. : 09-J-035)

➤ Household Consumption and Long-term Structural Changes in Regional Retail and Service Industries (KAINOU Kazunari) (DP No. : 09-J-014)

##### < Research results belonging to research projects prior to fiscal 2008>

Project Title: Building of GCE Model for East Asia that Introduces Economies of Scale Project Leader: BAN Kanemi, former FF

###### Discussion Papers

➤ Productivity Shocks and National Food Security for Japan (TANAKA Tetsuji and HOSOE Nobuhiro) (DP No. : 09-J-009)

Note: Discussion Papers listed below were published from April 2009 to March 2010.

### Discussion Papers

Discussion Papers are research results formed in the shape of treatises which principally have been through an internal review process. To stimulate active debates, they are posted on our website ([http://www.rieti.go.jp/en/publications/act\\_dp.html](http://www.rieti.go.jp/en/publications/act_dp.html)).

DP No.	Date	Title	Authors	Project No.
Written in Japanese				
10-J-025	2010/3	Measuring Social Exclusion of Non Regular Workers in Japan	KUME Koichi (RIETI/METI) OHTAKE Fumio (Osaka University) OKUDAIRA Hiroko (Okayama University) TSURU Kotaro (RIETI)	A-7
10-J-024	2010/3	Construction of Eco-system for NTBFs to Thrive, Grow and Agglomerate	NISHIZAWA Akio (RIETI/Tohoku University) WAKABAYASHI Naoki (Kyoto University) SABURI Masataka (Tohoku University/METI) KUTSUNA Kenji (Kobe University) HIBARA Nobuhiko (Ritsumeikan University) KANAI Kazuyori (Osaka University)	II-9
10-J-023	2010/3	Volatility of Firm Performance and Atypical Employment: An empirical analysis using firm-level data	MORIKAWA Masayuki (RIETI)	A-2
10-J-022	2010/3	Working Hours of Part-timers and the Measurement of Firm-level Productivity	MORIKAWA Masayuki (RIETI)	II-3
10-J-021	2010/2	Evaluating the Merger and its Remedies in a Dynamic Environment: Revisiting the 1970 Yawata-Fuji steel merger	OHASHI Hiroshi (RIETI/ University of Tokyo) NAKAMURA Tsuyoshi (Tokyo Keizai University) MYOJO Satoshi (Japan Science and Technology Agency)	A-14
10-J-020	2010/2	Business Startups: An analysis of selection and post-startup performance	YASUDA Takehiko (RIETI/Toyo University)	A-10
10-J-019	2010/2	Can the WTO Law be Applied Indirectly in Municipal Courts? Analysis of the trade remedies cases in the United States and NAFTA	ITO Kazuyori (University of Shizuoka)	III-2
10-J-018	2010/2	Wages and Productivity in Firms Using Foreign Trainees	HASHIMOTO Yuki (University of Tokyo/Japan Society for the Promotion of Science (JSPS) )	I-1
10-J-017	2010/2	Institutional Reform of Working Hours from a Workplace Standpoint: With a focus on incorporated national universities	KOJIMA Noriaki (OSAKA UNIVERSITY)	A-7
10-J-016	2010/2	Do Education Vouchers Prevent Dropouts at Private High Schools? Evidence from Japanese policy changes	AKABAYASHI Hideo (Keio University) ARAKI Hiroko (Keio University)	A-2
10-J-015	2010/2	Legislative Issues of the Working Hours System for White Collar Workers	SHIMADA Yoichi (Waseda University)	A-7
10-J-014	2010/2	Working Hours Reform: A bird's-eye perspective	TSURU Kotaro (RIETI)	A-7
10-J-013	2010/2	Is Work Sharing Effective?	KAWAGUCHI Daiji (RIETI/Hitotsubashi University) TSURU Kotaro (RIETI)	A-7
10-J-012	2010/2	Legal Issues of Working Hours and the Direction of Reforms	MIZUMACHI Yuichiro (University of Tokyo)	A-7
10-J-011	2010/2	Working Hours, Management, and Workers: What kinds of people in what kinds of companies feel their working hours are becoming longer?	MORISHIMA Motohiro (Hitotsubashi University)	A-7
10-J-010	2010/2	Working Hours Policy From an Economics Standpoint	HIGUCHI Yoshio (Keio University)	A-7
10-J-009	2010/2	Simulation Analysis of Community Farming: Is there any room for growth in Japanese rice farming?	SAITO Keiji (The National Institute of Science and Technology Policy (NISTEP)) OHASHI Hiroshi (RIETI/University of Tokyo) NISHIMURA Kiyohiko (Bank of Japan)	I-1

10-J-008	2010/1	The Over-employment of Regular Employees and their Work-family Conflict	YAMAGUCHI Kazuo (RIETI/University of Chicago)	I-6
10-J-007	2010/1	Agenda for R&D Globalization of Japanese Firms: From an organizational and strategic perspective	ASAKAWA Kazuhiro (RIETI/Keio University)	II-2
10-J-006	2010/1	Product Innovation and Economic Growth	YOSHIKAWA Hiroshi (RIETI/University of Tokyo) ANDO Koichi (Development Bank of Japan Inc.) MIYAKAWA Shuko (RIETI)	I-1
10-J-005	2010/1	Demand Driven Innovation and Uncertainty: Evidence from diffusion of flat panel TV	UNAYAMA Takashi (KOBE University) KEIDA Masayuki (Risso University)	I-1
10-J-004	2010/1	Marriage Rate and Female Labor Participation Rate: Evidence from Japanese prefectural cross-section	UNAYAMA Takashi (KOBE University)	I-1
10-J-003	2010/1	Discrepancy between Saving Rates in SNA and Family Income and Expenditure Survey and its Implications	UNAYAMA Takashi (KOBE University)	I-1
10-J-002	2010/1	A Study about the Job Training Expenditure of Japanese Firms in the 1990s	SUGA Yutaka (RIETI)	I-1
10-J-001	2010/1	Backward Patent Citations and Inventors' Recognition of Differential Influences	WADA Tetsuo (Gakushuin University)	II-1
09-J-035	2009/12	A Comparison of Japanese and U.S. Nuclear Power Plants in Reactor Operating and Incident Rates	KAINOU Kazunari (RIETI)	C-Others
09-J-034	2009/12	Empirical Analysis of the Function of the National University System—For appropriate allocation of subsidies	SHIMA Kazunori (Hiroshima University)	A-Others
09-J-033	2009/11	JSR Challenges Increasing Market and Technology Complexities: In search of its radical transformation process	CHUMA Hiroyuki (RIETI/Hitotsubashi University)	II-5
09-J-032	2009/11	Do Large Scale Investments Improve Corporate Performance?	TANAKA Kenji (Development Bank of Japan Inc.) MIYAGAWA Tsutomu (RIETI/Gakushuin University)	II-3
09-J-031	2009/10	Managerial and Policy Agenda for Improving Japanese R&D: Inventors' views	NISHIMURA Junichi (Hitotsubashi University) Tingting WANG (Hitotsubashi University) NAGAOKA Sadao (RIETI/Hitotsubashi University)	II-1
09-J-030	2009/10	Proposals for the Environment and Trade to the WTO	YAMASHITA Kazuhito (RIETI)	III-12
09-J-029	2009/10	Economic Analysis of the Environment and Trade (2) —Cross-border or global environmental problems and trade	YAMASHITA Kazuhito (RIETI)	III-12
09-J-028	2009/10	Economic Analysis of the Environment and Trade (1) —Environmental policies and trade policies	YAMASHITA Kazuhito (RIETI)	III-12
09-J-027	2009/10	Legal Analysis of the Environment and Trade	YAMASHITA Kazuhito (RIETI)	III-12
09-J-026	2009/10	Assessment of Policies of Local Public Corporations to Improve Business Efficiency—The Case of Niigata Prefecture's Bureau of Public Enterprise Management Reform Program (Industrial Water Project and Electricity Project)	KAINOU Kazunari (RIETI)	B-Others
09-J-025	2009/9	How Were Monetary Polices Implemented before and after the Showa Depression?—Interpretation based on the Taylor Rule and the McCallum Rule	HARADA Yutaka (Daiwa Institute of Research Holdings) SATO Ayano (Takasaki City University of Economics)	I-2
09-J-024	2009/9	Changes of Industrial Structure and Post-war Economic Growth in Japan	YOSHIKAWA Hiroshi (RIETI/University of Tokyo) MIYAGAWA Shuko (RIETI)	I-1
09-J-023	2009/8	Main Bank Relationships in Japan: From monitoring to risk hedging	HIROTA Shinichi (WASEDA University)	A-5

09-J-022	2009/8	Spatial Structure of Cities and Distribution of Retail Sales —Analysis based on a potential NEG model	NAKAMURA Ryohei (RIETI/Okayama University) TAKATSUKA Hajime (Kagawa University)	A-8
09-J-021	2009/8	White Collar Exemption and Working Conditions: Impact of overtime regulations on hours worked and hourly wages	KURODA Sachiko (University of Tokyo) YAMAMOTO Isamu (Keio University)	A-7
09-J-020	2009/7	The Current Status of SME Financing under the Financial Crisis: A summary of "the Survey on the Status of Transactions between Businesses and Financial Institutions (Feb. 2008)" and "the Survey on the Status of Transactions between Businesses and Financial Institutions following the Financial Crisis (Feb. 2009)"	UESUGI Iichiro (RIETI/METI/Institute of Economic Research, Hitotsubashi University) UCHIDA Hiroshi (Kobe University) OGURA Yoshiyuki (Ritsumeikan University) ONO Arito (Mizuho Research Institute Ltd.) Peng XU (Hosei University) TSURUTA Daisuke (National Graduate Institute for Policy Studies) NEMOTO Tadanobu (Chuo University) HIRATA Hideaki (Hosei University) YASUDA Yukihiro (Tokyo Keizai University) YAMORI Nobuyoshi (Nagoya University) WATANABE Wakou (Keio University) HOTEI Masaki (Hitotsubashi University)	A-1
09-J-019	2009/7	Knowledge Base of Software Innovation	SUZUKI Jun (RIETI/National Graduate Institute for Policy Studies)	II-6
09-J-018	2009/6	Productivity Disparities between Self-employed Workers and Employees	TOKUI Joji (Shinshu University) MAKINO Tatsuji (Institute of Economic Research, Hitotsubashi University) TAKAHASHI Yoko (Japan Society for the Promotion of Science)	II-3
09-J-017	2009/6	Pluralistic Evolution of the Japanese-style Enterprise System: Toward the hybrid model	MIYAJIMA Hideaki (RIETI/Waseda University)	A-5
09-J-016	2009/6	IT Innovation and Economic Growth: The importance of Moore's law in productivity from a macro perspective	MOTOHASHI Kazuyuki (RIETI/University of Tokyo)	I-3
09-J-015	2009/6	Quantitative Assessment and Analysis of the Household Electricity Rates System	KAINOU Kazunari (RIETI)	B-Others
09-J-014	2009/6	Household Consumption and Long-term Structural Changes in Regional Retail and Service Industries	KAINOU Kazunari (RIETI)	C-Others
09-J-013	2009/6	Determinants of Currency Invoicing in Japanese Exports: A firm-level analysis	ITO Takatoshi (RIETI/University of Tokyo) KOIBUCHI Satoshi (Chiba University of Commerce) SATO Kiyotaka (Yokohama National University) SHIMIZU Junko (Senshu University)	III-5
09-J-012	2009/6	Rise of China and Its Neighborhood Diplomacy—Implications for Japanese foreign policy	TAKAHARA Akio (University of Tokyo)	III-Others
09-J-011	2009/6	Settlement between Electric Transmission Companies under the Point of Connection Tariff or "Postal Stamp" System	HATTA Tatsuo (RIETI/National Graduate Institute for Policy Studies)	B-Others
09-J-010	2009/5	Financial Analysis of the Efficient and Effective Development and Operation of Ports and Harbors: Structural analysis of development, regulation and operation	AKAI Nobuo (RIETI/Osaka University) UEMURA Toshiyuki (Kwansei Gakuin University) SAWANNO Koichiro (Nagoya City University) TAKEMOTO Toru (Tezukayama University) YOKOMI Muneki (Osaka University of Commerce)	A-13

09-J-009	2009/5	Productivity Shocks and National Food Security for Japan	TANAKA Tetsuji (School of Oriental and African Studies, University of London) HOSOE Nobuhiro (National Graduate Institute for Policy Studies)	C-Others
09-J-008	2009/5	Evaluation and Allocation of Resources in Higher Education: The potential and challenges of performance-based funding	TANAKA Hideaki (Institute of Economic Research, Hitotsubashi University)	A-Others
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