

RIETI

Highlight

2021
SPECIAL
EDITION

84

CELEBRATING

20

Years of
RIETI

Global Intelligence Project

Special Dialogue:

**The Transformation of the International Community
and the State of Japan**

What is RIETI Highlight?

RIETI's public relations magazine *RIETI Highlight* is published in Japanese on a quarterly basis, featuring RIETI's most recent activities with the objective of disseminating our research outcomes to a wider audience. This *RIETI Highlight Special Edition* is written in English and published annually as an overview of RIETI's undertakings for our international readers. We hope this special edition will be helpful not only in spreading information on our activities and research findings but also in deepening international readers' understanding of our mission as a leading Japanese policy think tank.

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I

RIETI Celebrates Its 20th Anniversary!

Since its establishment in 2001, RIETI, as Japan's leading policy think tank, has made it its mission to conduct theoretical and empirical research, to maximize synergies with those engaged in policy making, and to provide evidence-based policy recommendations derived from its research activities. RIETI's activities over the past two decades have developed an excellent reputation both in Japan and overseas. In this issue, we look back on RIETI's achievements to commemorate the 20th anniversary of RIETI. (→see more on p.4)

II

RIETI and the Graduate School of Medicine at Kyoto University Initiated International Collaborative Research on COVID-19

RIETI and the Graduate School of Medicine at Kyoto University, in collaboration with the Pasteur Institute in France, began the world's first large-scale epidemiological study combining medical and social sciences. It is internationally collaborative research on Shiga residents and healthcare professionals at Kyoto University Hospital using an antibody testing kit developed by the Pasteur Institute. A joint press conference was held on January 6, 2021, prior to the start of the research. (→see more on p.13)

RIETI will promote more research that incorporates both the humanities and sciences through our new Fifth Medium-term Plan program, titled "Integrated Research" which began in 2020.

III

New "Global Intelligence Project" Launched

RIETI's new "Global Intelligence Project" explores new international economic systems, while assessing various future domestic and foreign risks to the Japanese economy, based on the analyses, in particular, of (1) interactions between economic security policies and industrial, science and technology policies in the U.S., the EU, China and other countries; (2) the Chinese economy; (3) the economic impacts on the Japanese economy and industries of the possible carbon border adjustment measures; and (4) the digital revolution. We will deepen exchanges of views between policy makers in Japan and overseas, including METI and relevant ministries and agencies, and strengthen interdisciplinary discussions. (→see more on p.14)

An example of the aims of the project is the recent release of "Getting America Back in the Game: A multilateral perspective," a policy proposal paper to the Biden administration by an international research group which includes Tetsuya Watanabe, the Vice President of RIETI. For more information of the paper, please see

<https://www.rieti.go.jp/en/special/policy-update/090.html>.



Messages from the Ch



Makoto Yano

Chairman

Biography

Yano received a BA from the University of Tokyo and a Ph.D. in economics from the University of Rochester. He taught at number of universities, including Cornell University, Yokohama National University, Keio University and Kyoto University before joining RIETI as President and CRO in 2016, and became Chairman in 2020. He was also Chair of Institute of Economic Research in Kyoto University from 2010 to 2012, and President of the Japanese Economic Association from 2008 to 2009.

I was appointed Chairman of RIETI, as of April 1, 2020. With society facing uncertainties such as the global spread of the novel coronavirus (COVID-19) pandemic, I am determined to work with RIETI officers and employees to contemplate what we should do now and to make every effort to select the best course of action for the Institute.

RIETI has a duty as a leading policy think tank and policy research institute in Japan and Asia, and we must fulfill and further expand that duty. To this end, we need to think hard about our current and future courses of action.

Social science is an academic discipline that studies how to use goods and how to create the systems to use them. As a research institute concerned with social science, RIETI has been enhancing its capabilities as a virtual organization in the midst of the COVID-19 pandemic; that is, utilizing online meetings, seminars, lectures, and workshops via the internet to expand its information networks. The COVID-19 pandemic has highlighted the fact that Japan is lagging behind not only Western countries, but also China and South Korea in terms of the nation's implementation and use of online resources. As a social science research institute, I believe that RIETI must be an organization that tests and drives efforts to enhance Japan's system for virtual organizations. For the greater development of social science, it is essential to share our understanding of issues through clear communication and to invent our own unique solutions for addressing the issues.

RIETI's Fifth Medium-term Plan, which began in April 2020, positions the integration of humanities and sciences

as a pillar of its research activities. Japan's science and technology policy has long been based on the belief that science and technology need only be studied by scientists. The Basic Act on Science and Technology stipulates that its purpose is to promote the hard sciences that are not concerned with the humanities, and accordingly social science had been put aside. Since my days as a professor at Kyoto University, I had been encouraging relevant individuals to revise the Act to include the humanities as an objective of science and technology promotion. Last year, my desire was finally realized with the Basic Act on Science, Technology and Innovation, which included the humanities in the law. With this, RIETI will assume a new position as a research and development agency from April 2021 and engage in economics research that includes a new perspective focusing on the integration of humanities and sciences, as well as the promotion of evidence-based policy making (EBPM) and data maintenance and utilization as a policy think tank. Regarding the integration of humanities and sciences in particular, in 2021 I plan to start international collaborative research integrating medicine and social science on COVID-19 together with Kyoto University and the Pasteur Institute in France, with myself acting as project leader.

I am committed to working with you to overcome the current difficulties and contribute to establishing a more advanced society. I would like to ask for your cooperation in this endeavor.

airman and President

Masayuki Morikawa

President and CRO

Biography

Masayuki Morikawa received a BA from the University of Tokyo and a Ph.D. in economics from Kyoto University. He joined the Ministry of International Trade and Industry (MITI; currently Ministry of Economy, Trade and Industry, METI) in 1982, where, among other assignments, he served as Director of the Macroeconomic Affairs Division, Director of the Industrial Structure Policy Division, as well as Deputy Director-General of the Minister's Secretariat in METI, before joining RIETI in 2009 as Vice President. In 2020, he was appointed as the President and CRO of RIETI. He is also a Professor of Hitotsubashi University.



In April 2021, RIETI will mark its 20th anniversary. RIETI is now recognized at home and abroad as a leading policy research institute for its contributions to policy making, quality research publications, and dissemination of socially significant insights. A long-term accumulation of steady efforts is essential to gaining of recognition as a research institute. Over the past decade or so, during which I have been involved in the management of RIETI as Vice President, I have felt that the institute in its current form is built on the achievements accumulated since its foundation. I therefore believe it desirable to continue to maintain our basic framework while fine-tuning it in response to changes in social and economic conditions, policy needs, and research trends.

RIETI aims to achieve two goals simultaneously: contributing to better policy making through bridging policy practices and academic research, and the production of research findings of high academic value. Looking ahead to the progress that can be made in the improvement of policy making, it is essential to foster many government officials who are equipped with a greater understanding of academic research. Meanwhile, researchers have much to gain from the field of policy making, which is full of inspiration and material for unique research. For evidence-based policy making to spread, it is ideal that highly aware policy practitioners and academic researchers with a strong sense of realism interact and collaborate both formally and informally. In my opinion, expanding their points of contact is one of RIETI's vital roles. However, this role is best served by

creating effective synergies through sharing an awareness of issues while maintaining an appropriate distance to preserve neutrality and objectivity in research.

If I have any comparative advantages, they would probably be my long-term engagement in both policy practices and academic research, as well as my parallel engagement in management responsibilities and my own research activities. My ability to understand the mindset and concerns of administrative officials, the motivations of researchers, and organizational management practices may also be helpful. From that standpoint, I am committed to undertaking coordination that helps deepen cooperation between (1) policy practitioners and researchers, (2) RIETI researchers and external researchers from universities, and (3) researchers and management/staff at RIETI.

The year 2020 saw the rise of a serious socio-economic challenge in the form of the novel coronavirus (COVID-19) pandemic. The development of vaccines has progressed rapidly, and the light at the end of the tunnel has gradually come into view, but the future nevertheless remains uncertain. COVID-19 has posed significant restrictions on RIETI's activities and disrupted plans. On the other hand, this crisis is also important as material for new research, and RIETI has already published a multitude of research outcomes. Moreover, many other unexpected shocks could occur going forward. It is therefore important for us as a policy research institute to maintain an adequate amount of nimble flexibility in responding to emerging challenges rather than to focus simply on implementing activities planned in advance.

CELEBRATING 20 Years of RIETI

In April 2021, RIETI celebrates its 20th anniversary.

During the past 20 years, many institutions and researchers not only in Japan, but also from all over the world have shared their research, given lectures, and contributed papers to RIETI.

We offer our heartfelt gratitude to those who have supported us over the past 20 years, and we would like to take this opportunity to share the congratulatory messages we have received from the people who have been involved with RIETI.



Richard Baldwin

Professor of International Economics,
Graduate Institute, Geneva

The 20th anniversary of RIETI is a moment that deserves celebration and examination. RIETI has over the last two decades, but especially over the past decade, pushed out the frontiers of policy relevant research with scholarly excellence. The research output has increased impressively in quantity, but even more impressively in terms of its academic quality. Looking ahead, I'm quite sure that the evidence-based policy analysis approach holds great promise for RIETI and for its impact on policy making in Japan. Congratulations for 20 years of success. I look forward to 20 more!

I congratulate RIETI for its valuable work over the past 20 years, where it has been influential in shaping economic and trade policy in Japan and internationally. RIETI continues to play an important role in the Australia/Japan relationship through its relationship with the Australian National University. It is a source of wise and prudent counsel during a time of great change, with large shifts in relative economic power to the Asian region, and I anticipate many more productive years in our relationship.



The Hon Julie Bishop

Chancellor,
Australian National University
Former Minister of Foreign Affairs,
Australia



Chien-Yi Chang

President,
Taiwan Institute of Economic Research

Congratulations to the Research Institute of Economy, Trade and Industry (RIETI) on the occasion of its 20th anniversary. Over the past two decades, the Research Institute of Economy, Trade and Industry (RIETI) has made remarkable achievements in promoting professional excellence in conducting theoretic and empirical research as well as policy studies and proposals. RIETI and Taiwan Institute of Economic Research (TIER) have been engaged in a vibrant partnership. With academic and practical excellence as core values, we have embraced the visionary ideals and values of both institutes. I extend my heartiest congratulations to RIETI for its 20th anniversary. We celebrate the accomplishments of previous years and anticipate firm strategic partnerships through interdisciplinary collaboration in industry, trade, and economics fields.



Ji-sang Chang

President,
Korea Institute for Industrial
Economics and Trade (KIET)

Congratulations to RIETI on its 20th anniversary. Over 20 years, RIETI's superior policy research has been crucial to the development of the Japanese economy, and it has emerged as a leading global policy think tank — an impressive achievement.

The global economy is in the midst of a great transformation to one that is digital, low-carbon and inclusive. Danger lurks on the path ahead, but with its outstanding research faculty and robust networks both domestic and foreign, RIETI is equipped to lead the transformation of the Japanese economy.

Having come of age, RIETI is poised to grow in prestige and renown as it now enters its prime. KIET too, working together with RIETI, shall spare no effort in shepherding the transition of the Korean economy.

I wish for RIETI's continued growth and success, and that the ties binding our institutions grow ever-tighter.

I congratulate RIETI on a successful 20 years in conducting basic research on the Japanese and world economies and on coordinating a series of highly influential conferences on the society and the economy that have advanced both policy and knowledge. My own experience in delivering an invited lecture was stimulating and for me highly informative about Japanese society and its economy. Japan is a fascinating country with a rich culture and an energetic and insightful body of scholars. I learned much and hope to return to learn more in the future. I look forward to the next 20 years of RIETI conferences and publications.



James J. Heckman

The Henry Schultz Distinguished
Service Professor in Economics and
the College, The University of Chicago
Nobel Laureate in Economics



Dale W. Jorgenson

Samuel W. Morris University
Professor,
Harvard University

I am very pleased to contribute to the memories and expectations on the 20th anniversary of RIETI. I have had the pleasure of serving RIETI as an advisor during most of its recent history. Recently, I gave a presentation as part of the RIETI 20th Anniversary Seminar on the origin and spread of the coronavirus. The coronavirus spread gradually, but became a global pandemic. Recent data from the International Monetary Fund has revealed an unprecedented decline in global economic activity due to the COVID-19 pandemic. Consumption growth has been downgraded for most economies. This has presented an unusual challenge to RIETI, enabling the research institute to draw on its extensive research program. This program focuses primarily on Japan, but covers all aspects of the world economy. I am confident that RIETI will make important contributions to our understanding of the decline in economic activity in Japan and around the world. RIETI will soon turn its attention to developing new and valuable insights into the recovery. RIETI will prove, once again, the value and strength of the outstanding research work that I have had the good fortune to experience in person in my many visits to the institute.

Congratulations on the 20th anniversary of RIETI. RIETI has provided excellent opportunities to bridge research, dialogue, and policy making by engaging distinguished scholars, private sector participants and government officials. I myself have had nine opportunities to speak at the BBL seminars since 2005 and enjoyed discussions with the audience regarding Japanese ODA, U.S. economic policies, international financial crises, the role of the Asian Development Bank, and Asia's development history. I hope that RIETI will continue to make great contributions to the betterment of policies and private sector activities through its active intellectual efforts.



Takehiko Nakao

Chairman,
Mizuho Research Institute
Former President of Asian
Development Bank



Robin Niblett CMG

Director and Chief Executive,
Chatham House
(The Royal Institute of International
Affairs)

I would like to offer my sincere congratulations to RIETI on the celebration of its 20th anniversary. Coincidentally, Chatham House celebrated its centenary in 2020 and we look forward to further developing our relationship as both institutes enter the new decade. In these turbulent times, the role of think tanks to instigate and nurture constructive dialogue on pressing global issues is more important than ever. This year, our institutes are excited to explore our longstanding joint interests in UK-Japan relations and the geo-economic world order.



Adam S. Posen

President,
Peterson Institute for International
Economics (PIIE)

Every government needs a good ‘Team B’ to create policy perspective and new options. RIETI has served Japan well as a substantive evidence-based Team B, choosing the right issues to focus on for Japan’s economic development. Many of the successes of Abenomics and Japan’s relatively good economic performance versus its peers have some of their origins in ideas and analyses from RIETI. I am proud that PIIE has ongoing intellectual exchange with RIETI, and we look forward to collaborating further with them in the next 20 years.

It gives me great pleasure to offer on behalf of the Japan Institute of International Affairs our warm felicitations on the occasion of the 20th anniversary of the Research Institute of Economy, Trade and Industry (RIETI). Through the Think 20 (T20) Japan 2019 and other collaborative activities, our two institutions have always enjoyed a close and productive working relationship. Together we strive to contribute to the policy making process by providing high-quality and evidence-based research directly relevant to our foreign and economic policies.

JIIA looks forward to continuing this successful cooperation with RIETI in the years to come.



Kenichiro Sasae

President,
The Japan Institute of International
Affairs (JIIA)



Nobuhiko Sasaki

Chairman and CEO,
Japan External Trade Organization
(JETRO)

In addition to the high-level academic research achievements, it is exceptional that RIETI continues to hold high quality BBL seminars which is an idea that was brought back from the U.S. by the founding Vice President, Mr. Nobuo Tanaka. I would like to express my deepest gratitude to all the top experts from all over the world for providing insights on ‘how to think’ as well as all the secretariat for keeping the question of ‘what to think’ fresh in our minds. Congratulations on the 20th anniversary of RIETI.

I first got in touch with RIETI in the early 2000’s. At the time, RIETI had established a large-scale international comparison study on the effectiveness of job search strategies and had asked IZA for running some standardized data analyses on European data sets for them. I remember well my stay in Tokyo, where we had extensive and fruitful discussions on the results. Later, they got published in a collective volume that still graces my bookshelf. Over the years, IZA and RIETI have cultivated and deepened their professional relationship in mutual benefit and will continue to do so in the future as well. Happy Birthday from Bonn!



Hilmar Schneider

Chief Executive Officer,
IZA Institute of Labor Economics



Mireya Solís

Director,
Center for East Asia Policy Studies
The Brookings Institution

It is my great pleasure to extend my congratulations to the Research Institute of Economy, Trade and Industry on this important milestone. I have fond memories of my participation of the BBL series and of exchanging views with RIETI’s leadership and experts. My very best wishes on its 20th anniversary.



Chikahisa Sumi

Director,
Regional Office for Asia and the
Pacific,
International Monetary Fund (IMF)

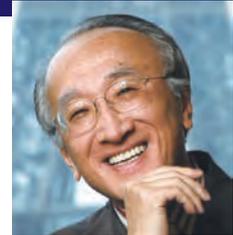
Congratulations on the twentieth anniversary of RIETI!

Our office, the IMF's Regional Office for Asia and the Pacific, has the privilege of collaborating closely with RIETI. With extensive contacts throughout Japanese industries and with policy makers, RIETI provides a great network through which to communicate our policy analysis to a much broader audience than we usually reach. RIETI's Brown Bag Lunch series provides great two-way communication, including through comments and Q&A. RIETI also helps us to reach its contacts for our seminars on topics like Fintech. I look forward to expanding our great collaboration further, including possibly by co-hosting conferences/seminars in the near future.

We wish RIETI the very best as it pursues an even brighter future.

“Dr. Aoki’s legacy”

I joined RIETI to help the late Dr. Masahiko Aoki in establishing a new think tank at METI. He let us try any experiments and took responsibility for the consequences. I started the Brown Bag Lunch (BBL) seminars by copying the tradition in Washington D.C. and among American academics. I am very happy to be able to count more than 1200 BBLs in 20 years. The biggest audience always comes to the first BBL of the year with Aoki-Sensei. RIETI's mission to become Team B of Kasumigaseki, Japan's policy making platform, is certainly his legacy.



Nobuo Tanaka

Special Adviser,
The Sasakawa Peace Foundation
Former Executive Director of
International Energy Agency



Beatrice Weder di Mauro

President,
Centre for Economic Policy Research
(CEPR)

I have had the pleasure of contributing to a joint CEPR / RIETI webinar in March 2020 on the “Economics in the Time of COVID-19: The economic impact on Asia.” This webinar was not only very informative but also very timely. It underlined for me the great collaboration that CEPR and RIETI have developed over the years and the valuable contribution this collaboration brings to the informed global public. I want to wish the RIETI team all the best for their 20th anniversary and a lot of success in their public policy research and analysis in the years to come.

Congratulations to RIETI.

It is with great pleasure that I want to congratulate RIETI for its 20th anniversary. RIETI has established itself as a key resource for insights into the Japanese economy, Japan's trade and importantly also its innovation policy. I enjoy interacting with the leadership and the researchers of RIETI and am always honoured to contribute to the active debate that RIETI so skilfully drives. In 2015, for example, I had the honour of contributing an important European debate on the future of Greece in the euro area to a Japanese audience. The entire Bruegel team looks forward to many more interactions with the RIETI team.



Guntram B. Wolff

Director,
Bruegel



Yang Bojiang

Professor
Director-General,
Institute of Japanese Studies,
Chinese Academy of Social Sciences (CASS)

On the occasion of the 20th anniversary of the establishment of the Research Institute of Economy, Trade and Industry (RIETI), please allow me to express my heartfelt congratulations on behalf of the Institute of Japanese Studies, the Chinese Academy of Social Sciences (CASS), and also in my own name. RIETI is an important think-tank in the field of economy and industry that has high academic reputation both in Japan and all over the world. In June 2019, my institute signed an academic exchange agreement with RIETI. It is my sincere hope to further strengthen academic exchanges with RIETI in the future.

With all the best regards.

(Non-political honorifics omitted.)

20 Years of RIETI

Celebrating 20 Years of RIETI

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Global Events	● 9/11/2001 September 11 attacks in the U.S.	● 1/1/2002 Distribution of Euro	● 3/20/2003 Outbreak of the Iraq war	● 12/26/2004 The Great Sumatra-Andaman Earthquake			● 8/9/2007 World-wide stock prices fall	● 9/15/2008 Collapse of Lehman Brothers		● 2010 European debt crisis	
Events in Japan	● 1/6/2001 Central government reorganization: Establishment of Ministry of Economy, Trade and Industry (METI)		● 4/28/2003 The lowest Nikkei stock average since the bursting of Japan's economic bubble					● 2008 Japan's population declined	● 9/16/2009 Change in government controlling parties	● 2010 China GDP surpassed Japan	● 3/11/2011 The Great East Japan Earthquake
Chairmen	Chairman Sozaburo Okamatsu (April 2001~August 2005)					Chairman Kozo Oikawa (August 2005~March 2011)					
Presidents	President Masahiko Aoki (April 2001~March 2004)			President Masaru Yoshitomi (April 2004~April 2007)			President Masahisa Fujita (May 2007~March 2016)				
Medium-term Plans	First Medium-term Plan (April 2001~March 2006)					Second Medium-term Plan (April 2006~March 2011)					
	<p>[Nine Research Clusters]</p> <ul style="list-style-type: none"> • Corporate Governance, Organization and Strategy • Regulation, Deregulation, Competitiveness • Employment and Safety Nets • Innovation and University-Industry Cooperation • International Economic Relations • Asian Economies and Regional Integration • Political Economy and Public Policy Process • Macroeconomic Policy and Performance • Quantitative Analysis and Database 					<p>[Major Policy Research Domains]</p> <ol style="list-style-type: none"> Maintaining Economic Dynamism under the Adverse Demographic Conditions of Low Fertility and Aging Population Promoting Innovation and Strengthening International Competitiveness Formulating Japan's Strategy in Response to Globalization and Deepening Economic Interdependence in Asia Compilation of the History of Japan's Trade and Industry Policy 					
RIETI Events	<ul style="list-style-type: none"> ● 4/1/2001 Establishment of RIETI ● 4/3/2001 BBL Seminar launched ● 4/27/2001 RIETI-AEI Joint Conference ● 7/13/2001 Opening Conference of RIETI on modularity ● 9/21/2001 Japan-China Economic Conference ● 4/22-23/2002 Symposium "Asian Economic Integration" (Prof. Joseph Stiglitz) ● 9/1/2002 International Conference in South Africa ● 3/28/2003 Special Seminar "Challenge for Asia" (PM Goh Chok Tong of Singapore) 			<ul style="list-style-type: none"> ● 3/11-12/2004 Symposium "Fiscal Reform of Japan" ● 6/17-18/2004 Symposium "Asian Economic Integration" ● 2005 Launch of RIETI Highlight ● 3/19/2005 Joint Conference in China ● 12/15-16/2005 Policy Symposium on pension 					<ul style="list-style-type: none"> ● 8/28/2009 International Conference "Institution Building in Asia" ● 12/16/2009 Symposium "Industry Related Government Policy and the Global Economic Crisis" ● 10/1/2010 METI-RIETI APEC Symposium on SMEs ● 12/7/2010-RIETI 10th Anniversary Seminar Series 		
	<p>Predecessor organization to RIETI</p> <p>Ministry of International Trade and Industry/ Research Institute (MITI/RI)</p> <p>April 1987 ~ March 2001 (President: Ryutaro Komiya)</p> <p>Research Topics:</p> <ul style="list-style-type: none"> • Market Structure and Export Price • Japanese Employment and Wage Practices, and High Economic Growth • Debt Accumulation Problems <p>Major Symposium Speakers</p> <ul style="list-style-type: none"> • Prof. D. Jorgenson (Harvard) • Prof. R. Gilpin (Princeton) • Prof. M. Porter (Harvard) • Prof. J. Sachs (Harvard) • Prof. C. Kindleberger (MIT) • Prof. E. Vogel (Harvard) etc. 					 <p>Ryutaro Komiya</p>					
	 <p>First Chairman Sozaburo Okamatsu First President Masahiko Aoki</p>		 <p>Second President Masaru Yoshitomi Third President Masahisa Fujita</p>		 <p>Fourth President Makoto Yano Fifth President Masayuki Morikawa</p>						

2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

● 1/20/2017 Inauguration of President Trump

● 12/30/2018 TPP11 enters into force

● 2020 Global COVID-19 pandemic

● 12/26/2012 LDP took back control, Second Abe Cabinet

● 4/1/2014 Consumption tax raised from 5% to 8%

● 10/1/2019 Consumption tax raised from 8% to 10%

● 10/31/2011 Yen-dollar exchange rate reached 75.54 yen per dollar (the highest in history)

Chairman Atsushi Nakajima
(April 2011~March 2020)

Chairman Makoto Yano
(April 2020~)

President Makoto Yano
(April 2016~March 2020)

President Masayuki Morikawa
(April 2020~)

Third Medium-term Plan (April 2011~March 2016)

Fourth Medium-term Plan (April 2016~March 2020)

Fifth Medium-term Plan (April 2020~March 2024)

[Research Programs]

- International Trade and Investment
- International Macroeconomics
- Regional Economies
- Technology and Innovation
- Raising Industrial and Firm Productivity
- New Industrial Policy
- Human Capital
- Social Security, Taxation, and Public Finance
- Policy History and Policy Assessment

[Research Programs]

- Macroeconomy, Low Birthrate/Aging Population
- International Trade and Investment
- Regional Economies
- Innovation
- Industry Frontiers
- Raising Industrial and Firm Productivity
- Human Capital
- Law and Economy
- Policy History and Policy Assessment

[Research Programs]

- Macroeconomy, Low Birthrate/Aging Population
- International Trade and Investment
- Regional Economies
- Innovation
- Industry Frontiers
- Raising Industrial and Firm Productivity
- Human Capital
- Integrated Research
- Policy Assessment

● 11/7&15/2011 Symposium “Toward Strengthening Competitiveness / Sustainable Economic Growth Following the Great East Japan Earthquake”

● 5/24/2012 Japan-China-Korea (A3) Conference on monetary and financial cooperation

● 6/7/2012 RIETI-JETRO Symposium on trade and investment

● 1/29/2013 Symposium Commemorating the Completion of *Japan's Trade and Industrial Policy History*

● 7/12/2013 Symposium “The Science of Japanese Personnel Management” (Prof. Edward P. Lazear)

● 10/8/2014 Special Seminar by Prof. James J. Heckman

● 12/12/2014 RIETI-JSTAR Symposium on super aging society

● 5/26/2015 RIETI-IZA Symposium

● 8/21/2015 RIETI-NISTEP Symposium on innovation

● 8/4-5/2016 Asia KLEMS Conference

● 11/7/2016 RIETI-CEPR Symposium

● 8/1/2017 RIETI-Harvard-CEPR Symposium

● 12/19/2017 EBPM Symposium

● 3/13/2018 METI JPO-RIETI International Symposium

● 12/6/2018 RIETI-ANU-ERIA Symposium

● 4/9/2019 T20 Round Table

● 10/7/2019 RIETI Blockchain Symposium

● 2/26/2020 Symposium on the Fourth Industrial Revolution

● 7/29/2020- *Economics of the COVID-19 Crisis* Publication Commemoration Webinar Series

● 9/30/2020 BBL Seminar “Global Intelligence Series” launched



4/22-23/2002 Symposium, “Asian Economic Integration” (Prof. Joseph Stiglitz)



10/1/2010 METI-RIETI APEC Symposium on SMEs



11/7/2016 RIETI-CEPR Symposium



4/9/2019 T20 Round Table



3/28/2003 Special Seminar, “Challenge for Asia” (PM Goh Chok Tong of Singapore)



10/8/2014 Special Seminar by Prof. James J. Heckman



12/19/2017 EBPM Symposium



10/7/2019 RIETI Blockchain Symposium

Special Interviews with Successive RIETI Chairmen

Since its establishment in 2001, RIETI has had four chairmen, the current Chairman Yano being the fourth. We interviewed the first three chairmen who have supported RIETI since its early days and asked them to share their memories.

*The interviews were held online.

Sozaburo Okamatsu

(Chairman, 2001-2005)



Sozaburo Okamatsu received a BA in law from the University of Tokyo in 1960, after which he joined the Ministry of International Trade and Industry (MITI, currently the Ministry of Economy, Trade and Industry, METI) where, among other assignments, he served as Director-General of the Consumer Goods and Service Industries Bureau, Director-General of Industrial Location and Environment Protection Bureau, and Director-General of International Trade Policy Bureau as well as Vice-Minister for International Affairs. In 2001, he was appointed as the first Chairman of RIETI.

TANIMOTO: You served as RIETI's first Chairman beginning your service with the organization's founding in April 2001 and continuing until September 2005. Could you please tell us what your thoughts were at the time of RIETI's establishment and some of the difficulties you experienced?

OKAMATSU: RIETI is the first social science research institute that is an independent administrative agency and I believe MITI made a wise decision in that regard. RIETI was established to operate independently from the government and to engage in a broad range of research extending beyond the conventional government framework. At the same time, RIETI's location in Kasumigaseki, the center of Japan's bureaucracy, has also been vital as it has allowed this geographical advantage to be applied in conducting policy research at the very site where policy is implemented. When we were setting up RIETI, another important point was the selection of RIETI's President who would oversee the research groups which form the mainstay of RIETI's research activities, and I believe that RIETI is what it is today because of RIETI's first President, Masahiko Aoki.

After I retired from MITI, I taught as a visiting professor at the Graduate School of International Relations and Pacific Studies at the University of California San Diego (UCSD). Once, when a UCSD professor asked me to tell him the history of how APEC emerged and I did, he replied, "I don't think so." Even though what I said was factually accurate, he disagreed with what I was saying. I realized that what I was observing was the quintessential, overly opinionated scholar. It is natural for scholars to have their own views. Although government administrators reconcile differences of opinion and integrate them, there is significance in researchers maintaining independent views, so these two mindsets are not reconciled and integrated, and it is said that there is no need to do so. Gaining this understanding of how some academics think from discussions with UCSD Graduate School faculty was very useful in working out the relationship between researchers and administrators at RIETI. I am very happy when I remember how that helped me receive an "A" from the evaluation committee, too.

TANIMOTO: What research or events do you consider to be highlights during your term?

OKAMATSU: One event that was particularly memorable was the Japan-China Round Table in September 2001, our first year (Japan-China Economic Conference "Is China a Threat or Opportunity? Japan-China economic relations in the 21st century" *conference supported by RIETI). With China becoming a WTO member, there was a large amount of business taking place with China's "new economic players" who were leading the newly emerging China as it opened up and reformed. Open discussions did not really take place between governments, but RIETI researchers were able to exchange opinions with academics from China at the event. Also, the "Asian Economic Integration: Current Status and Future Prospects," which was held in April of RIETI's second year, was memorable in that Professor Joseph Stiglitz and over 30 other well-known economists spoke during the monumental two-day symposium.

TANIMOTO: The Brown Bag Lunch (BBL) seminars that started during your tenure are still being held today. The other day, the 1,200th BBL was held. Beginning this year, BBL seminars have been held online, which has also allowed people to join them from areas outside of Tokyo as well as overseas.

OKAMATSU: The BBLs were the work of Nobuo Tanaka, then RIETI Vice President (later IEA Executive Director), who introduced that arrangement, which was something that think tanks in the United States had been doing. That reminds me, we also held American-style Christmas parties at the time.

TANIMOTO: Yes, of course. I have enjoyable memories of mingling and talking with researchers that I ordinarily wouldn't have had a chance to speak to. I also accompanied President Aoki's wife on piano as she played the cello (Tanimoto smiles).

Lastly, what are your hopes for the future of RIETI?

OKAMATSU: RIETI is Kasumigaseki's first social science research institute to be incorporated as an independent administrative agency. I hope that RIETI will further broaden its international network and continue to serve as a world-class think tank. At the time it was founded, one objective was to "prompt policy debate" and I hope that RIETI will maintain that goal.

Kozo Oikawa

(Chairman, 2005-2011)



Kozo Oikawa received a BA in economics from the University of Tokyo in 1969, after which he joined the Ministry of International Trade and Industry (MITI, currently the Ministry of Economy, Trade and Industry, METI) where, among other assignments, he served as Director-General for Policy Coordination in the Minister's Secretariat of MITI, Director-General of the Bureau of Equipment in the Japan Defense Agency, as well as Commissioner of the Japan Patent Office. In 2005 he was appointed as the second Chairman of RIETI.

TANIMOTO: To begin our discussion, could you please tell us what it was like during your tenure as Chairman?

OIKAWA: During the roughly five and a half years of my term as Chairman, the environment both at home and abroad was undergoing rapid change. At home in Japan, the political situation was fluid, with the prime ministership changing hands every year and a new political party taking over government administration in 2009. Administrative reforms were being hammered out one after the other and RIETI, as an independent administrative agency, was also on uneasy ground during those turbulent times. 2009 was the first year Japan's population began to decrease. Social security expenditures increased as the population aged and the fiscal constraints intensified. The economy continued its deflationary spiral. Also, in 2008, the collapse of Lehman Brothers triggered a financial crisis and global recession, which also plunged Japan into dire straits.

TANIMOTO: Please share with us some of the efforts that you made during your tenure.

OIKAWA: Simply because it was a turbulent time, I felt that to pilot RIETI, I had to forge my own path. That feeling was all the more prevalent because I didn't want policies to be made at the spur of the moment or capriciously. I was trying to figure out how to maintain and expand upon RIETI's founding principle that policy should be based upon theoretical and empirical research. A comment from a famous researcher during that time resonated with me. He said, "I think that it was during the time of President Komiya that the relationship between the ministry (MITI) and the research institute (Ministry of International Trade and Industry/Research Institute (MITI/RI); the predecessor to RIETI) was the happiest. There was a sense of unity that we were forming a common front during the trade friction of the 1990s." Because we believed that it was necessary during that time of great change to have visionary policy proposals that took into account academic expertise, I worked with President Fujita to foster this sense of unity.

We were responsible for some of the key policies over our history, including addressing the declining birthrate and aging population, innovation systems, globalism, and responsible for creating a compilation of MITI's policy history (1980- 2000).

We also worked to compile the JIP (Japan Industrial Productivity) Database, JSTAR (Japanese Study of Aging and Retirement) Database, and other valuable contributions to data management efforts.

TANIMOTO: During your term as Chairman, RIETI's network

was also quite extensive, wasn't it?

OIKAWA: In Asia, we pursued exchanges with research institutes in China, South Korea and Taiwan (DRC (Development Research Center of the State Council of the People's Republic of China), KIET (Korea Institute for Industrial Economics and Trade), and TIER (Taiwan Institute of Economic Research)) as well as ERIA (Economic Research Institute for ASEAN and East Asia), in addition to CEPR (Centre for Economic Policy Research), NBER (National Bureau of Economic Research) and other organizations in Europe and the United States. In Japan, we were able to hold numerous joint seminars and symposiums with JICA (Japan International Cooperation Agency), ADBI (Asian Development Bank Institute), JETRO (Japan External Trade Organization), the Institute of Developing Economies, and other research institutes under the auspices of other ministries and agencies.

TANIMOTO: Are there any symposiums, seminars or other events that are particularly memorable?

OIKAWA: "Quo Vadis the WTO?," which was held jointly with METI in August 2007, the "Work-Life Balance and Gender Equality" symposium in August 2007 which attracted more than 300 participants, labor issue symposiums in 2008 and 2009 where economists and legal scholars collaborated, and the series of symposiums addressing the global recession all made particularly lasting impressions on me.

TANIMOTO: Lastly, do you have any advice regarding the direction that RIETI should pursue in the future?

OIKAWA: I am very pleased that EBPM, which we had focused on during my tenure, has gradually also become more pervasive, not only in academic and bureaucratic circles, but also in the political world, and pleased with the variety of studies that have been pursued at RIETI and the fact that RIETI's attempts to encourage the integration of EBPM have made their way into policy formation in Japan. During research presentations, I always used to ask the question "What are the policy implications of this research?" I hope that RIETI will continue its efforts to have its research results reflected in policy.

Interviewer :

Toko Tanimoto
Deputy-Director,
International Coordination and
PR Strategy, RIETI



Atsushi Nakajima

(Chairman, 2011-2020)



Atsushi Nakajima received a BA in law from the University of Tokyo in 1975 after which he joined Industrial Bank of Japan, Ltd (IBJ), where, among other assignments, he served as General Manager of IBJ Paris Branch, President of Banque IBJ (France) S.A., Chief Economist and General Manager of Research Department at the Head Office of IBJ, as well as Senior Managing Executive Officer and Chief Economist of Mizuho Research Institute. In 2011 he was appointed as the third Chairman of RIETI.

UENO: What was your impression of RIETI when you first became Chairman?

NAKAJIMA: Well, I was the first RIETI Chairman who took up that position after an open recruitment of applicants from private enterprise, so I was surprised by the difference between private sector think tanks and RIETI, a government think tank. RIETI held seminars on a broad range of topics without the constraints imposed by revenue, and invited outside lecturers almost weekly which, in the case of a private sector think tank, would have been possible at the most once or twice a year. Experts from other countries also come and gather for the name value that RIETI offers. I was thrilled that top experts in a variety of fields would gather at RIETI as it serves as a “knowledge platform” in Kasumigaseki. I truly hope that RIETI will continue in its role of connecting policy and ideas.

UENO: Chairman Nakajima, you regularly appeared on economic programs on television and were active as the face of RIETI. I have heard that before you became chairman, the television appearances had an annual advertising effect of ¥4 billion. Also, you put a lot of emphasis on public relations activities, which was also very helpful for the staff. Are there any events or other occasions that were memorable for you?

NAKAJIMA: I think the activities that were most memorable for me were the symposiums related to the Great East Japan Earthquake and the 2014 symposium to which Nobel Prize-winning economist Professor James Heckman was invited. His speech prompted the subsequent government debate on facilitating free early childhood education. Similarly, the 2014 World KLEMS assembled several hundred researchers from around the world for a two-day conference. I also believe Think20 (T20), the official engagement forum for the G20, where think tanks mainly from the 2019 G20 Osaka Summit member countries discussed policy recommendations ahead of the summit, was a great success. Also, the EBPM symposiums, which have continued for three years, have made a significant contribution in inculcating EBPM within government.

UENO: What sort of initiatives did you emphasize during your term as Chairman?

NAKAJIMA: There was an effort made to emphasize external

public relations. We started to share research conducted in Japan via VoxEU and other portals and also started a YouTube channel. In addition, we also introduced budget management based on private enterprise systems and improved the personnel system. Although there may also have been other contributing factors, I am pleased that these initiatives seemed to be one reason we had almost no turnover. In addition, I also felt a sense of responsibility to complete the MITI policy history (1980~2000), which my predecessor Chairman Oikawa entrusted me with, and I believe that this will still serve as an important history book a thousand years from now. We also worked to improve databases and opened the R-JIP Database, Industry-Specific Nominal and Real Effective Exchange Rates of 25 Countries Worldwide, Japan Economic Policy Uncertainty Index, and others to the public.

On the other hand, a difficult issue, which I wanted to address, was responding to the new demands of the times, such as T20, blockchain analysis, and other important projects that emerge, but that do not easily fit into the conventional research framework, and putting in place the organizational infrastructure that can address such issues. I regret that I was unable to complete the establishment of a flexible system for meeting such demands and so I was forced to leave them to my successor.

UENO: Thank you very much. Lastly, what are your hopes for the future of RIETI?

NAKAJIMA: RIETI is a completely unparalleled policy think tank, and the most important “knowledge platform” in Kasumigaseki. It has a wonderful tradition in which that philosophy has consistently been maintained since its founding. As a Consulting Fellow, I also hope to continue to contribute to RIETI’s growth.

Interviewer :

Yuko Ueno

Chief Coordinator of Conference,
International Coordination and
PR Strategy, RIETI



RIETI and the Graduate School of Medicine at Kyoto University Initiated International Collaborative Research on COVID-19

The World's First Large-scale Epidemiological Study Combining Medical and Social Sciences

RIETI in collaboration with the Graduate School of Medicine at Kyoto University, began international collaborative research on general populace and healthcare professionals using an antibody testing kit developed by the Pasteur Institute in France. A joint press conference was held on Wednesday, January 6, 2021, prior to the start of the research.



Nagahiro Minato
President, Kyoto University



Makoto Yano
Chairman, RIETI

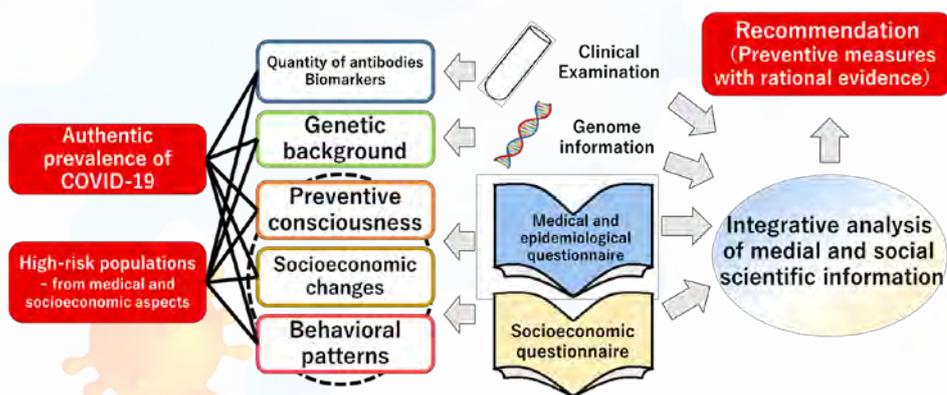


Fumihiko Matsuda
Director, Center for Genomic
Medicine, Graduate School of
Medicine, Kyoto University /
Director, Institut Pasteur-Kyoto
University International Joint
Research Unit

The number of people testing positive for COVID-19 is on a conspicuous upward trend worldwide. In this situation, asymptomatic individuals (those with subclinical infection) who are able to continue to conduct economic activities hold an important key in understanding the route through which infection spreads. For this reason, RIETI, in collaboration with the Graduate School of Medicine at Kyoto University, have initiated international collaborative research on residents of Nagahama City, Shiga Prefecture and healthcare professionals at Kyoto University Hospital using an antibody testing kit developed by the Pasteur Institute in France.

Since COVID-19 spreads from person to person, the way of thinking and behavior of each individual has a great influence on the spread of infection. In this study, therefore, we will attempt to understand the actual status of COVID-19 infection from two perspectives—medical and social science—by combining antibody testing and social scientific research on the general populace and healthcare professionals. Simultaneous collection of medical and social science information will make it possible for the first time to interpret physical characteristics such as an individual's genetic background, behavioral patterns, thought processes, and socioeconomic environment as well as the complex interactions of these factors, which are associated with the spread of infection. This will be the world's first large-scale epidemiological study combining medical and social sciences using comprehensive human data, including data from antibody testing.

Through integrated analysis of medical and social science data to determine the ideas, actions and other characteristics of people that are most effective at preventing infection, we will not only explore how to live with COVID-19 going forward, but also how to think and act in the event of new infectious disease outbreaks in the future in order to reduce their spread and limit economic and social losses.



* The event was held online.
Titles and affiliations are as of the day of the event.

Special Dialogue

The Transformation of the International Community and the State of Japan

Hideaki Shiroyama

(Vice Director, Institute for Future Initiatives/ Professor, Graduate School of Public Policy/ Professor, Graduate Schools for Law and Politics, The University of Tokyo)

Tetsuya Watanabe

(Vice President, RIETI)



The international order that Japan took as a given in the past is undergoing major changes due to the confrontation between the United States and China, climate change, infectious diseases such as COVID-19, and the digitalization of the economic system, increasing the risks to Japan's economy. In this context, RIETI has started a new Global Intelligence Project in 2021 to make policy proposals that comprehensively analyze economic security, the Chinese economy, climate change and the environment, and digital innovation. Hideaki Shiroyama, Vice Director at the Institute for Future Initiatives of The University of Tokyo, who was appointed as chairman of the project's study group, and Tetsuya Watanabe, Vice President of RIETI, who launched this project, met to discuss the project's significance.

WATANABE: Thank you for accepting the position of chair of the Global Intelligence Project (GIP)'s study group. In the GIP, we plan to conduct research on four main themes.

The first is economic security. Economic security involves all major powers such as the United States, Europe, and China, and it is said to be closely related to industrial policy and science and technology policy, or rather, it is a trend that determines the direction of such policies in each country. I would like one of the focal points of research to be what policy authorities in the U.S., Europe, and China think, what actions stakeholders such as legislatures and industry are taking, and what direction Japan should take given that context. The study group has been formed and the members selected, to be led by Professor Sahashi of The University of Tokyo, and I would like the group to study topics such as trends in the United States, trends in Europe, trends in China, and science and technology policy. The Ministry of Economy, Trade and Industry (METI) is also working on this issue, with export control authorities, for example, at the forefront, so we plan to have the participation of such policymakers as well.

The second theme is the view that should be taken on the Chinese economy. As a summary of the past and an outlook for the future, how will China transform in the 2020s, based on its process of growth up through the 2010s? We will conduct research to forecast the next decade while looking back on the past, including innovation and digitalization, state-owned enterprises, and structural reforms. Here, I would like to have Professor Asei Ito, also of The University of Tokyo, head up the

research.

The third theme takes a slightly different approach by focusing on the issues of the global environment and climate change. I think that we will see major movements in this area in the United States and Europe once the Biden administration comes into power. Europe may take steps toward concrete institutional design, especially regarding things such as carbon border tax, so we must analyze the impact on the Japanese economy and industry, and consider what institutional design is likely to succeed for Japan. Since there is also the question of legal consistency with the WTO, Professor Toshihide Arimura, who teaches environmental economics at Waseda University, will form a group of experts, and Professor Tsuyoshi Kawase of Sophia University will join the efforts regarding consistency with the WTO.

The fourth theme is digital innovation. I am consulting with Professor Yutaka Matsuo's laboratory at The University of Tokyo and others, and would like young researchers to join the project looking at topics such as digital innovation and governance in the future.

Since these four themes are all interrelated, I hope that we can examine the overall picture while bringing together knowledge from various fields such as international politics and economics, to explore the kind of future international order that Japan will envision and propose in the midst of globalization. So, I would like to provide opportunities for the professors who will head each theme to meet once every two to three months to coordinate their

research and engage in interdisciplinary exchanges of opinion. And I would like to ask you, Professor Shiroyama, to chair the committee coordinating those meetings. This is a pivotal time in which the postwar global system is changing, so I am counting on you.

SHIROYAMA: I think it would be good if we took a cross-sectional approach that covers the full spectrum, from identification of the overall risks to conceptualizing how to tackle international organizations and rulemaking including an analysis of each theme. Discussing the differences between Japan and other countries at international workshops would also be an effective way to deepen the conception.

WATANABE: Thank you. Since we are having this conversation, could you tell us a little bit about your research so far?

SHIROYAMA: My research to date has been in three main areas. The first has to do with international administration and global governance.

My initial research was on the regulation of international communications—things like frequency distribution, the standardization process, and the international tariff pricing system. Back then, it was still basically the time when the liberalization of telecommunications was just beginning, and I was looking at things such as how to adjust tariffs between countries, so for example, conducting comparative research on telecommunications, aviation, shipping, and other fields that have historically had to be managed across borders.

I became a researcher at the end of the 1980s, when trade friction was quite intense. What is similar but in a different way from now is that low politics became high politics; that is, things like economic and technical standards became politicized issues. It was a time when there were debates on the fact that the traditional willingness to cooperate on technical and functional issues was in fact not such a simple matter. It was my interest in international coordination related to these standards and technologies that led to my research in this area.

Initially, I focused on telecommunications, aviation, and shipping, but later, with debates on international standards for food safety and technical standards for automobiles, I looked at the questions of how to set standards in each country and how to create international harmonization. Perhaps as a matter of practical concern, I was interested in the formulation of such standards and how to create a mechanism around the issue of whether room would be left for each country to have national discretion in the WTO's TBT Agreement (Agreement on Technical Barriers to Trade) and SPS Agreement (Agreement on the Application of Sanitary and Phytosanitary Measures).

I'm a member of the Faculty of Law, but my background is in political science. So, a major area of interest for me was not

the topic of panels at the WTO, but rather the daily operations. When TBT and SPS committees accept notifications from member countries in advance of formulating regulations, there is a mechanism which requires information to be shared and screened. I wanted to know things such as how that mechanism worked.

As an extension of this, I'm interested in the issues of climate change, mentioned before, global health, the response to COVID-19, how international health regulations are applied in each country, and what kind of international framework will be established with regard to ocean plastic waste.

My second area of research had to do with science and technology and public policy, in which I compared risk assessment and risk management across various fields. In food safety, for example, a food safety committee had been established to explore how to respond to BSE (bovine spongiform encephalopathy) if it occurred in Japan, and I studied the risk assessment and risk management for food safety.

I was also interested in the regulation of nuclear power from a similar perspective. In regard to nuclear power, I had opportunities to be involved in a practical capacity; I was involved as a committee member of METI in the strengthening of safety regulations after TEPCO (Tokyo Electric Power Company)'s reactor shroud cracks cover-up (TEPCO's cover-up of nuclear power plant trouble in 2002), and as an advisor in the government's accident investigation of the Fukushima nuclear power plant accident (Investigation Committee on the Accident at the Fukushima Nuclear Power Stations of Tokyo Electric Power Company), in which I considered the ideal form of the regulatory system. Besides food and nuclear power, these days the work in this area is focused on public health and AI. In terms of AI, there are risks such as safety, security, manipulation of certain types of information, and disinformation.

When talking about risk management, there is no single risk, but an interconnection of various risks, so I think the question of how to manage that will undoubtedly be very important. The reason I became aware of this fact was the nuclear accident in Fukushima. We use the expression NaTech, which has to do with how natural disasters and technology disasters interact. For example, an earthquake causes a tsunami, which causes a technological disaster resulting in leakage of radioactive materials, which becomes a food safety problem.

Or take the risks associated with evacuation. Some people, including the elderly and the ill, have died due to being evacuated. They were exposed to the risk of moving from one place to another. How do we view the interconnectedness of such risks? I was interested in how we should respond to risks because it is possible that if we were to prepare a comprehensive risk response strategy based on safety and security, we might be able to respond better to a variety of risks. The World Economic Forum in Davos publishes an annual report called the Global Risks Report, through which a cognitive map of what risks various experts

consider important is updated. I wanted to make a Japanese version of that, so I put out a couple of working papers. I've also mapped how each risk is interconnected.

As for the third area, since I originally specialized in the field of public administration, I am interested in the policy making and implementation process itself. In the past, I researched cultural anthropology on the Japanese government bureaucracy in Kasumigaseki; specifically, I compared the decision-making of each ministry. This was before (Ryutaro) Hashimoto's administrative reforms. I conducted case studies on 15 of the 17 ministries and agencies at that time after young researchers, paired with managers in each ministry around the deputy director level, investigated each ministry's general system of decision-making and the system of deciding on personnel and budget proposals. These systems were very diverse, even for Kasumigaseki, and the most contrasting were the then-Ministry of International Trade and Industry (MITI, currently METI) and the River Bureau in the Ministry of Construction.

More practically, how do different stakeholders view things differently? Views were so different even just among the ministries in Kasumigaseki and when you go out into society, different stakeholders have completely different perspectives on things. So—I called this stakeholder analysis and problem-structured analysis—what do various actors think of as important environmental conditions and how does that affect their actions? What do they aim for, and what do they expect from others? I analyzed such issues and made cognitive maps of such stakeholders.

The truth is, it is interesting to be able to do this at the national policy level, but it is quite difficult when things are complex, so what was actually most interesting to analyze was local issues. For example, the idea of creating an LRT (next-generation streetcar system) in Utsunomiya City has been discussed for more than a decade, and I made a cognitive map around that. Stakeholder analysis and problem-structured analysis are types of practical methods and I'm interested in how to use them to create the global frameworks that you talked about at the beginning of our discussion.

In the research I'm doing now, ocean plastic waste, for example, has an impact on fish, of course, but ultimately there is also some kind of effect on human health. But the issue is rather about how the chemical industry will convert to a circular economy. This is a world in which people are involved from many points of view, from different perspectives. So, I think it would be interesting if we could propose some form of framework which would allow for an analysis of issues from various perspectives.

WATANABE: Thank you. I hope you will combine your areas of interest in this project. How should we develop the approach you just mentioned, as the global framework that we have taken for granted since the war is strongly shaken by future global trends?

And how do you see the new world?

SHIROYAMA: Speaking of risks being related to each other, there is the example of Fukushima, and I think that the current case of COVID-19 is truly another prime example. A situation that was a public health issue became not only that but also an economic problem. And if people shut themselves away in their houses, various social and domestic problems may become more serious. So, it really is a question of how such diverse things are related.

What is important in thinking about the future is not only that various things are related, but also how new systems develop. I think digital transformation (DX) is an example of that, and I think that at that time, various social systems will probably change in an interconnected way. In terms of a research field, it's something like transition management or transition research.

Transition management or research is an academic discipline that started in the Netherlands, originally as a government program. As the Netherlands had some sort of special account budget for North Sea oil field, they used it to conduct a transition management program to experiment with renewables in order to adopt a new energy system. That's how it started. At the same time, this also became an area of academic research, and it spread across Europe and is now practiced in various places internationally.

One of the key concepts in transition research is coevolution. Perhaps when society changes, there are top-down and bottom-up mechanisms. Top-down mechanisms change the system from the top. War and revolution, for example, are such ways of changing society. On the other hand, society can also change from the bottom-up, like with a social movement. Even with the issues of plastics and climate, as mentioned before, it is quite important what consumers are thinking, so the bottom-up mechanism is also major. But there is some intermediate factor at play; it is top-down and bottom-up, and yet it is neither. The fact that various elements of society change while interacting with each other will probably turn out, I think, to be an important mechanism of change.

For example, energy and healthcare systems, or agricultural systems, urban systems, the circular economy, and so on—these various systems are interconnected. But what each stakeholder sees is also different.

Taking that view and thinking about the interconnected risks that I mentioned earlier, since risks can also be opportunities, how will the entire system transition in the midst of those interconnections? At that time, there may actually be cooperation in unexpected places. I think it would be pretty interesting to understand these types of issues.

For example, here is something I once heard from a historian who specializes in transition (social change) of science and technology: Refrigerators were a very important technological development. The historical shift in refrigeration technology from primarily ammonia-driven to primarily electricity driven units

was caused by a transition in the energy system. The invention and improvement of refrigerators allowed for food to be stored in refrigerators, so the agricultural system naturally changed. The health system also changed because hygienic conditions were improved. In other words, a single technology causes society to change through a large variety of connections, including the agricultural system, health and hygiene systems, and the energy system.

In that sense, I think that DX, digital transformation, will have a big impact on society as a common interface that is involved in a variety of places. I think it would also be very interesting to think specifically about how such technologies can be utilized in the future.

WATANABE: I think that people such as yourself who are looking at it from the viewpoint of public administration can take a comprehensive view of society as a whole, but researchers often, relatively speaking, stay inside their own silos, so I thought that the approach that you just mentioned is very important.

SHIROYAMA: It's easy to say that we should take a multidisciplinary approach, but it's very difficult to put into practice. Previously, the Nuclear Safety Commission revised the seismic resistance evaluation guidelines in response to the Great Hanshin-Awaji Earthquake, and if you read the abstract of proceedings, you see that the people dealing with earthquakes and tsunamis and the engineers who design nuclear reactors could hardly converse with each other even though they all have backgrounds in science. The people who design nuclear reactors say that they cannot make designs without properly calculated probabilities. On the other hand, geology is not a field where experiments can be done, so it is kind of like the humanities and social sciences, so to speak; it is a field where people say that they don't have answers when asked about probabilities.

The question is how to communicate and create standards despite these issues? It took a lot of time—five years—to achieve some results, and because of that, I think that the damage was relatively low at the time of the Great East Japan Earthquake because of the amendment. But it was very difficult to put it together. In the end—I think it was a person in the former Science and Technology Agency, which was the secretariat at that time—someone with a civil engineering background just pulled it all together in one shot. It is rather difficult for researchers to work these things out, and I think that there will be a need for this kind of integration work in all kinds of fields in the future.

WATANABE: That is absolutely right. I think that it is difficult to come to compromises because of, as you mentioned earlier, the different ways that actors perceive things, through their own, individual paradigms. However, I think that what the world is asking Japan for right now is to cross such boundaries.

In that sense, we will start the GIP at RIETI in order to explore a new economic order. The background is that the postwar systems have changed, and the liberal international order has undergone a major transformation. As in the case with the U.S.-China confrontation, considerations for economic security as well as industrial policy and science and technology policy will change. We will look at how to view the rise of China's new economic model, and also individually at trends in things such as the environment and DX. I would like to explore how to create a new system, while considering how it interacts as a whole, moving ahead from the standpoint of a think tank while also holding dialogues with policymakers.

Can you give us any comments or advice on our GIP, Professor Shiroyama?

SHIROYAMA: I think it is a very meaningful project as a process for considering, understanding and responding to complex risks. There are four themes, and right now, there are many types of risks that are interconnected. Things that were previously separate, such as the economy and security, have become quite interconnected. One of the major epicenters is China. And, after all, a big challenge on a global level is that in addition to climate change, various other environmental constraints will impose conditions.

In terms of digital transformation, digital technology itself is in part a risk. There are, of course, things like cybersecurity and disinformation risks, but at the same time, digital technology is an enabler. So, I think it's good to look at both sides: what it makes possible and what the risks are.

In addition to this, there is the world of biotechnology. Issues such as gene editing can be involved in security, and there is also the issue of the bioeconomy, so I think these can be related topics which can be considered in our study project.

Within these several elements, some things are moving independently and some in interconnected relationships. Perhaps the most interesting thing in such research is finding unexpected connections. We can communicate with each other while conducting research individually. Or, since people out on the frontlines in society sometimes notice unexpected connections, I thought it would be very meaningful as a project if we could connect with each other while having various stakeholders come in for discussions.

WATANABE: Thank you for your valuable advice. With your guidance, I would like to make this a project that looks comprehensively at the research themes in each field.

(Honorifics omitted)

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Titles and affiliations are as of the day of the event



Global Intelligence Series

Date: November 25, 2020

The Geo-Political Tensions between the U.S.-China:

ASEAN caught in the middle, the future of the Japan and ASEAN cooperation and the prospects of semiconductor supply chains

Speaker: **Bilahari Kausikan**
(Chairman, Middle East Institute, National University of Singapore / Former Permanent Secretary at the Ministry of Foreign Affairs of Singapore)

Commentator: Yasuhiko Ota (Editorial Writer & Columnist, NIKKEI)

Moderator: Tetsuya Watanabe (Vice President, RIETI)

Three Factors

KAUSIKAN: Three fundamental factors about China profoundly influence the issues that are the topic of today's talk. First, China is a communist country, not in ideology, but in its political structure. Everything is subordinated to the interests of the Party and its control, which is of the highest value in a Leninist state, with no compromise: only tactical adjustments. Reform in a communist state always strengthens the rule of the Communist Party. Reform that could threaten Chinese Communist Party rule is impossible. Mr. Xi Jinping has stressed party control, party discipline and the first priority of the party in China is the achievement of its ambitions.

The second fundamental factor about China is that it is a civilizational state whose current form is the People's Republic of China, led by the Communist Party. In the Chinese Communist Party's version of Chinese history, the People's Republic of China is China and Chinese civilization has been redeemed by its leadership after a long period of weakness. For example, the South China Sea and the Senkaku Islands are important to China because they are inextricably bound up with a nationalist historical narrative of humiliation and ultimate rejuvenation and the realization of the Chinese dream under the Chinese Communist Party's leadership. Chinese nationalism as defined by the Communist Party is based on revanchism: the recovery of lost territory and the international acceptance of a hierarchy with China at its apex. Because this narrative is connected to the legitimacy of Chinese Communist Party rule, on this narrative and its territorial implications, there can only be tactical adjustments, and no fundamental compromise. This has profound consequences for China's relations with the U.S., Japan, India and the countries of South East Asia, among others.

The third fundamental factor about China is a subtler point than the other two. Sociologist Fei Xiaotong explained the essential differences between Western and Chinese society by reference to the rural foundations of Chinese society. Fei argued Chinese society has a deeply ingrained, "self-centered quality" and that traditional

Chinese society was selfish. These selfish personal networks challenge a Leninist party's basic principle of centralized rule and its claim to a monopoly on power and authority. Xi's "socialism with Chinese characteristics for a new era" is the latest attempt to assert the kind of impersonal and collective identity the Chinese Communist Party wants to promote.

These three factors account for both China's strengths and its weaknesses. The centralized and largely unaccountable power of a Leninist state buttressed by a popular nationalist narrative gives it the ability to make fundamental decisions and pursue them relentlessly with minimal long-term internal dissension. The ability to act decisively and over the long term is a great strength but only if a decision is correct. Deng Xiaoping's decision to reform and open up was correct, but Mao's decisions that led to the Great Leap Forward and the Cultural Revolution were catastrophic disasters.

By concentrating power in himself, Mr. Xi may have reintroduced a Maoist single point of failure into the Chinese system. This is particularly so because there is reason to wonder about the quality of the information that the leadership gets in a system where the cost of dissent or perceived dissent has been increased by Mr. Xi.

Exposure of China's ambition and its unsustainable growth model

I think such a misjudgment is responsible for the current state of U.S.-China relations. The initial mistake probably began towards the end of the Hu Jintao years after the global financial crisis. At that time, China seemed to have begun to believe its own propaganda about the U.S. being in inevitable decline. China may have taken the Obama administration's reluctance to exercise power as a new norm in American foreign policy. Mr. Xi doubled down on these mistakes. Mr. Xi's signature Belt and Road Initiative and the Made in China 2025 plan flaunted China's ambitions.

Mr. Xi's exposure of China's ambitions is a major factor in its relations with the U.S. and other Western and advanced economies. The nascent coalition of countries with concerns about China or

certain aspects of Chinese behavior was created not by the U.S. but by China itself. This is a remarkable failure of Chinese foreign policy. Once you reveal your ambitions and intentions, you cannot conceal them again.

Some of the structural reforms the U.S. has demanded strike at the core of the Chinese Communist Party's grip on power and therefore will not happen. It is impossible for any Chinese business to operate without the favor of the Chinese Communist Party. Even if new foreign investment and intellectual property protection legislation is passed, its interpretation and implementation will be subject to the Chinese Communist Party's interests and control. You can never have the rule of law in a Leninist state because the law is subordinate to the party's interests; it's never more than an instrument of the party's will to be used or not used as the party's interests dictate. In a Leninist state, the law is an instrument of political will and not a check on it.

At its 18th party Congress in 2012, the Chinese Communist Party officially acknowledged that the growth model that had brought it spectacular growth in the 1990s and the early 2000s was unsustainable. At the plenum of the 18th Congress in 2013, it announced a plan to restructure the economy with a "decisive role for the market in the allocation of resources." Xi Jinping's speech to the 19th Congress redefined the principal contradiction facing China as that, and I quote, "between unbalanced and inadequate development and the people's ever growing needs for a better life,"—in other words, rising expectations across a broad range of different policy domains.

China has to generate long-term growth to meet the ever-growing expectations of its people or the Chinese Communist Party's nationalist narrative will begin to ring hollow. A free market means less control and not just in economics. Appropriate methods of balancing political control and market efficiency are not clear.

China faces a vicious cycle. Sustaining growth to meet continuously rising expectations requires greater economic efficiency. Greater economic efficiency will require a new growth model based on a new balance between party control and the market. Establishing that new balance will necessarily entail risk. Mitigating the political risks will require growth. Sustaining growth will require a new model based on a new balance, and so on. By emphasizing Communist Party control, Mr. Xi has sharpened the difficulty of finding a new balance between political control and market efficiency.

Future prospects



China is a country like any other. Our strategic choices may be distorted to our disadvantage if we don't see the country as a whole, both with the country's strengths and its weaknesses.

The Biden administration is not expected to change direction on China, but its policy making will be more orderly and transparent. I don't think Biden will lift the present tariffs on China but he might slowly ease their implementation. Almost all semiconductor suppliers are in America or among America's allies. Biden may be more

generous in granting licenses than Trump, but the choice of who will get exemptions or licenses for what equipment or components will be essentially political. There will be furious lobbying in Washington, D.C. My advice to Japanese companies who hope to benefit from this lobbying process is to start now.

Some ASEAN countries thought the U.S.-China conflict would lead to relocation of production to Southeast Asia. Some relocation has happened but largely at the low end of the value chain. I think this shift will to some degree continue, but ASEAN should not expect this shift to be automatic at the high end of the value chain. ASEAN needs to move more quickly to have a chance to attract those entities that would move out of China. Common rules of origin in the RCEP may help.

How the digitalization of global supply chains and the so-called Fourth Industrial Revolution will affect ASEAN is an interesting question. New technologies like AI and 3D printing seem to be eroding the cost advantages of widely distributed supply chains. This jeopardizes ASEAN's plans to make Southeast Asia a common production platform.

Geopolitically speaking, the essential problem for the new Biden administration is that Trump was not all bad and Obama was not all good. This caused China to misunderstand the U.S. and problems in the rest of Asia, and Biden needs to take ownership of this. I hope that Japan can advise them. One of the most important things the Biden administration can do to reassure Southeast Asia and indeed the entire Indo-Pacific is to re-engage with the CP/TPP.

Comment

OTA: The flow of data in and out of China vastly exceeds the U.S. according to the Nikkei, China now accounts for 23% of cross-border global data; twice the share of the U.S. Other Asian and Southeast Asian countries now make up more than half, particularly Vietnam and Singapore, which means data flows between China and Southeast Asia have greatly increased.

The source of Beijing's power in the region is its connection with Southeast Asia, and when China becomes a global data superpower, it will control a vast resource that is very valuable to economic competitiveness. Data from foreign sources can provide a competitive edge in the development of AI, because the more and better data an entity can collect, the smarter the AI they can develop. Of course, hardware is also critical and fundamental to this process, as the ambassador mentioned, and here semiconductors are the key.

Japan, the U.S. and other major nations lack free trade agreements with Taiwan, and this is where Singapore has been smart in establishing such an agreement. Despite the likely continuation of U.S.-China tensions even with the new Biden administration, I believe that a stronger relationship between Japan and ASEAN can promote stability in the region.

(Honorifics omitted)

*This event was held online. Titles and affiliations are as of the day of the event



Looking Back at ICEF and TCFD Summit 2020: Future climate change action

Speaker: Hiromichi Mizuno
(Executive Advisor to the Ministry of Economy, Trade and Industry (METI))

Speaker: Nobuo Tanaka
(Special Advisor, The Sasakawa Peace Foundation (SPF) / Former Executive Director, International Energy Agency (IEA) / CEO, Tanaka Global, Inc.)

Moderator: Fumihiro Kajikawa (Director, Environmental Economy Office, Industrial Science and Technology Policy and Environment Bureau, METI)

Climate change is profoundly affecting all humankind. We must establish a virtuous cycle that both protects the global environment and facilitates economic growth. Japan's Ministry of Economy, Trade and Industry (METI) sponsored ICEF 2020 which focused on environmental technologies and the TCFD Summit which covers green finance. These events were held between October 7 and 10, 2020 toward realizing the goal of implementing a virtuous cycle of environment and growth. In this seminar Hiromichi Mizuno, METI Executive Advisor and TCFD Summit Ambassador, and Nobuo Tanaka, ICEF Steering Committee Chair, were invited to discuss these two summit meetings and the latest global trends relating to climate change.

Regarding the TCFD Summit

MIZUNO: The TCFD (Task Force on Climate-related Financial Disclosures) was originally a creation of the G7 Financial Stability Board. Initially, even among individuals affiliated with Japanese companies, there were many who believed that greater climate change-related disclosures would conversely be disadvantageous for Japanese corporations. In 2018, however, METI established the TCFD Study Group. Ever since, companies in Japan have gradually come to understand and accept that both risks and opportunities should be disclosed. The result has been that the number of Japanese organizations, which includes both companies and financial institutions, expressing support for the TCFD, has risen to 306. A total of 1,433 have signed on worldwide, so it is evident that Japan has far and away the greatest presence on the TCFD. In October 2019, the first global TCFD Summit was held in Tokyo. People from the energy industry, banking, exchange markets and a variety of other sectors gathered in Japan to discuss ways of utilizing the TCFD and its possibilities.

Following on the work achieved in 2019, private sector best practices were shared in 2020. In addition, a range of guidance and case studies from around the world have been presented that detail more advanced scenario analyses. Among these, JFE Steel Corporation, Japan's leading steel manufacturer, has conducted world-class, cutting-edge scenario analyses and Kirin Holdings also gained global recognition for its best practices. The TCFD Summit has been a forum for sharing such leading examples achieved by Japanese companies with the world and we are headed for an even

better platform for sharing climate risk.

At the opening, Prime Minister Yoshihide Suga and METI Minister Hiroshi Kajiyama both contributed welcome messages. What impressed me was that, in his address, the Prime Minister not only mentioned ESG (environment, society and governance), but also articulated the concept of Beyond Zero and declared that the Japanese government would lend its support for the TCFD so that it would be made use of to an even greater extent around the world. Minister Kajiyama heralded artificial photosynthesis and a variety of other technologies as well as Japan's Climate Innovation Finance Strategy 2020 and the companies that are taking on the Zero-Emission Challenge. I was strongly encouraged by these comments as they were much more concrete than previous statements voiced by high-ranking Japanese government officials.

Regarding the ICEF

TANAKA: The ICEF (Innovation for Cool Earth Forum) is a global conference that originated with a proposal put forth by the former Prime Minister Abe Shinzo. In 2020, as many cities went into lockdown on account of the COVID-19 outbreak, demand for fossil fuels and nuclear power decreased while that for renewable energies increased. I believe that we are now going to see the energy world transform at a greatly accelerated pace.

Against the backdrop of a rebound in CO₂ emissions that took place after the global financial crisis, the International Energy Agency (IEA) announced the Sustainable Recovery Plan in June. At

the ICEF as well, many participants enthusiastically commented on and discussed how tremendously important green stimulus is. The four technologies addressed by the IEA—hydrogen, batteries, carbon capture utilization and storage (CCUS), and small modular nuclear reactors—were also the focus of these technology discussions. The ICEF sessions attracting the highest number of viewers were those discussing hydrogen and CCUS. It looks like hydrogen and CCUS will be at the core of the energy transformation as it moves forward.

Japan has been very successful with liquefied natural gas (LNG). However, as we look ahead, I believe that Japan will need to shift away from LNG and be the world leader in the use of both blue hydrogen and green hydrogen. At one time, Japan showed the largest commitment to hydrogen, but its efforts have been surpassed by China and South Korea. Now, Europe has begun putting together a major policy package, which will bring about a sea change in hydrogen worldwide.

As for nuclear energy, the United States has put forward a proposal for “Flexible Nuclear Energy,” the aim of which is to develop nuclear systems that easily support renewable energies through the intelligent and flexible use of decentralized nuclear energy. Japan has joined with the United States in a project to build the Versatile Test Reactor in Idaho. Both Japan and the United States must take the lead on even more of these sorts of projects. Without nuclear power, it will be quite difficult for Japan to reduce CO₂ emissions. I believe that if nuclear power is to advance, Japan must take the initiative and set an example for the world with small modular reactors that are flexible, environmentally friendly systems.

Bioenergy with carbon capture and storage (BECCS) is a negative emissions technology, meaning that it removes more CO₂ than is emitted. At the ICEF, the Biomass Carbon Removal and Storage (BiCRS) roadmap was proposed. With biotechnology, there is always a trade off with other uses (food or agriculture), so the ICEF’s message was that the development of scientific and biological storage technologies should be an issue to which we increasingly direct our attention.

Another major focus of the ICEF is women. The International Finance Corporation (IFC) stated in its report that companies with a gender-balanced board of directors and management are more ESG responsive and the fact that this was a topic of discussion at the ICEF in 2020 is the most distinctive feature of this year’s conference. The energy industry is very much less diverse than other industries in terms of women’s roles and participation. I believe that it will be very beneficial for the global environment if more opportunities are created for women to contribute in the energy industry. Japan is very much behind the world in terms of gender equality and ranks the lowest of all OECD countries in this category. I believe that incorporating the gender pay gap and gender balance index into TCFD will change the world.

Q&A

Q: How should Japanese companies address sustainability?

MIZUNO: I believe that the drivers of future economic growth will be digital transformation (DX) and sustainability transformation (SX). The stock price of Tesla, the electric vehicle manufacturer, has surpassed Toyota’s. Tesla has attained such an evaluation because it emphasizes both DX and SX. If we take this into consideration, then Japan’s future economic growth strategy should, I believe, naturally harness both of these orientations.

Q: What is necessary for Japanese companies to change the way they regard these issues?

MIZUNO: The simplest way would be for the Prime Minister to declare that Japan will be net zero and to revise all METI plans so that they are net zero. That would certainly raise awareness immediately. In Japan, progress has been able to be made at blistering speed when the private sector gets on board after the government has pushed ahead just a little and both are pretty much in sync. So, unless the government operates with the intention of moving ahead of the private sector just a little bit, little or no progress will be made.

Q: Where is the value in tackling the issues of both climate change and gender together?

TANAKA: According to UN Women, peace agreements and consensus are easier to achieve if women participate in the process. Also, if women are involved in effectuating such accords, they last longer. As the TCFD puts forward a variety of disclosures about items that are friendly to the global environment, there will be extensive innovation if there is greater disclosure about women as well.

Q: What sort of possibilities and issues are present in GPIF and other major asset owners that encourage improvement?

MIZUNO: think that the most efficient way to make the entire global economy sustainable is to manage portfolios sustainably. Still, investors are ultimately followers and the job of finance is not to come up with innovative ideas on this front. The first step is for companies and other entrepreneurs to innovate. Governments need to make it easier for companies to do that.

Q: What factors have made the TCFD work as well as it has ?

MIZUNO: Protecting the environment is not a cost for corporations, but an opportunity. If that is explained in acceptable terminology in other countries, then it will work to promote Japan. In addition, climate change risk scenario analyses by the TCFD have shown that the stock price of Japanese companies will rise higher if we aim to achieve the 2°C target. I believe that this is what METI should promote.

(Honorifics omitted)

*This event was held online.
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Getting America Back in the Game: A multilateral perspective

Speaker: **Richard Baldwin**
(Professor of International Economics, Graduate Institute, Geneva)

Speaker: **André Sapir**
(Professor, Université libre de Bruxelles / Senior Fellow, Bruegel)

Moderator: **Tetsuya Watanabe** (Vice President, RIETI)

Returning to multilateralism

BALDWIN: The open rules-based multilateral trading system was wonderful and did amazing things in the post-war period. It increased prosperity and decreased world poverty while also allowing the emerging markets to rise without major issues. Trump broke it. Until December 2017, the world trading system was making progress. Starting in February 2018, the Trump administration started a war on trade, putting tariffs on many products from many different countries, including our allies. These countries retaliated and the Trump administration later turned to a forceful U.S.-China trade war which actually accelerated during the 2020 presidential campaign to involve all sorts of things that were damaging to confidence in the open, rules-based system.

We really need multilateral cooperation right now in 2021 for two, era-defining reasons. First, we need the trade system and multilateral trust and cooperation to fight the pandemic. Second, we have to fight this incredibly deep, broad and synchronized global recession. Although fighting a recession requires changes in domestic policy, international cooperation can help.

Reasons for opposition to trade in the U.S.

Biden's constraints are deep and real. Decades of globalization were great for the U.S. as a whole but they created winners and losers. As Pascal Lamy said it so eloquently, trade works because it's painful, and it's painful because it works. That is, trade leads to reallocation of resources within countries and more efficient economies as a whole but it also creates winners and losers. The lack of systemic domestic policies to help the losers in the U.S. adjust created deep resentment in U.S. working-class voters. Both automation and globalization were at fault, but trade is easier to blame than robots, so in the U.S. a consensus has emerged that globalization is a problem. Moreover, Trump's incessant attacks on multilateralism, trade and foreigners created a new rallying point for

U.S. politics that is now bipartisan and deeply-held.

It's important to understand how real this is. Brookings has analyzed the malaise in the U.S. working class and the basis of it. Real median hourly wages in the U.S. have been flat since 1970, and particularly since 1990. If you are in the middle of the income scale in the U.S., you do not think things are working. The UK is a little bit better but if you go to say France or Japan or many other G7 countries, this has not been the case; there's been a relatively widespread sharing of the prosperity.

Biden's approach

Biden said in a speech in July 2020 that there is no going back to business as usual on trade; we need new rules, new processes and voices for all stakeholders at the table, including leaders representing labor and the environment. The whole Biden project is to fix U.S. domestic economic problems first and once American workers are competitive enough to stand up to anybody, then perhaps we will return to opening up to trade. We don't think the world can wait given the current circumstances.

Biden's foreign and climate policies have a very different feeling. The key goals are restoring American leadership abroad and returning to a foreign policy based on American values and a climate policy based on science. Biden's plan includes a "blueprint to repair the damage wrought by President Trump and chart a fundamentally different course for American foreign policy for the world as we find it today—and as we anticipate it will be tomorrow."

Biden must address trade issues to achieve his foreign policy and climate goals. He must repair Trump's damage to trade in order to restore trust. He'll find trade to be a convenient part of the deals and compromises he needs to make with like-minded nations. It's both a carrot and a stick. Trade will be part of Biden's foreign policy and climate policy and that's an opportunity for people who care about trade.

Two-element plan



The plan we've developed has two elements. First, we have to work together and address the U.S. not just bilaterally. Second, we have to design mutually advantageous trade tracks that fit into Biden's foreign policy and climate goals by simultaneously restoring multilateral economic cooperation, starting slowly and hopefully creating a snowball effect.

What do I mean by working together? The group of nations approaching the U.S. needs to be small, representative and homogeneous enough to agree rapidly. Who will actually be in it is an intensely political discussion which people like us are not very well adapted to solving, but we have criteria. The group needs to be fully transparent with the rest of the world. It needs to operate in an informal and institution-less setting so that it can be flexible. History offers many examples of this. At the WTO, for example, this is sometimes called the green room process: a group tries to hash out the key tradeoffs and then bring everybody else along.

Biden recognizes the need for cooperation. If we look at world trade shares when Clinton took office, China had 1% and the U.S. had 13%. The EU was 37%, Japan was seven, Canada was three. The G7 accounted for roughly two-thirds of world trade. China is now 10 times larger. The United States is not much smaller, but Japan is 3%, Canada is 2%, and the entire G7 accounts for less than half of world trade. One country has gone from 1% to 10%, and that has changed the reality of the situation. The United States can no longer go it alone.

Biden's first hundred days



Biden has already said the U.S. is going to rejoin the Paris Agreement and the WTO and call for a NATO Summit on day one. The U.S. may stop blocking Ngozi Okonjo-Iweala's appointment as the new Director-General of the WTO. That could be the trade track in the day-one agenda. Biden is planning to repair alliances in his first hundred days. He may also remove the national security tariffs and terminate the low-quality trade deals that were struck. In leading the global fight against the pandemic, most of what he does will be domestic. There could be a truce at the WTO on trade in medical products where there are no tariffs but no restrictions, for example. Leading on climate will mostly be about carbon and it's going to be about science and being committed to changing the way economies run, but we could finish the fish subsidies at the WTO and we could finish the environmental goods agreement as a trade track in climate leadership. Leading the fight against the global recession will require continued cooperation, but it could involve a G20 commitment to no protectionism, the boosting of certainty by starting deliberations on WTO reform and addressing the China interface problem.

The idea is that like-minded nations should change the current mindset. A bilateral approach to the U.S. is less likely to work because the Biden administration is likely to delay any agreements with individual countries until its second term. Working together

with the U.S. on mutually advantageous trade tracks, restoring honest economic cooperation and helping tackle the global pandemic and the global recession could work. Maybe Japan could take the lead.

I'll end by saying that this is not anti-China. Trump created an atmosphere of hostility, distrust and acrimony, a toxic environment that stands in the way of adapting economic cooperation among all nations to the economic and political realities of the 21st century. China is and will be part of that reality.

The EU perspective



SAPIR: Brussels released a document a few days after Biden's election, called "A New EU-U.S. Agenda for Global Change." It starts by saying that the EU and the U.S. have a shared history, values and interests and that together we remain very influential globally and that we should see ourselves as an anchor for global cooperation. I'm sure that this is a document that any of us like-minded parties could have issued, including Japan and Canada.

The concrete elements in this document are fairly similar to our joint document here, putting forward issues on health, on climate and then on trade and technology as areas of global cooperation with the U.S. and other nations. For Europeans, and the EU institutions in particular, the fact that Biden is using the word "multilateral" in a positive manner, rather than as a dirty word as his predecessor did, is music to our ears. European leaders both at the European level and in the national capitals are very committed to multilateralism. We all have taken notice of how the world has changed, and sure, the world is very different than it was 10, 20 or 30 years ago, and that's good in that the system has worked and been inclusive. The G20 has played a very important role by bringing advanced countries and middle-income and emerging countries together.

Climate change, European patience on trade



An important narrative in Brussels that has been established with the new von der Leyen Commission is the European Green Deal. Biden's statements during the campaign about making climate change central to the transformation of the United States were also welcome. They mean that we can work together again toward global cooperation on those issues. Clearly, there are also some trade dimensions to climate issues and in the Green Deal. The European Commission will propose a carbon border adjustment measure by June 2021 as part of the European Green Deal. It's a measure whose nature has yet to be decided but this is an issue that obviously Europe will need to discuss not only with the United States but with all of its allies and other WTO members. Europe has insisted that its carbon border adjustment measure will be compatible with WTO rules, but the details will have to be discussed bilaterally with close partners and multilaterally at the WTO.

Europe is willing to be a bit patient on what it calls the bilateral trade irritants: measures that President Trump took, particularly on

steel and aluminum and then the Boeing/Airbus issues. Europe is not expecting that these measures will be removed on day one of the Biden presidency, but they definitely need to be addressed quickly. Brussels was shocked when the U.S. administration decided to impose steel and aluminum tariffs on its allies. People were completely unsettled by that and the trade relationship with the U.S. has been disastrous ever since. Restoring trust bilaterally and multilaterally is absolutely crucial. Europe understands that we are not going back to the Obama administration and that the world has changed, but we want to restore trust at the personal, bilateral and multilateral levels.

The WTO and the failure of bilateral approaches

On other trade issues, the WTO will be crucial. Europe is committed to leading WTO reform efforts and this is also what Europe expects from the United States, Japan and other like-minded countries. So, the notion of cooperation among like-minded countries is important. Our contribution is not anti-China, but at the same time, one of the realities of the changed world is the fact that China became a member of the WTO in 2001 and a number of issues have occurred since then. We need to look at the reality of the world and together with the United States, Japan, and other like-minded countries, we need to sit down with China and discuss WTO reforms that are not just related to China and its role but indeed other issues of extreme importance as well, including climate and digital matters.

BALDWIN: I think approaching this particular president bilaterally would actually be harmful and would not achieve progress. I think the Biden administration would like to ignore trade for most of its first term at least. The Biden administration was elected by a coalition of Democrats who have very different views on trade, and in general it's not a good time to be pro-trade. I think the Biden administration will try to stall anyone who comes to them with concerns. If instead a group of countries start to work with the U.S. and the U.S. starts to see this collaboration, including on trade, as a way of advancing its policy goals, it's more likely to achieve progress in the short term. The Biden trade policy appointees probably won't be approved very quickly because they will be controversial. The one United States Trade Representative (USTR) designate is unlikely to run into too many problems. I think we have to get into the mindset in the years ahead that trade will be a flanking policy to other policies, not the other way around.

The role of China

The second point is that this is in no way anti-China. In the group, we worried continuously about this being seen as ganging up on China, and I want to address that. Trump destroyed the atmosphere and engendered a hostile, distrustful and explicitly anti-multilateral one. On occasion he explicitly insulted many countries, including China. He was intentionally creating discord as a means of creating

opportunities. This is not the way an open rules-based system works. It's not the predictable, slow and very diplomatic way that the U.S. has run this system since World War II. This new toxic atmosphere stands in the way of adapting economic cooperation to the realities of today. Fundamental systemic changes have to be made for different types of capitalism to work together in a mutually advantageous trading system. China will be part of that.

China has benefited more over the last 20 or 30 years from the open and rules-based multilateral trading system than anyone else and they have an enormous stake in restoring trust and cooperation. I mentioned that the conflict between the U.S. and Japan in the 80s and between the U.S. and China now are very similar. Japan and the U.S. were able to move forward and I'm very hopeful that the same will happen with China.

Returning the U.S. to multilateralism is necessary to solve the problems and remove the distrust, hostility and acrimony produced by Trump. It's important to restore the U.S. instinct to act multilaterally by turning to economic cooperation, both as a carrot and as leverage, to advance U.S. interests and also to advance multilateral cooperation. We have to find a solution to the interface problem, and hopefully we will over the next four years.

Need to restore and reform the Appellate Body

SAPIR: One of the great irritants has been the demise of the Appellate Body. Restoring it needs to be a priority. The Trump administration wanted to go back to the GATT situation: a dispute settlement that was in the end purely diplomatic. I think that this option is not acceptable to most countries. We need a judicial element, so we need the Appellate Body to be functional again.

To my mind, much of the complaint that some WTO members have with the Appellate Body relate not so much to judicial but to the legislative function of the WTO. The judicial function of the WTO is inseparable from the legislative function, the rulemaking. The WTO has had difficulty modernizing its rules. That legislative function was broken and the judicial side needed to fill the space. There were disputes and the rules were unsatisfactory but the judges nonetheless had to interpret them. This led to a feeling among some members, including the U.S., that there was too much judicial activism. However, that judicial activism on the part of the Appellate Body was a reflection of the fact that there was too little legislative work. I think the two functions need to be seen as complementary of another rather than as substitutes.

Reforms of some WTO rules are needed. Negotiations are ongoing on e-commerce, and that's extremely important. Rules are also needed on climate issues, including carbon border adjustment measures. Modernizing the rules and restoring the Appellate Body should be viewed ultimately as a package. If one function does not work well, then the other will be placed under tremendous stress.

(Honorifics omitted)

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Titles and affiliations are as of the day of the event

List of Major Events in 2020

RIETI hosted more than 50 seminars and webinars in 2020, welcoming various speakers from Japan and overseas. The seminars covered a wide range of topics including the impact of COVID-19 on the economy, the U.S.-China conflict, the environment and energy, DX, and Japan-Asia cooperation. Please visit <https://www.rieti.go.jp/en/events/symposium.html> for the videos and summaries.

Date	Event
1/29	RIETI Open BBL Seminar New Renewable Energy Technology Development through Industry-Government-Academia Collaboration: To compete with the world
2/6	RIETI Open BBL Seminar Current Status, Prospects and Challenges of Impact Investing in Japan
2/12	RIETI Open BBL Seminar Critical Ideas in Confronting the Revolutionary Era of 5G & DX Technologies
2/26	RIETI Policy Symposium The Fourth Industrial Revolution and Japan's Economic Outlook
2/27	RIETI Open BBL Seminar Energy and Sustainability
3/4	RIETI Open BBL Seminar The Future of Mobility as Seen by Aftermarket Parts Makers
3/5	RIETI-CEPR Symposium Is Globalism at a Turning Point?
3/19	RIETI Open BBL Seminar Considering the Shape of this Country: Reflection and discussions on parliamentary democracy in Japan and the UK
3/24	CEPR-RIETI Webinar Economics in the Time of COVID-19: The economic impact on Asia
4/23	RIETI Open BBL Webinar The Economics of Luck and Chance
5/15	RIETI Open BBL Webinar Global Value Chains in the Aftermath of the Corona Shock
5/22	RIETI Open BBL Webinar Evidence-Based Policy Making: An example of the effect of new technology on employment
5/29	RIETI Open BBL Webinar Development of North Korean International Interests – Status of UN sanctions implementation, challenges they face, and the impact of the COVID-19 pandemic
6/4	RIETI Open BBL Webinar World Economic Outlook and the Asia Pacific Region –The Great Lockdown: A crisis like no other
6/12	RIETI Open BBL Webinar Outline of the 2020 White Paper on Manufacturing Industries (Monodzukuri): Transformative capabilities of manufacturing industries in an era of uncertainty (dynamic capabilities)
6/19	RIETI Open BBL Webinar Energy White Paper 2020
6/24	RIETI Open BBL Webinar How the Coronavirus Crisis is Affecting Japanese Businesses: Evidence from the stock market
6/25	RIETI Open BBL Webinar Next-generation Human Resource Development – The development of truly global HR leaders
7/3	RIETI Open BBL Webinar Energy, Climate Change and Gender After COVID-19
7/10	RIETI Open BBL Webinar [DX Series] Management in the Software Engineering Age
7/16	RIETI Open BBL Webinar White Paper on International Economy and Trade 2020 – The Corona Crisis and Globalization: Supply chains, human interaction, international cooperation and interdependence
7/17	RIETI Open BBL Webinar [DX Series] "Working" in a World that is Changing Drastically with DX: What are you working for?
7/22	RIETI Open BBL Webinar Macroeconomic Prospects and Policy Coordination in Asia to Overcome the Challenge of COVID-19
7/28	RIETI Open BBL Webinar Small Business under the COVID-19 Crisis: Expected short- and medium-term effects of anti-contagion and economic policies
7/29	RIETI Publication Commemoration Webinar "Economics of the COVID-19 crisis – Proposals and analyses" Series 1st: Economic Policy for the COVID-19 Crisis
7/30	RIETI Open BBL Webinar [DX Series] Global Catastrophes: Before, during, and after COVID
8/4	RIETI Publication Commemoration Webinar "Economics of the COVID-19 crisis – Proposals and analyses" Series 2nd: COVID-19 and Medical/Drug Discovery
8/5	RIETI Open BBL Webinar Where is Education Reform Headed? Economic education as the strongest growth strategy

Date	Event
8/6	RIETI Open BBL Webinar Effect of COVID-19 on Global Value Chains and Future Prospects
8/7	RIETI Publication Commemoration Webinar "Economics of the COVID-19 crisis – Proposals and analyses" Series 3rd: The COVID-19 Crisis, Labor Markets and Safety Nets
8/26	RIETI Open BBL Webinar The Institutional Sources of Energy Transitions: From the oil crises to climate policy
8/27	RIETI Open BBL Webinar [DX Series] Efforts for Increasing the Number of Female Engineers in the IT Industry and the Necessity of Such Efforts
8/31	RIETI International Webinar World Economies Surviving and Thriving through COVID-19 and beyond
9/10	RIETI Open BBL Webinar Will the 21st Century be "Asia's Century"? – Perspectives on the international order in the coronavirus era
9/14	RIETI Open BBL Webinar [DX Series] Deep Tech AI Startup Business Environment
9/30	RIETI Open BBL Webinar [Global Intelligence Series] The Turbulence of Indo-Pacific Regional Order and Japan-ASEAN Relationship
10/7	RIETI Open BBL Webinar [Global Intelligence Series] A Political Scientist's Look at the 2020 U.S. Elections
10/12	RIETI Open BBL Webinar [Global Intelligence Series] Looking Back at ICEF and TCFD Summit 2020: Future climate change action
10/20	RIETI Open BBL Webinar [Global Intelligence Series] The Mood of the American Voter on the Eve of the 2020 Presidential Election
10/23	RIETI Open BBL Webinar [Global Intelligence Series] Support for Restricting Liberty for Safety: Evidence during the COVID-19 pandemic from China, Israel, Japan, South Korea, Taiwan, and the United States
10/26	RIETI Open BBL Webinar [Global Intelligence Series] U.S. Sanctions Policy
11/4	Tohoku University-RIETI Online Symposium Survival Tools for 100 Year Lifespan – What are the risks and opportunities for an "ultra-aging society" in the new normal era?
11/9	RIETI Open BBL Webinar [DX Series] Online Education in the Coronavirus Era
11/11	RIETI Open BBL Webinar Annual Report on the Japanese Economy and Public Finance 2020
11/12	RIETI Open BBL Webinar [Global Intelligence Series] The Role of Study Abroad Returnees in China's Economic Development – China's success and challenges in global human resource competition
11/19	RIETI Open BBL Webinar Modern Hot-spring Treatments and Health Tourism: Revitalization of human mind, body and regional economies with the powers of hot-springs
11/25	RIETI BBL Webinar [Global Intelligence Series] The Geo-Political Tensions between the U.S.-China: ASEAN caught in the middle, the future of the Japan and ASEAN cooperation and the prospects of semiconductor supply chains
11/30	RIETI Open BBL Webinar [Global Intelligence Series] Israel Moves the World: How should Japan proceed?
11/30	Japan Society for the Promotion of Machine Industry – Economic Research Institute Online Seminar U.S.-China Conflict over Semiconductors and Japan: Japan's position in the deep 5G era
12/8	RIETI Open BBL Webinar [Global Intelligence Series] Build Back Better? The future of the U.S.-China economic relationship
12/10	RIETI BBL Webinar [Global Intelligence Series] Enhancing Intelligence: How AI changes the view of the world
12/11	RIETI Open BBL Webinar [Global Intelligence Series] Biden's Climate Change Options in a Divided Congress
12/16	Maison franco-japonaise Open Online Workshop The COVID-19 Outbreak and Public Health Issues: An interdisciplinary approach
12/16	RIETI Open BBL Webinar [Global Intelligence Series] Challenges and Opportunities for India-Japan Economic Partnership
12/17	RIETI Open BBL Webinar [Global Intelligence Series] Getting America Back in the Game: A multilateral perspective
12/23	RIETI EBPM Symposium In Order to Practice Evidence-Based Policy Making

*Events highlighted in green are the special symposiums and seminars (webinars).

Overview of the New EBPM Program in RIETI's Fifth Medium-term Plan

Policy Evaluation Program: Evidence-Based Policy Making



Daiji Kawaguchi

Program Director / Faculty Fellow, RIETI
(Professor, Graduate School of Economics/ Graduate School of Public Policy,
The University of Tokyo)

Biography

Dr. Daiji Kawaguchi received his Ph.D. from the Department of Economics, Michigan State University. His previous roles include Assistant Professor at the Institute of Social and Economic Research, Osaka University; Assistant Professor at the Graduate School of Humanities and Social Sciences, University of Tsukuba; and Professor at the Graduate School of Economics, Hitotsubashi University. Since April 2016, he has been a Professor at the Graduate School of Economics/Graduate School of Public Policy, The University of Tokyo.

Interviewed by **Masataka Saburi** Director of International Coordination and PR Strategy, RIETI

With the goal of accelerating Evidence-Based Policy Making (EBPM), RIETI launched the “Policy Assessment Program” in FY2020 to simultaneously promote two research subjects: the configuration of EBPM and the assessment of individual policies. In this interview, we asked the Program’s new director, Dr. Daiji Kawaguchi (Graduate School of Economics/Graduate School of Public Policy, The University of Tokyo), to provide an overview of the Program, explain how we should structure policy assessment, and describe the future goals of the Program.

Could you please tell us how you first became interested in EBPM and policy assessment, possibly in the context of your previous research?

During my University education, labor economics was my major. It is a subject area in which a significant amount of data has been available for a relatively long time, and the research in this field is predominantly focused on empirical analysis. From its early days, the approach of labor economics has been to identify “causality” rather than “correlation.”

In the case of minimum wage and employment, the government may decide to not raise the minimum wage because the economy is not thriving. However, when the economy improves, the government may consider it safe to raise the minimum wage. Thus, a strong economy definitely plays an important role in raising the minimum wage.

What would happen to employment if we raised the minimum wage by 10% when the economic conditions were stagnant? Labor economics has been studying this causal relationship since the early 1990s using an approach called “natural experiments.” I found it intriguing to be able to discover causal relationships by simulating an experiment when one cannot conduct an actual experiment. This was what drew me to EBPM.

Successful policy formulation is impossible without the knowledge of causal relationships. In order to decide whether or not to raise the minimum wage under the current pandemic, we should, while supposing that all other conditions will remain constant, deduce the extent of change in employment if we raise—or decide not to raise—the minimum wage.

I believe that the type of knowledge and expertise in economics

that would best contribute to policy formulation is the knowledge of the causal relationships that are relevant to the policy at hand. Such investigation has been carried out for a long time in positive economics as a social science, outside the realm of policy assessment, but I became specifically interested in estimating causalities using non-experimental data.

Could you give us an overview of the new “Policy Assessment Project” launched under RIETI's Fifth Medium-term Plan?

Considering this project, we are planning to examine a central theme of labor policy: the impact of the minimum wage on employment.

There is an argument that raising the minimum wage would eliminate businesses that can only pay low wages, increasing the overall productivity in Japan. However, there is also a concern that raising the minimum wage might reduce employment itself or cause small- and medium-sized businesses to go out of business. As such, how employment might change when the minimum wage is raised is a critical question in policy making. The policy assessment of this question will be one of the major pillars of RIETI’s new project. Our plan is to uncover it using government statistics and other resources.

Another pillar of our research is the impact of major negative economic shocks on employment adjustment. One of the previous projects at RIETI analyzed employment adjustment in the aftermath of the 2008-2009 financial crisis. We examined how employment adjustments were implemented by exporters who had experienced enormous negative shocks due to the crisis, and our

results indicated that their employment adjustments barely affected their full-time employees, affecting only their part-time employees. The study was an empirical analysis and used only data from the Basic Survey of Japanese Business Structure and Activities from the Ministry of Economy, Trade and Industry (METI). The new project will use economic statistics with a sampling frame of the Economic Census from the Ministry of Internal Affairs and Communications. By combining the Basic Survey of Japanese Business Structure and Activities with data from the Basic Survey on Wage Structure of the Ministry of Health, Labour and Welfare, our investigation will elucidate how the companies that were hit by the strong-yen shock adjusted their wages.

Another issue is the inequality between men and women. The “2030” (*nimaru sanmaru*) policy to increase the percentage of women in managerial positions to 30% by 2020 is being reevaluated as it became impossible to achieve this goal by the 2020 fiscal year. The Japanese government has implemented various policies, such as the Act on Promotion of Women’s Participation and Advancement in the Workplace and the “Next Generation Act” (Act on Advancement of Measures to Support Raising Next-Generation Children), to create a society in which it is easier for women to work. Our project will also analyze whether these policies have had initial impacts. One of the core goals of our project is to assess Japan’s labor policy from several perspectives.

Could you tell us how policy assessment—including your work as the Director of the Center for Research and Education in Program Evaluation, The University of Tokyo—should change in the future?

It is important for policy assessment to quantitatively demonstrate the results of policy implementation. By estimating policy outcomes, such as the degree to which a given policy improved outcomes or the level/number of side effects it produced, we will be able to assess and determine the allocation of scarce resources used to achieve the overall goal.

For example, to increase the female employment rate, different policy options are available, such as invoking the Act on Promotion of Women’s Participation and Advancement in the Workplace, which impacts how companies manage employment, developing an environment where it is easier for women with children to work by establishing day care centers, enhancing the childcare leave system to make it easier for companies to continue employing women. We also need to remember that different policy options entail different costs. Let’s consider if we want to increase female employment by 1%. If we estimate values for the percentages by which different policy options will raise the female employment rate, we will be able to estimate how much each policy will cost to raise the female employment rate by 1%. By conducting a number of similar studies, we will be able to deduce which of the 100 policy options provide the best relative cost effectiveness. The significance of working on EBPM as an

organization at RIETI or the Center for Research and Education in Program Evaluation, The Tokyo University, lies in the fact that it creates a large pool of knowledge that will allow us to consider the entire spectrum of policies and identify the one with the best cost effectiveness. Of course, it goes without saying that the efforts of individual researchers are the most important factor.

How is COVID-19 affecting labor and employment?

I believe that the expansion in telework will probably have long-term impacts. On the one hand, this may help individuals achieve a better life-work balance. On the other hand, telework is not an option for individuals who must go to their workplace to provide services to customers in person. It has already been suggested that these individuals will be significantly impacted. A RIETI Discussion Paper (Faculty Fellows Kikuchi & Kitao) argues that COVID-19 is a shock that has triggered inequality. I think that this is an important finding.

Another question is how to assess the outcome of telework. Under the existing, predominant wage system, only a small number of individual workers come under a performance-based system. It is common to pay salary based on the input, such as remaining in the office for a certain number of hours each day, rather than paying salary based on the output. Generally, a system based on output is challenging to measure as most workers work in teams. If individuals are forced to work from home, I believe that there will be a significant decrease in productivity, unless we carefully examine methods of measuring the output and structure the compensation system accordingly. The response of society, companies, and corporate managers when jobs, whose output is challenging to measure, are switched to telework, would be a compelling research topic.

One other point I would like to mention is the importance of cities. The belief that the concentration of individuals in cities improves productivity has caused an over-concentration in Tokyo. One of the significant research topics is the change in the importance of cities when telework becomes a viable option in the aftermath of COVID-19. In addition, we should examine how the Japanese government will formulate the national land policy. While there was an argument favoring dispersion of the population to non-metropolitan areas of the country, a significant number of economists assert that dispersing the population is undesirable as it diminishes the agglomeration advantage of Tokyo. I am personally very interested in this debate as the balance may shift considerably.

Before we go, could you share your message to RIETI?

RIETI acts as a bridge between policy making and academia. There have probably been times when information from RIETI has been utilized to examine policy options. RIETI has strong public relations activities, and I hope that we remain strong. As the Program Director, I would like to contribute to this effort.

*The interview was held online.
Titles and affiliations are as of the day of the event

Characteristics of Firms Transmitting Data across Borders: Evidence from Japanese firm-level data

Eiichi Tomiura, Faculty Fellow, RIETI | Banri Ito, Research Associate, RIETI | Byeongwoo Kang, Hitotsubashi University

It is not just international trade and foreign direct investment (FDI), but also cross-border data flows that are increasingly critical for our economies in the digital age. However, little is known about the characteristics of firms actually transferring data across borders. We investigated differences in firm productivity and other basic characteristics by linking the results of our unique corporate survey on cross-border data flows that we conducted at RIETI with government statistical firm-level data.

First, to understand the value and content of firms' cross-border data flows, we conducted a survey in 2019 of large- and mid-sized firms in the manufacturing, wholesale, and information-related service industries in Japan and collected responses from 4,227 firms, a response rate of over 20%. We found that the proportion of firms collecting data overseas and transferring data across borders was small despite the fact that this survey did not include small firms. For more specific details on how the survey was conducted and other information, please see Tomiura et al. (2019). Next, in order to learn how these firms that do transfer data across borders differ from other firms, we linked the results of this unique survey with firm-level micro-data, data derived from METI's Basic Survey of Japanese Business Structure and Activities.

The results show that the productivity of firms actively collecting data not only domestically but also overseas is the highest, followed by firms that only collect data domestically. The productivity of firms not collecting data was the lowest (see Figure). This ranking is seen regardless of the measurement of productivity, whether it be labor productivity or total factor productivity. Compared to firms that do not collect data, firms engaged in data collection domestically are on average 6% more productive and firms collecting data both domestically and overseas are 14~18% more productive. Moreover, when quantile regression is conducted for the productivity distribution, this ranking is verified in comparisons of sales and number of employees. The fact that the more globalized a firm is the higher its productivity is consistent with the productivity ordering for firms engaged in exporting and FDI, confirmed in accumulated studies of international economics. Firms engaged in cross-border data transfers are also actively expanding internationally through exports and FDI. Also, of the new technologies that have attracted attention in recent years, 3D printing has the potential to tremendously affect global trade in dyes, components, materials

and other goods as digital data for design and other processes is transferred. Our analysis also revealed that globalized and highly productive firms are very active in adopting 3D printing.

Figure: Data Collection and Productivity Ordering



Note: Labor productivity is calculated as per-worker value-added. Total factor productivity is calculated as the residual of the (Cobb-Douglas) production function using both capital and labor as inputs. Both show the average ratio normalized to one for firms not engaged in data collection.

Even among firms collecting data overseas, noteworthy differences were observed in terms of firms' characteristics. The productivity premium is especially evident for firms that responded they have been affected by recent regulations on cross-border data transfers (EU's General Data Protection Regulation (GDPR) and cyber security regulations imposed by China and other emerging countries). While it is difficult for an academic survey to directly capture the economic value and content of data being transferred by individual firms, it is possible to conjecture differences in the quality and quantity of data transfers based upon whether firms are affected by data transfer regulations. From the results of our analysis, we conjecture that firms which are actively collecting data and have introduced the Internet of Things (IoT) overseas are more likely to be impacted by cross-border data transmission regulations as it is conceivable that a large quantity of sensitive data is exchanged with overseas subsidiaries and other affiliates. Although such firms are limited in number, they are large and highly productive, and also globalized, so they have extensive influence on many other firms both domestically and internationally. For this reason, the impact that

digital protectionism may have on corporate activity cannot be underestimated.

*For details of the analysis, refer to Tomiura E, B. Ito, B. Kang (2020), "Characteristics of Firms Transmitting Data across Borders: Evidence from Japanese firm-level data," RIETI Discussion Paper No. 20-E-048 <https://www.rieti.go.jp/jp/publications/dp/20e048.pdf>

NON TECHNICAL SUMMARY

Measuring Business-level Expectations and Uncertainty: Survey evidence and the COVID-19 pandemic

Cheng Chen, Clemson University | Tatsuro Senga, Fellow, RIETI | Hongyong Zhang, Senior Fellow, RIETI

Uncertainty is often mentioned in the official economic outlook and forecasts. While it is common to see statements such as "there are extremely high uncertainties over the consequences of COVID-19 and the magnitude of their impact on domestic and overseas economies" (Bank of Japan Outlook Report), data on business uncertainty is non-existent in Japan. To measure business' subjective uncertainty, we conducted a unique firm survey twice in 2017 and 2020 based on a sample of the Basic Survey of Japanese Business Structure and Activities conducted by the Ministry of Economy, Trade and Industry (METI).

This firm survey is novel in that we attempted to directly ask firms what sort of subjective probability distribution they keep in mind with regard to future macro-economic prospects as well as prospects pertaining to their own economic environment. More specifically, as shown in Table 1, we asked about five scenarios related to future prospects and designed the survey so that it would also ask the expected probability of each scenario. This sort of survey has also been conducted in the United States and Britain. Variance in future outlooks can be calculated from responses obtained to construct a firm-level uncertainty index. The second time the survey was collected was in January 2020, so the COVID-19 outbreak had begun to spread in China. This made it possible to analyze what sort of impact an unforeseen event has on a firm's future outlook. We present an analysis focusing on this point here.

In January 2020, the Wuhan seafood market was shut down, after which related news continued to be broadcasted. Around the time when Wuhan itself was locked down, it was highly likely that firms would find it difficult to create a forecast about economic activity in China. Nevertheless, it may also be remembered that firms had not yet been able to anticipate the subsequent worldwide economic stagnation, either. Accordingly, to verify this point, we compared firms that answered the survey in early and mid-January to firms that answered the survey between late-January and early-

Table 1: Survey Items Relating to Firm Sales Forecasts and Forecast Probability

Question 12. Your firm's sales (non-consolidated basis)

<Reply Column>

Expected FY2019 performance	5 scenarios, from lowest to highest	FY2020 Outlook/forecast	
		Approximate value of sales	Percentage likelihood
Unit: million yen	(1) Lowest	Million yen	%
	(2) Low	Million yen	%
	(3) Medium	Million yen	%
	(4) High	Million yen	%
	(5) Highest	Million yen	%
			Total 100%

Note: Excerpted from the FY2019 "Business Plans and Expectations Survey" Form

February in order to analyze whether the level of sales that firms expected had declined and whether variance in sales expectations had increased. Also, the difference in sales expectations which we analyzed, which were confirmed based upon different timing when the firms submitted their replies, could be found to be noteworthy depending upon whether the firm has an import-export relationship with China. From our analysis, we found that, as of January, the COVID-19 outbreak in Wuhan had not yet lowered sales expectations of companies with a business relationship with China in comparison to companies without a business relationship with China. On the other hand, we confirmed that there was a noticeable rise in variance in sales expectations of companies with a business relationship with China compared to companies without a business relationship with China (Table 2).

In this way, based upon an event in which an unexpected shock occurred during the process of conducting the survey, our study analyzed what sort of impact the shock had on firms' future outlooks and found that, when confronted with a shock, there was an increase in variance in outlooks prior to firms' expected sales

outlook being revised downward. The results, which confirmed the presence of uncertainty prior to firms tending toward pessimism, is new knowledge obtained from this firm survey and will likely be also beneficial for policymakers in charge of the current economic situation as well as the outlook. This point has been used, for example by the Bank of England in its Decision Maker Panel surveys of variance in firms' sales forecasts to prepare uncertainty metrics as well as to prepare documents for policymaker meetings

and economic outlooks. The Federal Reserve Bank of Atlanta also conducts similar surveys. If Japan also began to collect data about the uncertainty that firms face, this information might similarly be beneficial for policy and research.

*For details of the analysis, refer to: Chen, C, T. Senga, H.Zhang (2020), "Measuring Business-Level Expectations and Uncertainty: Survey Evidence and the COVID-19 Pandemic," RIETI Discussion Paper No. 20-E-081 <https://www.rieti.go.jp/publications/dp/20e081.pdf>

Table 2: Variance in Firms' Expected Sales and COVID-19

	(1)	(2)	(3)	(4)
	Sales ^{PC} _{sd}			
1(year = 2020)	-0.00215 (0.00474)	-0.00268 (0.00447)	-0.00225 (0.00514)	-0.00255 (0.00500)
1(year = 2020) * 1(date > Jan./26)	0.00729+ (0.00455)		0.00160 (0.00516)	
1(year = 2020) * 1(date > Jan./22)		0.00671+ (0.00413)		0.00229 (0.00481)
1(year = 2020) * China			-0.00175 (0.00599)	-0.00173 (0.00596)
1(year = 2020) * 1(date > Jan./26) * China			0.0173* (0.00996)	
1(year = 2020) * 1(date > Jan./22) * China				0.0137+ (0.00885)
log (firm age)	-0.0409 (0.0534)	-0.0328 (0.0485)	-0.0323 (0.0501)	-0.0277 (0.0477)
Firm Fixed Effects	Yes	Yes	Yes	Yes
Prefecture Fixed Effects	Yes	Yes	Yes	Yes
N	612	694	612	694
R ²	0.689	0.692	0.695	0.696

Sales^{PC}_{sd} is the standard deviation of expected sales growth rates (across five bins).
Std. err. clustered at firm level. +0.20 *0.10 **0.05 ***0.01.
Dependent variable is trimmed out from both below and above at 1% level.
Firms that answered our survey between Jan./20/2020 and Jan./22/2020 (or Jan./26/2020) are excluded from column 1 (and column 2).

ON TECHNICAL SUMMARY

Emissions Trading and International Trade

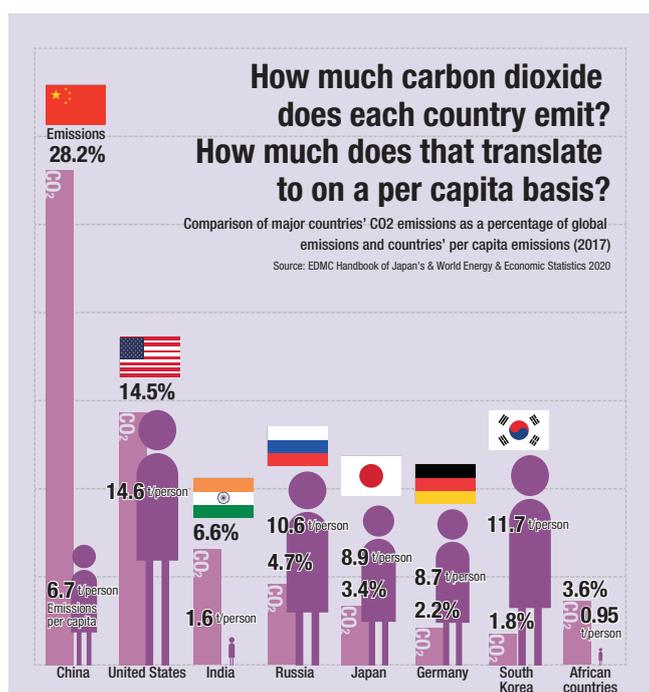
Jota Ishikawa, Faculty Fellow, RIETI | Kazuharu Kiyono | Morihiro Yomogida, Sophia University

The global average temperature increased by 0.85°C between 1880 and 2012 due to the effects of greenhouse gases. Climate change caused by global warming has led to torrential rains, droughts, heat waves, severe typhoons and hurricanes as well as other unusual weather conditions being observed more frequently than in the past. These events continue to have a very severe impact on our lives. Carbon dioxide accounts for a majority of the effects of these greenhouse gases. CO₂ emissions by the major countries in 2017 are given in the following diagram.

The 1997 Kyoto Protocol permitted emissions trading as a measure to counter global warming. The EU had the idea that market mechanism-based emissions trading would be able to achieve greenhouse gas reduction targets at minimum cost, so it introduced the EU Emissions Trading System, which works on the cap-and-trade principal, in 2005.

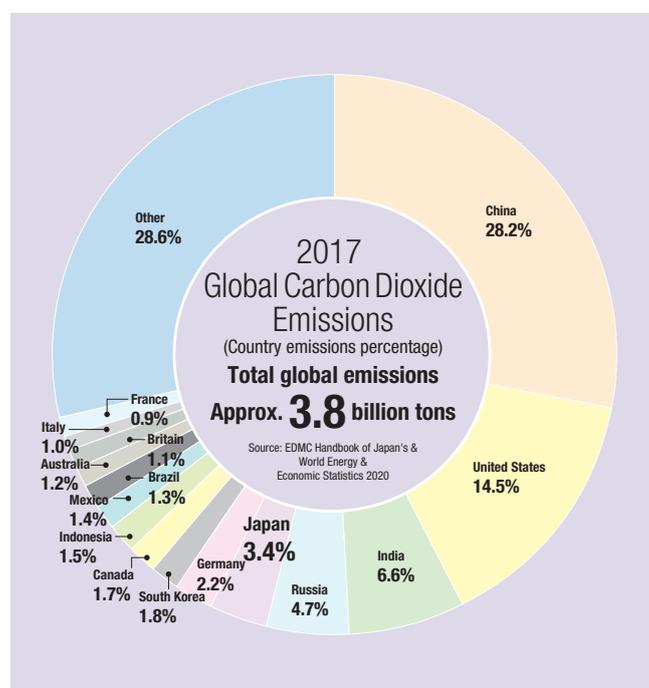
According to the World Bank, 28 emissions trading schemes have been introduced worldwide as of August 2020 and three more are in the planning stage. However, international emissions trading is limited only to the EU emissions trading system.

Figure 1: Comparison of Major Countries' CO₂ Emissions as a Percentage of Global Emissions and Countries' per capita Emissions (2017)



Source: EDMC Handbook of Japan's & World Energy & Economic Statistics 2020
Available through the Japan Center for Climate Change Actions website (<https://www.jccca.org/>)

Figure 2: Global Carbon Dioxide Emissions (2017)



Source: EDMC Handbook of Japan's & World Energy & Economic Statistics 2020
Available through the Japan Center for Climate Change Actions website (<https://www.jccca.org/>)

Under the 2016 Paris Agreement, all participating countries (197 countries and regions, of which 189 have ratified the agreement as of August 2020) have specified greenhouse gas reduction and mitigation targets for 2020 and beyond, so emissions trading is expected to expand.

In this paper, we construct a simple two-country, two-good, general equilibrium international trading model and theoretically analyze what effect international commodity and emissions trading has on global warming and welfare. The model is a hybrid with both Ricardian and Heckscher-Ohlin features. Key findings are explained below.

When a comparative advantage stems from only the difference in per-capita emission allowances, it cannot successfully reduce global warming, and commodity trading may in fact increase greenhouse gases worldwide. If the comparative advantage also relies on a difference in commodity production technology, encouraging commodity trading to specialize in goods that are efficiently produced or that involve less greenhouse gas emissions in the production process may lead to a decrease in global emissions. Nevertheless, international emissions trading never mitigates global warming and it may in fact increase greenhouse gases worldwide because the unused permits could be traded for use in production of emission-intensive goods. Whether or not international emissions trading improves welfare depends on what sort of effect that has on terms of trade and global warming. Even if a country is permitted a more generous per capita emissions quota than other countries, equilibrium in international emissions trading would exist as that country imports emissions permits. This may significantly deteriorate welfare as not only is global warming aggravated, but terms of trade are worsened.

The policy implication of the aforementioned results is that a prudently designed system is necessary for international emissions trading. If emissions trading is to be introduced, then emissions quotas should be strictly applied, particularly for developing countries. Although it has been said that generous quotas should be afforded to developing countries in order to encourage them to adopt emissions trading, that opinion remains controversial. Particularly, the argument that generously granting emissions permits to developing countries (allowing for a surplus of emissions permits to be sold in the emissions trading market) will contribute to developing countries' welfare, is not necessarily correct.

*For details of the analysis, refer to: Ishikawa, J, K. Kiyono, M. Yomogida (2020), "Emissions Trading and International Trade," RIETI Discussion Paper No.20-E-080.

**Views expressed in these Non Technical Summaries are solely those of the individual authors, and do not necessarily represent the views of the RIETI.

Integration of Arts and Sciences

Kazuo Yamaguchi Visiting Fellow, RIETI



RIETI is tackling two new major challenges: “evidence-based policy making (EBPM)” and “integration of arts (humanities) and sciences.” I have been involved in RIETI’s project concerning the former as the director of the EBPM research committee, but I have no direct involvement in the project concerning the latter. However, in this column, I would like to offer my thoughts on the integration of arts and sciences. Discussion on the integration of arts and sciences tends to focus on industrial challenges, such as the development of products sensitive to people’s tastes and potential needs, and questions like for which social issues may artificial intelligence (AI) be effective in providing solutions. However, like “cram-free education,” the “integration of arts and sciences” could end up being nothing more than a slogan unless its admirable goal is accompanied by solid methodology. My main specialty is developing and applying statistical models for the purpose of examining social phenomenon, which is related to the integration of arts and sciences. However, talking about the specialty of a person like me who has an unusual background—I became a sociologist after studying mathematics—is unlikely to provide useful insights to most people. Therefore, I will discuss this matter from a broader perspective.

I will begin by talking about *Nihongo No Horobiru Toki* (When the Japanese Language Perishes) (2008), a book written by novelist Minae Mizumura, although this may appear to have little to do with the integration of arts and sciences. This book points out the existence of three categories of languages—“mother tongues,” which are spoken languages that people learn to speak as they grow up, “universal languages,” which are written languages used mainly for communication and mutual understanding with the outside world (in Japan’s case, *Kanbun* (written Chinese) formerly served as the universal language but that has been replaced by English in the modern era (I also think that mathematical formulas constitute a universal language)), and “national languages,” which are state-promoted written “standard” languages with cultural inheritances from the mother tongues—and describes the interactions between and changes in those categories of languages. The book also sounds alarms over the gradual loss of the unique Japanese cultural elements in both the mother tongue and the

national language amid the growing influence of “universal languages” due to globalization. I would also like to mention *The Animal Babel*, a story included in *Kentoshi* (2016)¹, a novel by Yoko Tawada², the English translation of which received the National Book Award, a prestigious U.S. literary prize under the title *The Emissary*. It goes without saying that *The Animal Babel* alludes to the story of the Tower of Babel in the Old Testament. In Tawada’s story, although the animals speak the same language, they are unable to understand each other at all apparently because they express themselves based on their respective, different cultures and values. At last, a squirrel, acting as a “translator” who best understands and communicates what everyone says, is chosen as their leader.

The important point is that the animals’ failure to understand each other despite speaking the same language is a problem that has something in common with the problem posed by the deepening specialization of academic study in the modern era. In individual fields of study, be they natural or social science fields, as specialization has deepened, the body of technical terms shared exclusively among experts has expanded, with the result that experts rely heavily on terminology when communicating among themselves. Most technical terms constitute a “universal language.” The meanings of technical terms, whether used by Japanese or English speakers, are common worldwide. That is because technical terms have developed as a means for experts to facilitate accurate and efficient communication among themselves. There is no doubt that the accuracy and efficiency of communication based on technical terms has contributed to the development of specialized fields of study. However, once experts have become accustomed to the efficiency of terminology, it becomes difficult and painful for them to make themselves understood by laymen. To give an extreme example, it is all but impossible for mathematicians to explain mathematical theories without using formulas, which constitute their “universal language.” Likewise, economists would find it very difficult to explain the accurate meanings of technical terms familiar in their own circles, such as “elasticity” and “fungibility,” to people without knowledge of economics.

However, one challenge faced by modern society is the increasing number of problems that cannot be resolved without cooperation among experts from different fields and between experts and laymen. The University of California San Francisco, which is a well-known specialized medical school, decided to employ “interpreters” in light of the widespread discontent among patients with the doctors’ use of technical terms in explanations about medical conditions and diagnosis results. The “interpreters” are experts responsible for facilitating doctor-patient communication by rendering medical terms used by doctors into plain language on behalf of patients. In the IT industry in Silicon Valley, “product director” has become an important position. Product directors are capable of communicating with people from different corporate divisions, including technology development, marketing, and sales divisions, and have a final say over new products. To engage in meaningful dialogue with the technology development division, product directors must have computer science knowledge, while meaningful dialogue with the marketing division requires statistics literacy. The ability to listen to and understand the “voices from the frontlines” is essential for meaningful dialogue with the sales division. Meeting all those qualifications is, in a sense, tantamount to acquiring multilingual and multicultural literacy. Let me cite an example in the Japanese business world. Kazuko Takamatsu, who became the first woman to rise to a senior executive position (vice president in charge of the environment) at Sony, created a unique career path as an expert on product manuals. Previously, manuals had been written by the engineers who developed the products. However, Takamatsu pointed out that the manuals written by the engineers were not consumer-friendly because they were full of technical terms, and she went on to create consumer-friendly manuals for the first time. As engineers wrote most of the manuals for Japanese companies in those days, Sony’s “manuals reform” is said to have significantly increased sales of Sony products.

The common implication of those three examples is that fostering talent who can cultivate mutual understanding and trust among experts from diverse fields and between experts and laymen is an important factor in the integration of arts and sciences. In practice, how can such talent be fostered? I believe that the key is reforming education, particularly liberal arts education. In the United States, many universities have designated (1) foreign language study, (2) civilization, (3) statistics, and (4) computer science as mandatory subjects that students in this contemporary society must study regardless of whether they major in liberal arts or sciences. There is a great variety of course options that students are able to choose from in terms of level and substance depending on what they learned before they entered university. The “civilization” course typically provides education on the history of the development social philosophies and social thoughts such as democracy, human rights, and rationalism side by side with the history on the development of civilizations. Of the above topics,

(1) and (2) are arts subjects, while (3) and (4) are science subjects. However, there is an explicit understanding that knowledge in all those fields should be shared by all students who receive a university education, and it may be said that this understanding forms the basis of the integration of arts and sciences.

When we think about groups of fields of study— as opposed to individual subjects—ranging from sciences to arts, including “mathematics and physical sciences,” “life sciences,” “social sciences” and “humanities,” it is important to consider what elements they share. In my opinion, common elements include “the capacity to accurately describe using words and symbols,” “conceptualization,” “analysis,” “critical thinking,” and “professional ethics.” Of particular importance is “analysis.” Analysis itself has various elements, including “situational assessment,” “generalization and classification,” “functional understanding of concepts,” “quantification,” and “causality.” For example, it is said that in Japan, the teaching of Japanese as a school subject tends to focus on the interpretation of the words of fictional characters and essay writers to understand their feelings and emotions, while the teaching of English at American schools concentrates mainly on “analysis.” Let me illustrate what this difference means by assuming a case in which Mizumura’s *When the Japanese Language Perishes* is discussed in a classroom. In a Japanese classroom, the main focus of discussion is likely to be something like “What is the author trying to convey through the book?” or “What feelings caused the author to choose this book title?” In contrast, from the viewpoint of “analysis,” one focus of interest is likely to be something like “In which situations do differences between a country’s ‘mother tongue’ and its ‘national language’ emerge (situation assessment)?” Situations such as when dialects are spoken, or when the native tongue is spoken by immigrants may come to mind first. What other situations are conceivable? What causes those situations? What are the differences between the functions of “mother tongues,” “national languages,” and “universal languages” (functional understanding of concepts) as explained in the book? From the viewpoint of “analysis,” questions like those are more likely to be asked. From the viewpoint of “functional understanding,” students may also be asked questions such as “Into which category should mathematical formulas and technical terms be classified?” and “What is the reason for the categorization?” (generalization and classification). They may also be asked to identify how much each of the “mother tongue,” “national language,” and “universal language” are used (quantification). Next, let us assume a case in which Tawada’s *The Animal Babel* is the subject of classroom discussion. First, why the animals cannot understand each other despite speaking the same language (situation assessment) may become the focus of discussion, followed by the questions of what other situations may prevent communication despite the use of the same language and whether or not those situations have similarities (generalization and classification). The discussion may move on to the causes of

declines of communication systems in general. To cite an example in the real world, a lack of common understanding on the ethics of accountability is causing parliamentary debate in Japan to continue without producing meaningful results.

The teaching of Japanese at Japanese school is different from analysis-focused national language teaching in its approach to literary works in that the former aims at fostering in-depth understanding of a work as a self-contained world, while the latter looks at a work in a broader context, namely in the context of the world of arts or society at large, and thus encourages proactive thinking by students. In particular, even though the emphasis placed on understanding the general gist of a passage and identifying the feelings and emotions of characters and authors in the teaching of Japanese at Japanese school may be important, it could stifle diversity by encouraging everyone to think and feel in the same way. Recently, controversy has arisen over unconscious prejudices associated with certain words. To cite a gender bias example, the tendency to associate the word “surgeon” with a man or the word “feminist” with a woman is a case in point. Since the early times of higher education, the essence of liberal arts education has not been to merely enrich knowledge, but to liberate people from the confines of social customs and prejudices by providing opportunities for exposure to a variety of thoughts on different matters. In addition to emphasis on an analytical viewpoint, rationalism, objectivism, and formalization of expression (use of a universal language), which are common elements of the sciences, significantly contribute to liberating people from social customs and prejudices. Meanwhile, the sciences have been relatively indifferent in matters like symbols used for human communication (languages), the subjective meaning of such symbols, and cultures, including “ethics of civilization.” However, in modern society, the social implications of ethics in such technical fields as medicine, information

processing, environmental preservation and social surveys have also become important. That is one of the reasons why it is significant to integrate arts and sciences. Moreover, the advanced development of technical terms that was mentioned earlier impedes communication among experts from different fields and between experts and laymen in a different way from the way in which a conventional Tower of Babel situation that is created by the presence of multiple languages undermines communication. At the same time, the prevalence of technical terms has created a situation in which trust among people who do not share the same “language” may be undermined due to miscommunications. The integration of arts and sciences has therefore a significant role to play in reducing the social cost of those negative effects of miscommunications. To achieve the objective of the integration of arts and sciences, it is important to carry out social reforms while considering ways of effectively achieving that, including the reform of liberal arts education at universities.

Footnotes

1. *Kentoshi* sounds like “遣唐使” which implies Japanese envoys to Tang Dynasty China during 6th-to-10th centuries. However, Tawada used an original expression, “献灯使,” whose Chinese characters remind us of Rosemary Sutcliff’s novel *Lantern Bearers* (1959). The physically-handicapped hero of *Emissary*, Mumei (which means nameless), indeed is both an emissary and a lantern bearer.
2. Tawada writes her works in Japanese and German. She finds the freedom of the human spirit in creating a unique “cross-border” language which transcends the confines of a particular mother tongue or national language and which is also different from a universal language and realizes that process in the world of fiction. However, I refrain from discussing the innovative significance of her works, which is not relevant to the theme of this column. *The Animal Babel* contains many analogical references to a fictional “post-March 11, 2011” Japan after the Fukushima nuclear accident. Although the “interpretation of analogies” is an important analytical viewpoint in the domain of liberal arts, it was excluded from my discussion of the integration of arts and sciences because it is not a common element of these two domains.

Using Nudge as Entry Points for EBPM!

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The Importance of Examining the Effects in EBPM and Barriers in the Administrative Field

Initiatives related to EBPM (evidence-based policy making) have recently spread among national and local government bodies in Japan. The main differences between EBPM and previous policy making have been (1) the use of evidence (scientific basis that demonstrates the causal effects of the policy) and (2) the generation of evidence. The use of evidence means the selection of measures that contribute to the attainment of a policy goal based on the existing causal evidence. The generation of evidence refers to examining the effects of a policy for which the causal effects have not been proven¹.

If causal evidence already exists, we can simply use EBPM for policy making. However, the reality is that there are many cases in which such causal evidence has not been extracted through research because new policy challenges arose, as well as cases in which there are uncertainties regarding whether the same effects can be expected in Japan for policies that were implemented overseas, and for this reason there are not many cases in which it is possible to make political decisions based on the existing evidence.

For this reason, it is important to both generate and accumulate evidence. While there are many methods for generating evidence, one useful tool is a randomized controlled trial (RCT)². RCT is a method used to measure the causal effects of a policy by randomly assigning subjects to groups that are eligible or not eligible for a policy. However, several barriers can be faced if we try to use RCT in the field of policy. Frequently encountered barriers are as follows.

“The budget proposal has to be submitted next month, so there is no time to examine the effects of the policy with RCT. The responsible officer will change before the analysis comes out.”

“It is difficult to come up with funding to examine the effects.”

“Because the budget has already been secured and the structure of the project has been decided on, it would be difficult to implement RCT at this point.”

“Because fairness in policy administration is required, it would be

difficult to randomly assign people to groups that are eligible for a certain policy, and in the case of a project in which proposals have already been accepted, it would not be possible to eliminate applications from people who want to apply.”

Using Nudges as Entry Points for EBPM!

It is obvious that although RCT is a useful tool for generating evidence, there can be many barriers to actually implementing it.

For this reason, I would like to propose the use of nudges as a method of overcoming such obstacles. Nudge theory has also already become quite popular in Japan. The original meaning of a nudge is a gentle push in a specific direction, and by extension, it has been used to mean encouraging better choices by taking human psychology into consideration. A nudge is a tool for encouraging better choices at a low financial cost while respecting the freedom of individual decisions, and it has become recognized around the world as a fourth policy tool that is complementary to the conventional policy tools of subsidies, taxation, and regulations and rules³. A wide range of research has been conducted on nudge theory. For example, Allcott (2011) presents a U.S. home energy report (HER) that focused on comparing the amount of energy used by a household to its neighboring households and used social comparison nudges to achieve energy conservation of approximately 2%.

I propose that such forms of nudges could be used as entry points for EBPM. The reason for this is that in the case of nudges it is often possible to overcome the barriers to examining the effects that are described above. The table on p.36 summarizes the administrative barriers that are frequently faced when examining effects of policy and the advantages of using nudges in these situations.

In response to the barrier of requiring too much time to examine the effects, in many cases, such as the example of the home energy report, it is possible to examine the effects in a relatively short period of time with nudges. Because analysis is easy in the case of a simple RCT, it is possible to examine the effects using only

internal administrative resources. In addition, many nudges are often used for operational improvements in the field of policy (e.g. innovations in information provision methods), and in many cases they can be implemented with a decision by the responsible department, without requiring any major changes to the policy structure. This means that nudges can be applied to policy that has already been implemented, without waiting for the budget proposal for the next fiscal year. In many cases, nudges such as information provision or reminders can be implemented at low cost, and it is also highly likely that they can be implemented within the scope of the existing budget. Furthermore, many people have the opinion that the random assignment of policy benefits is inappropriate, because fairness is a requirement of policy administration. Although similar barriers can be faced in the case of nudges, for cases such as creating and separately sending out several versions of a notification document, because the notification document itself is broadly sent out to all people who need it, the implementation hurdles are likely to be lower than the randomly targeted assignment of actual policy.

Table: Administrative obstacles faced when examining the effects of policy and strengths of nudges

Administrative obstacles to examining the policy	Advantages of using nudges
It takes too much time to examine the effects. The responsible person will change before the results of the examination become clear.	The examination of the effects is possible in a short period of time in many cases.
It is not possible to secure the funding for examining policy effects.	The costs for examining effects can be low in the case of a simple nudge.
The budget has been secured and the policy has already been started, so it would be difficult to change how the policy is being implemented in order to examine the policy effects.	In many cases nudges are possible through changes on the policy operational level without making major changes to the structure of the policy itself.
Random assignment is difficult because fairness is required for administration. It would not be difficult to eliminate applications from people wanting to apply.	In many cases, nudges are possible through means such as the randomization of notification documents. In such a case, there would be no need to eliminate applicants.

Use Practical Nudge Theory Implementation Guides to Accumulate Experience toward EBPM!

Another advantage to using nudges as entry points for EBPM is the wide range of practical implementation guides that are available. For example, the OECD has presented a framework called BASIC (behavior, analysis, strategy, intervention, and change), which summarizes the steps for creating a nudge. In addition, the Behavioural Insights Team in the UK has presented a framework called EAST (easy, attractive, social, and timely), which summarizes the approach to creating effective nudges. Most recently, Osaka University Professor Fumio Ohtake has written a new book called *Kodo keizaigaku no tsukaikata* (Using Behavioral Economics) that describes the approach of behavioral

economics, explains how to create nudges, and provides concrete examples, in a manner that is easy to understand in Japanese. Detailed introductions for the BASIC and EAST frameworks are also provided in this book. In this manner, there is a wide range of implementation guides for nudges, and the hurdles for use in the field by administrative officials are getting lower and lower.

Of course, a nudge is not a magic wand. There are many policy challenges that cannot be resolved through nudges, and many cases have been reported of the effects weakening over the long term even if they were demonstrated over the short term. However, in order to implement EBPM, it is extremely important to facilitate the generation of evidence by accumulating cases of examining effects of policy and increasing the level of experience in internal administrative work among relevant personnel. To do so, it is essential to repeatedly implement administrative measures based on evidence, even if they are small, so that people responsible for policy can gain first-hand experience in what EBPM can and cannot do and in what areas it is useful, to enable this experience and know-how to be accumulated and shared. Nudges are an ideal entry point for this process.

Footnotes

1. Refer to commentary by the author contained in Duflo et al. (2019) for details on the EBPM approach and examination methods for policy effects.
2. Refer to Kobayashi (2014), Duflo et al. (2019), and Aoyagi and Kobayashi (2019) for details on randomized controlled trial approaches and implementation methods.
3. For example, cases of nudging in countries around the world are introduced in OECD (2017).

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Health Tourism in Japan: Evidence-based Hot Spring Healing

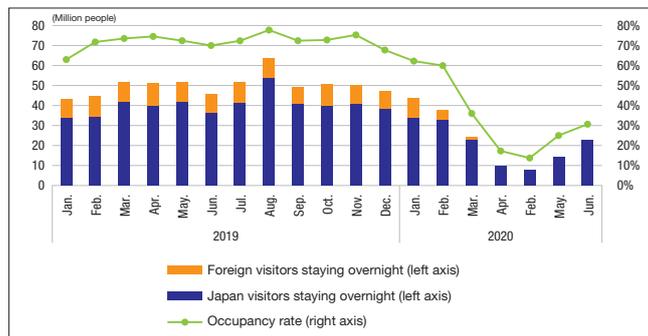
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Hot Spring Healing as the Original Overnight Tourism

Since February 2020, due to the spread of COVID-19, accommodation facilities have seen a significant decrease in the number of overnight visitors compared to the figures in the previous year. However, the number is showing signs of recovery nationwide thanks to various tourism campaigns by local governments targeting local residents and the commencement of the Go To Travel Campaign by the Japan Tourism Agency on July 22 (Figure 1). At the meeting held on July 27, the Tourism Strategy Promotion Council announced a policy for new patterns of tourism on the premise that longer stays would contribute to reduction of COVID-19 infection risk, such as “work-ations,” i.e. teleworking while enjoying leisure time at a hot spring or other resort¹. Nevertheless, under the current circumstances where the end of the COVID-19 pandemic is not in sight and entry of foreign tourists is not permitted, the number of overnight visitors is unlikely to recover to the pre-pandemic level within the short term.

Figure 1. Changes in the Total Numbers of Overnight Visitors and Occupancy Rates



Source: Prepared based on the “Overnight Travel Statistics Survey” by the Japan Tourism Agency: <https://www.mlit.go.jp/kankochou/siryou/toukei/shukuhakutoukei.html> (viewed on September 10, 2020)

Note: Figures for 2019 are definite figures. Those for January to June 2020 are the second preliminary figures and those for July 2020 are the first preliminary figures.

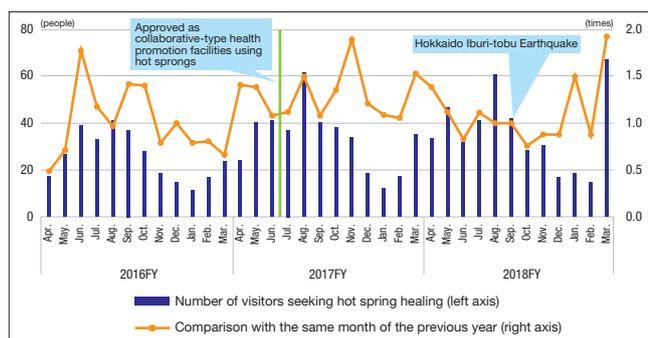
Japan has a tradition of hot spring healing, that is, Japanese

people stay at hot spring resorts not only for the treatment of a disease or injury but for the promotion of good health by reducing the tiredness of the mind and body. However, it is rather difficult for modern working people to take a three- to four-week-long holiday for hot spring healing, unlike people in the Edo era. These days, repeated, short-term stays, such as day trips or weekend trips have replaced the former weeks-long stays of the Edo era, providing much of the benefit of the longer stays, but such recently termed “modern hot spring healing” and “new hot spring healing,” which adds the enjoyment of local resources to the hot spring experience, have gained prominence. In addition, tours to natural areas focused on enjoying the natural environment, hot springs, and healthy food which together refresh both the body and mind are being promoted as “health tourism.”

Germany, France and other European countries position hot spring treatments as medical treatments based on scientific evidence, and effectively utilize hot springs for treatment under their medical insurance systems, which cover hot spring treatments. Japan also has an official support system under which the use of any of the health promotion facilities including hot springs that are approved by the Ministry of Health, Labour and Welfare for hot spring treatments allows part of the expenses to be deducted as medical expenses from the patient’s income tax. Initially there was very little use of the system, partly because the system was not widely known, but Toyotomi Hot Springs (Toyotomi Town in Hokkaido) after being approved as collaborative-type health promotion facilities that utilize hot springs for treatment, where scientific evidence on the effects on dermatological diseases has been accumulated, allowing doctors to recommend the hot springs as medical treatment, saw increases in the number of visitors seeking hot spring healing based on doctors’ information (Figure 2).

Hereinafter, I will consider measures for establishing new forms of hot spring healing that organically combine an increase in evidence accumulated on the effects of hot spring treatments with programs centered on local resources of hot spring resorts in order to achieve regional revitalization through promoting tourism involving overnight or longer stays.

Figure 2. Changes in the Monthly Numbers of Visitors Seeking Hot Spring Healing at Toyotomi Hot Springs



Source: Sekiguchi (2020) p.20 (prepared based on materials of Toyotomi Town)

Hot Spring Treatments Not Falling under Medical Practice

Hot springs have various characteristics in terms of mineral ingredients, temperature, color and smell and are categorized into ten types depending on the content and quantity of these characteristics. Each of the ten types demonstrates particular treatment effects, but hot spring treatments are not recognized as medical practice at universities. In the Medical Regulations, which were established with the introduction of modern medicine to directly treat diseases in the Meiji era and which serve as the basis for policies on health administrative organizations, medical education, hospitals, doctors and pharmaceutical affairs, hot spring treatments are positioned as a traditional folk remedy and do not fall under established medical practice.

On the other hand, Dr. Erwin von Bälz (1849-1913), a German doctor employed by the Meiji government, and others, studied hot spring treatments in Japan. Some effects of hot springs are traditionally known, but there are many questions that have not yet been answered scientifically². The Japanese Society of Balneology, Climatology and Physical Medicine (hereinafter referred to as the “Society”) and the Japan Health & Research Institute have carried out continuous research on hot spring medical treatment. There are doctors who have received training in balneology, climatology and physical medicine and are approved by the Society as doctors who can provide medical instructions to persons seeking hot spring healing. There are also doctors who are approved by the Society as doctors with a certain level of clinical experience in hot spring treatments from within the pool of doctors who are qualified to prescribe hot spring treatments. If a person has received hot spring treatments based on a written instruction prepared by a doctor at any of the 22 health promotion facilities that utilize hot springs as treatment nationwide (as of April 1, 2020), part of the expenses may be deducted as medical expenses from his/her income tax.

However, as hot spring treatments do not fall under established medical practice, there is little chance to study them in university medical courses, which are generally based on modern Western

medicine. Doctors other than those qualified to prescribe hot spring treatments by the Society are unaware of evidence of the effects of hot spring treatments and never recommend hot spring treatments to their patients. Overnight visitors to hot spring resorts may have sufficient information on the resorts as tourist sites but generally have only limited information on the treatment effects of specific hot spring resorts³.

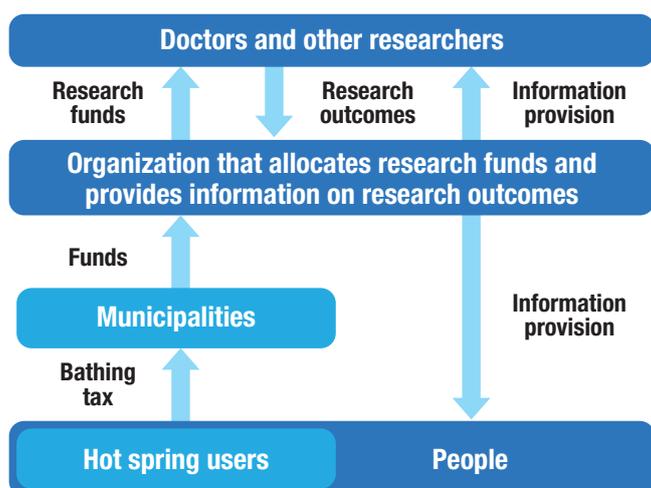
Strengthening the System for Accumulating and Disseminating Evidence on the Effects of Hot Spring Treatments

In Germany and France, where hot spring treatments are covered by their medical insurance systems, many people receive hot spring treatments. In Japan as well, Toyotomi Hot Springs is welcoming an increasing number of people who visit for the purpose of hot spring healing based on doctor recommendations. Additionally, promotional efforts have been undertaken to encourage stays at hot spring resorts, as represented in such branding terms as “modern” or “new hot spring healing” or “health tourism,” and research on hot spring medical treatment has also been carried out. Strengthening of the relevant systems will facilitate the accumulation and dissemination of evidence on the effects of hot spring treatments that will communicate the medical benefits to doctors and the general public, further popularizing treatments at health promotion facilities that utilize hot springs and encouraging people to pursue evidence-based hot spring healing.

In France, the French Association for Thermal Research is providing subsidies to research projects studying the treatment effects of hot springs with funds collected from every hot spring patient and resort, and is providing information to doctors and the general public, with the aim of communicating the concrete benefits of hot spring treatments. As the French Association for Thermal Research, a nationwide organization, unilaterally allocates such subsidies and provides information, the effective, large-scale accumulation and dissemination of evidence is possible.

It is also desirable to strengthen the system in Japan for the accumulation and dissemination of evidence, such as by creating a nationwide organization which effectively allocates funds from hot spring patients and other beneficiaries towards research on the effects of hot spring treatments and towards communicating research outcomes (Figure 3). One of the options for raising funds is to increase the bathing tax levied on mineral spring bath guests. However, as the bathing tax is a municipal tax, it will be difficult to increase the tax rate uniformly nationwide. It may be more practical to target specific municipalities and facilities and consider measures to collect funds from users of relevant hot springs.

Figure 3. The System for Accumulation and Dissemination of Evidence on Effects of Hot Spring Treatments



Establishing New Forms of Hot Spring Healing that Organically Combine Local Resources and Evidence on Hot Spring Treatments

After accumulating and sharing the evidence on the effects of hot spring therapy, what kind of efforts can be expected from each hot spring resort? There are approximately 3,000 hot spring resorts nationwide and the quality of the spring itself and the surrounding environment differ for each resort. Hot spring resorts for treatment, which are characterized by unique spring quality which have long been used for medical treatments, also tend to be used differently from hot spring resorts for recreation, where the hot springs came to be used later, as simply one of the tourist attractions of the facility.

For treatment-based resorts, emphasizing the evidence for any treatment effects will enhance the appeal of the site as a therapeutic bath. The appeal may be further increased by including local resources in tour packages, such as walking tours and cultural experiences that take advantage of rich natural environments and healthy, locally-sourced cuisine. For recreation-based resorts, tour programs that combine hot springs with local resources will further strengthen bonds between hot springs and surrounding areas as appealing tourist sites. On the other hand, in order to attract guests for longer stays, simply providing time and space to enjoy the facilities freely without any regimented tours may be highly valued. It is also important for accommodation facilities to devise accommodation plans that provide discounts for guests that stay for two or more nights in a row, or to prepare flexible meal plans, for example by separating accommodation fees and meal fees.

New hot spring healing and health tourism are meant to refresh the minds and bodies of customers by allowing them to enjoy hot springs, nature and food, etc., and finding the best methods of combining medical treatments using hot springs with recreational activities based on local resources is the key. Establishing scientific

evidence for the benefits including medical treatment effects, reduced stress and refreshment of “new hot spring healing” will aid in both attracting health tourists and in improving the programs that are offered by the industry⁴. It is hoped that strengthening the system of accumulation and dissemination of scientific evidence will allow for reevaluation of the treatment effects of hot springs and allow travel agencies and hot spring resorts to establish new forms of hot spring healing that are combined organically with other local resources. These efforts will allow the tourism industry to shift their focus from quantity to quality, instead of merely waiting for increases in the number of guests.

Footnotes

1. Japan Tourism Agency (2020) p.9
2. Maeda (2010) p.22
3. Information on hot springs for foreigners is also necessary. Easing regulations on the extension of medical visa stays for foreigners is also highly anticipated in the future (at present, stay over 90 days is permitted only in the case of hospitalization).
4. Expert Committee for Revitalizing Hot Spring Resorts by the Use of Nature and Other Local Resources (2017) p.5

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RIETI'S FIFTH MEDIUM-TERM PLAN

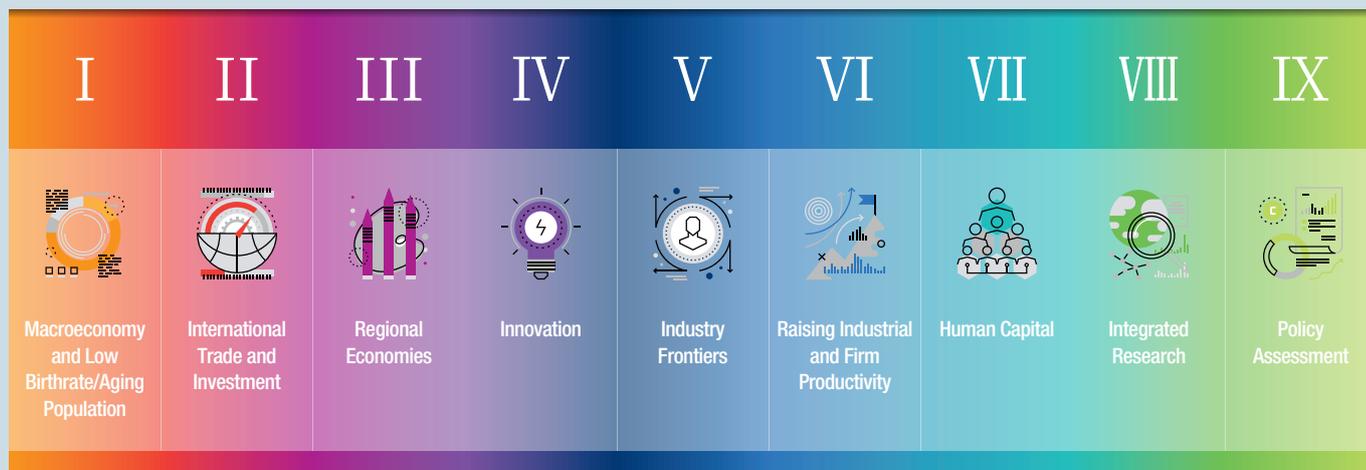
FY2020 to FY2023

In the Fifth Medium-term Plan period, RIETI will add research on the Fourth Industrial Revolution and the behavioral economics approach, which has been gaining popularity and credibility, to the AI-related research (e.g., using AI to analyze corporate performance and consumer behavior) it has promoted to date. The scope of this research creates opportunities for the participation of researchers in science disciplines outside economics and will gradually enable the establishment of a system that allows for integration of the humanities and sciences, including linkages between research in multiple disciplines and social science/economics. Additionally, RIETI will promote research on evidence-based policy making (EBPM), which is expected to become increasingly important in the future, to contribute to developing solutions to increasingly diverse and complex economic and social issues toward the formulation of economic and industrial policies.

Guided by medium- and long-term policy directions from the government, including its economic and industrial policies, RIETI will continue to engage in research activities while working with experts in other areas to initiate integration between the humanities and sciences including linkages between research in multiple external disciplines and social science/economics. In doing so, it will contribute to an evidence-driven transformation of economics and social systems.

Research Programs

Research Programs



Research Process

RIETI provides forums for discussion (e.g. brainstorming workshops and discussion paper/policy discussion paper seminars) and invites policymakers to these forums to improve the quality of our research and to build linkages between our research and future policies.



Introduction of the Nine Research Programs

Program I

Macroeconomy and Low Birthrate/Aging Population



Program Director: Keiichiro Kobayashi
Faculty Fellow, RIETI / Research Director, Canon Institute for Global Studies /
Research Director, The Tokyo Foundation for Policy Research



Sustaining long-term growth is a common challenge for the global economy; however, Japan is facing a rapidly declining birthrate and aging population ahead of other countries. We will conduct research that will contribute to policy recommendations to help maintain the economic vitality of Japan and contribute to the future development of the global economy. Specifically, we will analyze the role of supply chains within and between industries in the Asian region, the trends in international finance and the global economy, and the mechanisms behind prolonged economic stagnation. In addition, we will engage in multifaceted and integrated research to analyze comprehensive panel data for the elderly, the direction of reform for the integration of social security and tax/fiscal policies, and develop policy recommendations for economic change and the transformation in the industrial structure caused by the coronavirus pandemic.

Active Projects

Macroeconomic Policy and Political Philosophy toward Economic Growth
Project Leader: Keiichiro Kobayashi (Faculty Fellow)

East Asian Production Networks, Trade, Exchange Rates, and Global Imbalances
Project Leader: Willem Thorbecke

Exchange Rates and International Currency
Project Leader: Eiji Ogawa (Faculty Fellow)

Robots, Labor and the Macroeconomy
Project Leader: Ippei Fujiwara (Faculty Fellow)

Program II

International Trade and Investment



Program Director: Eiichi Tomiura
Faculty Fellow, RIETI / Professor, Faculty of Economics, Hitotsubashi University



Formulating economic and industrial policies requires a deep understanding of domestic and overseas economies; however, with the intensification of globalization, research on the international economy has become even more significant. Amidst the increasing global uncertainty related to trade and investment, it is necessary to address policy concerns and to understand long-term trends. Thus, we will empirically analyze international trade, foreign direct investment, and various other international economic activities in the real economy using a variety of data including microdata from government statistics and our own surveys. We will also examine topics such as Japan's external economic policy, trade policies in other nations, rules on international trade, and the global activities of firms from both legal and economic perspectives.

Active Projects

Empirical Analysis of Firms amidst Globalization, Digitization and the COVID-19 Pandemic
Project Leader: Eiichi Tomiura (Faculty Fellow)

Research on Relationships between Economic and Social Networks and Globalization
Project Leader: Yasuyuki Todo (Faculty Fellow)

Comprehensive Research on the Current International Trade/Investment System (pt.V)
Project Leader: Tsuyoshi Kawase (Faculty Fellow)

Studies on Foreign Direct Investment and Multinationals: Impediments, policy shocks, and economic impacts
Project Leader: Naoto Jinji (Faculty Fellow)

Globalization and the Japanese Economy: Firm adjustment and global trade governance
Project Leader: Shujiro Urata (Faculty Fellow)

Empirical Studies on Crises and Issues in Global Supply Chains
Project Leader: Hongyong Zhang (Senior Fellow)

Economic Policy Issues in the Global Economy
Project Leader: Jota Ishikawa (Faculty Fellow)

Program III

Regional Economies



Program Director: **Nobuaki Hamaguchi**
Faculty Fellow, RIETI / Professor, Research Institute for Economics and Business Administration (RIEB), Kobe University



We will systematically organize place-based policies (PBPs) that take the uniqueness of each locale into consideration. For large cities, which are expected to take a leading role in innovation and international competition, we will identify both the infrastructure that utilizes the economic advantages of agglomeration while curbing the harmful effects caused by congestion and the methods of assisting economic actors. For non-metropolitan regions, we will identify the network and community structures and system designs that will promote structural transformation toward production activities that will generate high-added value via the innovative and sustainable use of each region's locally-specific resources. We will also study policy measures that can optimize the balance between large cities and non-metropolitan regions.

Active Projects

Economic Policy for Post COVID-19 Japanese Regional Economies
Nobuaki Hamaguchi (Faculty Fellow)

Agglomeration-based Framework for Empirical and Policy Analyses of Regional Economies
Project Leader: Tomoya Mori (Faculty Fellow)

Spatial Economic Analysis of Urban and Regional Economic Activities
Project Leader: Takatoshi Tabuchi (Faculty Fellow)

Regional Economy and Roles of Regional Finance in the Post COVID-19 World
Project Leader: Nobuyoshi Yamori (Faculty Fellow)

Verification of Regional Revitalization and Regional and Urban Economies after the Coronavirus Pandemic
Project Leader: Ryohei Nakamura (Faculty Fellow)

Urban Policy from the View of Consumer City
Project Leader: Kentaro Nakajima (Faculty Fellow)

Geography, Inter-firm Network and Socio-economic Structural Change
Project Leader: Yukiko Saito (Senior Fellow (Specially Appointed))

Program IV

Innovation



Program Director: **Sadao Nagaoka**
Faculty Fellow, RIETI / Professor, Tokyo Keizai University



The creation of knowledge and its exploitation for solving economic and non-economic problems are the foundations of innovation, including the Fourth Industrial Revolution. We will develop original data that will allow us to understand this process, conduct cutting-edge research using these data, and perform analyses that will contribute to the formulation of policies for accelerating innovation. Specifically, we will examine the innovation capability of industries, mechanism of the development of innovation-enhancing industrial organizational changes, such as vertical specialization, government policies that support research and development (R&D), including the intellectual property regime and setting of technological standards, and industry-academic collaboration. We will undertake research from an international perspective that will include international comparisons of innovation performance.

Active Projects

Building Innovation Capability and Incentives: Evidence from micro data
Project Leader: Sadao Nagaoka (Faculty Fellow)

Digitalization and Innovation Ecosystem: A holistic approach
Project Leader: Kazuyuki Motohashi (Faculty Fellow)

Developing an Entrepreneurial Ecosystem
Project Leader: Yuji Honjo (Faculty Fellow)

Program V

Industry Frontiers



Program Director: **Hiroshi Ohashi**

Faculty Fellow, RIETI / Dean, Professor, Graduate School of Public Policy, The University of Tokyo / Professor, Faculty of Economics, The University of Tokyo



As the public implementation of digital technology occurs and the integration of digital and real space gradually becomes a reality, it is necessary to redesign Japan's socioeconomic system and create new industrial frontiers in order to effectively incorporate technological progress. We are entering an era in which various economic activities are merged around data. In this context, we will study the nature of the policies for overcoming the challenges that Japan's economy faces by considering not only the traditional industry-specific policies but also cross-industrial policies.

Active Projects

Policy Analyses on Industrial Organization

Project Leader: Hiroshi Ohashi (Faculty Fellow)

Economic Growth and Fluctuations under Population Decline

Project Leader: Hiroshi Yoshikawa (Faculty Fellow)

Study Group on Corporate Finance and Firm Dynamics

Project Leader: Ichihiro Uesugi (Faculty Fellow)

Institutional Design for Desirable Acceptance of AI Technology

Project Leader: Shunsuke Managi (Faculty Fellow)

Macro-economy under COVID-19 Influence: Data-intensive analysis and the road to recovery

Project Leader: Hideaki Aoyama (Faculty Fellow)

Globalization, Innovation, and Competition Policy

Project Leader: Noboru Kawahama (Faculty Fellow)

Program VI

Raising Industrial and Firm Productivity



Program Director: **Kyoji Fukao**

Faculty Fellow, RIETI / Professor, Institute of Economic Research, Hitotsubashi University



Since the 1990s, Japan has fallen behind other developed countries, such as the United States, the United Kingdom, and Germany, by a large margin in terms of its gross domestic product per capita and the increase in its real wage rate. The main factors causing this include the stagnation of the total factor productivity (TFP) and the significant slowdown in capital stock accumulation, including intangible assets and information and communications technology (ICT), particularly since the mid-2000s. This program will update and develop databases related to industry-level productivity and the factor inputs in Japan and China (Japan Industrial Productivity [JIP] Database and China Industrial Productivity [CIP] Database) and the Regional-Level Japan Industrial Productivity (R-JIP) Database, which measures the TFP for each industry by prefecture. The program will also examine the types of policies required to improve productivity and facilitate investment via empirical analyses using these databases and firm/business-level data.

Active Projects

East Asian Industrial Productivity

Project Leader: Kyoji Fukao (Faculty Fellow)

Refinement and Analysis of the Regional-Level Japan Industrial Productivity Database: Analysis of regional industrial linkages and productivity

Project Leader: Joji Tokui (Faculty Fellow)

Determinants of Firm Dynamics: Causal inference approach

Project Leader: Kaoru Hosono (Faculty Fellow)

Capital Accumulation and Productivity Growth after the COVID-19 Crisis

Project Leader: Tsutomu Miyagawa

Program VII

Human Capital



Program Director: **Kotaro Tsuru**
Faculty Fellow, RIETI / Professor, Graduate School of Business & Commerce, Keio University



It is expected that our society and economy will be significantly transformed by the current decrease in population caused by the rapid acceleration of population aging, the intensification of global competition, and new technologies such as information and communications technology (ICT) and artificial intelligence (AI). Therefore, for resource-poor Japan to maintain and strengthen its economic vitality and innovation and drive its growth potential while leveraging its strengths, the utilization of human resources will be of critical importance. We will undertake multifaceted and comprehensive research on the redesign of employment/labor systems suitable for the age of AI, the development of capacity/skills to complement AI, the required reforms in education/training for such purposes, and the ideal methods of improving the well-being of workers, such as health management. Greater use will be made of original datasets.

Active Projects

Employment and Educational Reform in the AI Era
Project Leader: Kotaro Tsuru (Faculty Fellow)

Productivity Effect of HRM Policies and Changing Employment Systems
Project Leader: Hideo Owan (Faculty Fellow)

Fundamental Research for Economic Growth and Productivity Improvement in Japan
Project Leader: Kazuo Nishimura (Faculty Fellow)

Research on Working-style Reform, Health and Productivity Management
Project Leader: Sachiko Kuroda (Faculty Fellow)

Empirical Studies on Issues of Foreign Employment and Technology Progress in a Society with a Persistent Labor Shortage
Project Leader: Yang Liu (Fellow)

Program VIII

Integrated Research



One of the major issues afflicting the Japanese economy is the existence of barriers, such as the barriers between permanent and non-permanent employees and between men and women in the workplace. RIETI has been addressing various problems concerning these barriers in the economy. Academia has also been suffering from this problem of barriers, for example, barriers between humanities and sciences, between legal studies and economics, between microeconomics and macroeconomics, and between theory and empirical testing. It is essential to remove these barriers to increase the capacity for innovation and enable organizations to become more sophisticated. The Integrated Research program uses this perspective to undertake research and incorporate knowledge from other disciplines, such as natural sciences, law, political science, and sociology, into economics and policy studies.

Active Projects

Frontiers in Corporate Governance Analysis
Project Leader: Hideaki Miyajima (Faculty Fellow)

Social Scientific Studies on Self-replicating Natural and Technical Phenomenon
Project Leader: Yuichi Furukawa (Faculty Fellow)

Toward Building Socio-life Science
Project Leader: Shigeru Hirota (Faculty Fellow)

Basic Research for Exploring the Ideal Medical Intervention after the Advent of the New Coronavirus
Project Leader: Yoichi Sekizawa (Senior Fellow)

Advanced Technology and Democracy: Does new technology help or hurt democracy?
Project Leader: Yoshikuni Ono (Faculty Fellow)



Program Director: **Daiji Kawaguchi**

Faculty Fellow, RIETI / Professor, Graduate School of Economics, The University of Tokyo
/ Professor, Graduate School of Public Policy, The University of Tokyo



The Policy Assessment program will accelerate evidence-based policy making (EBPM) by simultaneously researching the ideal form of EBPM and evaluating individual policies. Regarding the research on the nature of EBPM, we will employ a meta perspective to analyze how policymakers should prepare evidence and formulate policies based on such evidence, as well as the extent to which EBPM is practiced. Regarding the evaluation of individual policies, the program will use high-quality microdata and empirical microeconomic techniques to provide credible evidence to contribute to policy making in education, labor, tax, social security, and other areas.

Active Projects

Empirical Analysis on Japanese Labor Market

Project Leader: Daiji Kawaguchi (Faculty Fellow)

Comprehensive Research on Evidence-Based Policy Making (EBPM)

Project Leader: Yoichi Sekizawa (Senior Fellow)

Establishing Evidence-Based Policy Making in Japan

Project Leader: Kazuo Yamaguchi (Visiting Fellow)

The Future Direction of Corporate Taxation

Project Leader: Motohiro Sato (Faculty Fellow)

Microeconomic Analysis of Education Policy with Large Administrative Data

Project Leader: Ryuichi Tanaka (Faculty Fellow)



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