



How Covid-19 Impacts Supply Chains and the Economy: Evidence from Europe and Asia

12 July 2021

Online | In English

9.00 - 11.15 (France) | 16.00 - 18.15 (Japan)

Registration: forms.gle/VzbaMujBjm5S72Lm9

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The COVID-19 crisis has walloped the world economy. Fear of infection prevented consumers from engaging in face-to-face transactions. Uncertainty restricted investment. Lockdowns reduced output in many regions. How do policies that restrict production in one region affect downstream firms in other regions? Have supply chain disruptions magnified the impact of the coronavirus shock? Is there a role for policy coordination across regions and countries that are linked via value chains? How can we understand the relative performance of different sectors and economies during the pandemic? This workshop marshals evidence from Europe and East Asia to address these and other issues. It then draws policy implications from the findings. We will discuss specific support infrastructures for new mobility systems. Second, the governance session will discuss on networking and collaboration requirements among stake holders to build and regulate frameworks. The discussion will exchange diversity of experimental cities and their dynamics from hands-on experiences and research findings by actors of governance in policy implementation, industry development, and academic research.

Programme

- 09.00 (FR) | Opening Remarks
16.00 (JP) |
- Sébastien Lechevalier** (President, FFJ-EHESS)
Tetsuya Watanabe (Vice President, Research Institute of Economy, Trade and Industry)
Bruno Cabrillac (Deputy Director General, Banque de France)
- 09.15 (FR) | Supply chains and the economic effects of lockdowns
16.15 (JP) |
- Hiroyasu Inoue** (University of Hyogo)
Yohsuke Murase (RIKEN Advanced Institute of Computational Science)
Yasuyuki Todo (Waseda University and Research Institute of Economy, Trade and Industry)
- 09.40 (FR) | Regional economic impact of Covid-19: the role of sectoral structure and trade linkages
16.40 (JP) |
- Philipp Meinen** (European Central Bank)
Roberta Serafini (European Central Bank)
Ottavia Papagalli (Scuola Superiore Sant'Anna)
- 10.05 (FR) | How Covid-19 Is Affecting Supply Chains and Economies in East Asia and Europe: Evidence from the Stock Market
17.05 (JP) |
- Willem Thorbecke** (FFJ, Research Institute of Economy, Trade and Industry)
- 10.30 (FR) | Why Did the "Covid Shock" Have Differential Economic Effects across Countries in 2020?
17.30 (JP) |
- Nicolas Chatelais** (Banque de France)
- 10.55 (FR) | Discussion and Concluding Remarks
17.55 (JP) |

Speakers



Sébastien Lechevalier (President of FFJ, Professor at EHESS)

Sébastien Lechevalier is an Economist and a Professor at EHESS (School of Advanced Studies in the Social Sciences, Paris), specialised in Japanese economy and Asian Capitalisms. He is also founder and president of the Fondation France-Japon de l'EHESS (FFJ). He has been a Visiting Professor At Tokyo University, Kyoto University, Hitotsubashi University, Waseda University and Doshisha University.



Tetsuya Watanabe (Vice President of RIETI)

Tetsuya Watanabe is Vice President of the Research Institute of Economy, Trade and Industry (RIETI) and Visiting Professor at the Graduate School of Public Policy of The University of Tokyo. He is a specialist of Geopolitics, Economic Security, Trade Policy, Energy and Environment Policy, Digital Innovation Policy.



Bruno Cabrillac (Deputy Director General of The Bank of France)

Bruno Cabrillac entered the Bank of France (Central Bank) in 1984 as an economist in the Foreign Relation Department, then in the Research and Forecast Department. He was seconded to the Ministry of Finance as Financial Counsellor in Cairo (1989-1992) and Tokyo (1994-1996) after spending eighteen months as a foreign exchange and bond trader. In 1997, he was appointed Head of the African Department (Zone Franc) of the Bank of France. In April 2001, he was seconded to the Ministry of Finance to become Trade Commissioner and Bank of France representative in Hong Kong and Macau. In July 2005, he was appointed Financial Counsellor for Africa at the French Ministry of Finance (Treasury and Economic Policy Directorate General). In October

2008, he was appointed Director of economics and international European relations at the Bank of France and since last October he is Deputy Director General Economics and International.



Hiroyasu Inoue (Associate Professor, Graduate School of Simulation Studies, University of Hyogo)

Hiroyasu Inoue is an associate professor at the Graduate School of Simulation Studies, University of Hyogo. Formerly, he was an associate professor in the Department of Business Administration, Osaka Sangyo University. From 2011 to 2012, he was a visitor at the Center for Complex Network Research at North eastern University. He earned his Ph.D. in Informatics from Kyoto University in 2006. His research expertise is in complex systems, artificial intelligence, and data science. He has published widely in many international journals. His recent works mainly focus on network sciences, which are based on big data, such as patents, papers, human mobility, and company data.



Yohsuke Murase (Research scientist, RIKEN)

Yohsuke Murase is a research scientist at RIKEN Center for Computational Science (R-CCS) since 2013. He was previously software developer at Elysium from 2010 to 2013 and a research assistant at Department of Applied Physics at The University of Tokyo from 2008 to 2010. Yohsuke completed his Ph.D. in applied physics at the University of Tokyo in 2010 on the subject of “Statistical mechanics study on community assembly”. He received the 11th RIKEN Research Incentive Award (Ohbu Award) in 2020 and the 18th Docomo Mobile Science Award, Excellence Award in Social Science in 2019. His research interests include Complex Systems and Complex Networks, Computational Social Science and also software developments for scientific computing.



Yasuyuki Todo (Professor, Waseda University)

Yasuyuki Todo, a Ph.D. in economics from Stanford University, has been a Professor at the Graduate School of Economics, Waseda University since 2014, after serving as the Department Head at the Department of International Studies, the University of Tokyo. He is also a Faculty Fellow at Research Institute of Economy, Trade and Industry. His research fields are international economics, development economics, and applied micro-econometrics, currently focusing on the role of social and economic network in economic growth and resilience based on firm- and household-level data from various countries. He has published 60 academic papers in refereed journals including the Journal of Industrial Economics, the Journal of Regional Science, Ecological Economics, Research Policy, and World Development. He has also

served a number of policy-advising committees in the national and local governments, including the Frontier Subcommittee of the National Policy Meeting of the Cabinet Office, the Committee for Japan’s Future under the Council on Economic and Fiscal Policy of the Cabinet Office, and the Industrial Structure Council of the Ministry of Economy, Industry and Trade, and T20 Japan 2019 under G20.

Title: The impact of supply-chain networks on interactions between the anti-COVID-19 lockdowns in different regions

To prevent the spread of COVID-19, many cities, states, and countries have ‘locked down’, restricting economic activities in non-essential sectors. Such lockdowns have substantially shrunk production in most countries. This study examines how the economic effects of lockdowns in different regions interact through supply chains, a network of firms for production, simulating an agent-based model of production on supply-chain data for 1.6 million firms in Japan. We further investigate how the complex network structure affects the interactions of lockdowns, emphasizing the role of upstreamness and loops by decomposing supply-chainflows into potential and circular flow components. We find that a region’s upstreamness, intensity of loops, and supplier substitutability in supply chains with other regions largely determine the economic effect of the lockdown in the region. In particular, when a region lifts its lockdown, its economic recovery substantially varies depending on whether it lifts lockdown alone or together with another region closely linked through supply chains. These results propose the need for inter-regionpolicy coordination to reduce the economic loss from lockdowns.

Philipp Meinen (European Central Bank)

Philipp Meinen is a member of the Directorate General Economics. His research interests include International Trade, Applied Econometrics and Empirical Industrial Organization.

Roberta Serafini (European Central Bank)

Roberta Serafini is a Principal Economist at the European Central Bank.



Ottavia Papagalli (Ph.D. Candidate, Sant'Anna School of Advanced Study)

Ottavia Papagalli is a Ph.D. Candidate in Economics at Sant'Anna School of Advanced Study, Italy, since October 2020. She received her M.Sc. in Economics from the Economics School of Louvain, Belgium, and her B.Sc. in Economics and Business Administration from the Università degli Studi di Genova, Italy. Before starting her Ph.D., Ottavia gained professional experiences in the field of economics, finance and business. In particular, she worked on research projects at two European Institutions: spending six months in the Finance and Economy Unit of the Joint Research Centre of the European Commission, Italy, and a year in the Euro Area External Sector and

Euro Adoption Division of DG-Economics at the European Central Bank, Germany. Previously, she worked in Brussel as a research assistant at the European Public Real Estate Association and as trade analyst intern at the Italian Trade and Investment Agency. Her research interests include industrial organizations and applied microeconomics; international trade, finance and financial markets; the economics of innovation and industry dynamics.

Title: Regional economic impact of COVID-19: the role of sectoral structure and trade linkages

The paper provides an ex-post analysis of the determinants of within-country regional heterogeneity of the labour market impact of COVID-19. By focussing on the first wave of the pandemic in the four largest euro area economies, it finds that the propagation of the economic impact across regions cannot be explained by the spread of infections only. Instead, a region's economic structure is a significant driver of the observed heterogeneity. Moreover, our results suggest that a region's trade relations, both within and across countries, represent a relevant indirect channel through which COVID-19 related disruptions affect regional economic activity. In this regard, the analysis depicts vulnerabilities arising from potential disruptions of the highly integrated EU supply chains.



Willem Thorbecke (Senior Fellow, FFJ, RIETI)

Willem Thorbecke is a Senior Fellow at Japan's Research Institute of Economy, Trade and Industry and a visiting fellow at the Fondation France-Japon in Paris. Prior to this he was a Senior Research Fellow at the Asian Development Bank Institute and a professor at George Mason University. He has written many papers investigating the determinants of trade flows in Asia and the rest of the world, the impact of shocks on global value chains and the spillovers that result from trade.

Title: The effect of the COVID-19 pandemic on East Asian and European economies: evidence from the stock market

This paper investigates how the coronavirus crisis has impacted France, Germany, Italy, Japan, South Korea, and Taiwan. To do this it examines how the pandemic has affected sectoral stock returns in these economies. Finance theory implies that stock prices equal the expected present value of future cash flows, so this approach can shed light on how the pandemic affects sectoral performance. The paper uses macroeconomic variables to forecast how stocks would be expected to perform over the crisis and investigates sectors that have performed better or worse than predicted. The results indicate that economies that have done better at managing the pandemic have also performed better and that certain sectors such as banking have performed badly across all the countries and that other sectors such as semiconductors have performed well. The paper also examines how shocks from the pandemic have been propagated across supply chains.



Nicolas Chatelais (Senior Economist, Banque de France)

Nicolas Chatelais is a Senior Economist at Banque de France, in charge of the conjunctural assessment and macroeconomic projections for the international environment of the Euro Area. He received his Ph.D from University Paris 1 Panthéon-Sorbonne in 2011 and his research focused on the tax competition behavior of small countries in Europe. He started his career at the Banque de France within the euro area outlook division during the Sovereign Debt Crisis. He was then head of the risk measurement department within the Financial Stability Directorate. His current research focuses on the impact of the Covid-19 on GDP growth divergences and inflation dynamics.

Title: Why did the "Covid shock" have differential effects across countries in 2020?

The intensity of the Covid-19 pandemic (measured by the number of people affected by the virus or dead) explains only a small direct part of the shock on GDP in 2020. Half of the shock is the consequence of the magnitude of the reactions from both public authorities in terms of health restrictions and private economic agents. The other half is explained by sectoral specialization (mainly the share of tourism and the level of technological development), the demographic, social and economic situation before the crisis and finally the impact of the fiscal stimulus put in place in 2020. Finally, the "controlled quarantine" strategy aimed at eliminating the pandemic rather than the "living with it" strategy would have led to a smaller drop in GDP. The decline in GDP in 2020 was smaller in the United States than in Europe. At least 80% of the difference is explained by non-fiscal factors. The constraints on activity linked to restrictions to limit the spread of the Covid-19, which are stronger in France / Italy / Spain, explain more than 40% of the divergence with the United States. This factor was amplified by the difference in sectoral specialization.

