EU-JAPAN SPA FACILITY
COVID-19 WEBINAR SERIES
COVID-19 & Business

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Mechanism of economic crisis

- The current crisis was developed on a global scale due to the simultaneous movement of “supply shock” and “demand shock” triggered by restrictions on the movement of people.

- This should be considered as an extraordinary economic crisis that has a different character from the past economic crisis and cannot be overcome by traditional economic measures.

Types of economic crisis

<table>
<thead>
<tr>
<th>Type</th>
<th>Damage</th>
<th>Shock</th>
<th>Key to recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaster</td>
<td>Production equipment and capital</td>
<td>Supply</td>
<td>Reconstruction</td>
</tr>
<tr>
<td>Financial crisis</td>
<td>Financial system</td>
<td>Demand</td>
<td>Financial system recovery</td>
</tr>
<tr>
<td>Infectious disease</td>
<td>Human interface</td>
<td>Supply and demand</td>
<td>End of infection</td>
</tr>
</tbody>
</table>

- Destruction of production equipment and social capital, supply constraints (Great East Japan Earthquake)
  Restrictions on imports and distribution of overseas dependent materials (oil crisis)

- Drop of asset prices, stagnation of consumption and capital investment (Japan after Lehman shock)
Need for global response

- There were 2nd and 3rd wave of past infectious diseases. The timing of the end of infection varies from country to country, and infection in developing countries may spread further. If the development and dissemination of therapeutic agents/vaccines is delayed, or if containment fails in some countries/regions, the economic crisis may be prolonged or serious.
- How much time should be taken to overcome a crisis? It is necessary to stop the infection not only at home country but also at the global level.

**Spanish Flu in US**

(Source) Centers for Disease Control and Prevention
(https://www.cdc.gov/flu/pandemic-resources/1918-commemoration/three-waves.htm)

**Three tracks to a coronavirus vaccine**

(Source) Ian Bremmer Eurasia group update(5/11)
Vulnerability of global supply chain

- The global supply chain is fragmented around the world due to the corona crisis, and the risk of supply chain disruption of various goods becomes apparent.
- **What was the risk in the production (materials/intermediate goods/finished products) and logistics supply chains that were constructed across borders?**

Examples of supply chain disruption

- **EU → World**
  - Restriction of medical goods supply

- **EU**
  - Stagnation of movement causes labor shortage
  - Increased time required to cross border

- **China**
  - Delay in land transportation due to city blockade, reduction in number of container ships departing from China
  - After the New Year's holiday, migrant workers did not return from rural areas and labor shortage occurred

- **China → Japan**
  - Supply disruption of automobile parts and electronic parts

- **US**
  - Isolation measures associated with entry impede technician mobility

- **ASEAN → Japan**
  - Supply disruption of automobile parts and electronic parts

- **Worldwide**
  - Suspended passenger flights reduce air transport capacity

(Source) Press release, Global Trade Alert
Concentration of international import sources/production bases

- Since the 2000s, as globalization has progressed, the concentration of import sources and production bases of some goods has increased.

- How should we consider the balance between "economic efficiency by concentrated production" and "response to supply disruption risk"?

### Dependence of import source on China

- Japan
- Korea
- US
- World

### Concentration of import source of electrical machinery and electronic parts (Herfindahl-Hirschman Index: HHI)

- Japan
- Korea
- US
- China
- World
- Germany

(Source) International Trade Centre

HHI: An index that measures import dependence. The higher the number, the more concentrated. For example, if Country A imports 50% from Country B, 30% from Country C, and 20% from Country D, the HHI of Country A is $50^2 + 30^2 + 20^2 = 3,800$. The maximum value (when dependent on only one country) is $100^2 = 10,000$. 
"My country first" vs. "International cooperation" in emergency

- Demand for Personal Protective Equipment (PPE) has increased explosively, and the shortage of those goods has become more serious. Export restrictions has also prevailed.

- Are crisis preparedness and international cooperation in emergency sufficient? Export restrictions when the exporting countries are concentrated in a specific source country are not only a constraint to end the crisis in the world, but if the restrictions remain after the end of the crisis, they will hinder the economic recovery.

Export restrictions

<table>
<thead>
<tr>
<th>Category</th>
<th>Export Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mask, goggles</td>
<td>7%</td>
</tr>
<tr>
<td>Protective clothing</td>
<td>5%</td>
</tr>
<tr>
<td>Gloves</td>
<td>4%</td>
</tr>
<tr>
<td>Disinfectant</td>
<td>4%</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>4%</td>
</tr>
<tr>
<td>Food</td>
<td>4%</td>
</tr>
<tr>
<td>Medical equipment</td>
<td>4%</td>
</tr>
<tr>
<td>Other medical related goods</td>
<td>3%</td>
</tr>
<tr>
<td>COVID-19 test kit</td>
<td>3%</td>
</tr>
<tr>
<td>Soap</td>
<td>3%</td>
</tr>
<tr>
<td>Toilet Paper</td>
<td>2%</td>
</tr>
</tbody>
</table>

(Source) WTO  https://www.wto.org/english/news_e/news20_e/rese_03apr20_e.pdf (as of 2020/4/22)

Export country of PPE

(Source) WTO  https://www.wto.org/english/news_e/pres20_e/pr855_e.htm (as of 2020/4/22)
Changes in the trend of globalization

- Globalization was a great driving force for the world economy, where people, goods, money and data move across borders to create added value.

- How will the globalization trends change after the corona crisis, where 1) the face-to-face communication between people will be restricted, 2) the supply chain will be reviewed, and 3) the importance of the digital transformation will increase? How can we create added value under new normal?

(Source) Cisco, 2019, IMF, WTO, UNCTAD ※2015=100%

Regarding the IMF forecast of GDP, the basic scenario is when the spread of infection will end in the second quarter of 2020 (China's first quarter). The second wave scenario refers to the forecast when the outbreak in 2020 and the second outbreak in 2021 also occur.
Restructuring of global governance and international cooperation

- While “centrifugal force” tends to work in international cooperation over responding to the corona crisis, there are also movements to maintain “centripetal force” in international cooperation at leaders level or ministries level.
- How should we consider the positive and negative aspect of globalization? In order to improve crisis response capabilities, should we deepen not only domestic response but also international cooperation? How can we build new global governance toward a flexible and balanced economic and social system that is highly resistant to crisis?

Examples of “centrifugal force”
- Trade restriction measures
  - US-China trade dispute
  - Unilateral measures
  - Export restrictions on masks, etc.
- Concerns about excessive market fragmentation
  - Strengthening security-related regulations in each country
- Weakened functions of international organizations and regional integration
  - Stalemate of the WTO reform including the Appellate Body
  - US’s withdrawal from Paris Agreement, suspension of contribution to WHO
  - Brexit

Movements to maintain “centripetal force”

- **G20 Trade and Investment Ministerial Statement (30 March)**
  We agree that emergency measures designed to tackle COVID-19, if deemed necessary, must be targeted, proportionate, transparent, and temporary, and that they do not create unnecessary barriers to trade or disruption to global supply chains, and are consistent with WTO rules.

- **ASEAN - Japan Economic Ministers’ Joint Statement on Initiatives on Economic Resilience in Response to the Corona Virus Disease (COVID-19) Outbreak (22 April)**
  The Ministers affirm their commitment to strengthen cooperation on building resilient supply chains to enhance the region’s position as a global trade and investment hub.

- **STATEMENT ON COVID-19 AND THE MULTILATERAL TRADING SYSTEM BY MINISTERS RESPONSIBLE FOR THE WTO (5 May)**
  We stress that trade restrictive emergency measures aimed at protecting health, if deemed necessary, shall be targeted, proportionate, transparent and temporary, not create unnecessary barriers to trade or disruption to global supply chains, and be consistent with WTO rules. We support the full resumption of all WTO activities as soon as feasible. We will also support continued efforts to reform the WTO so that it is as effective as possible.
In the corona crisis, needs for digital usage and emerging technology were increased. It includes technology for tracking individual behaviors to prevent the spread of infections and communication tools that allow business continuity while avoiding contact with other people.

Technological innovation triggered by the corona crisis would significantly change the businesses and society, and affect industrial competitiveness. Establishing new international rules and standards for digitalization will become even more important.

Progress of digitalization and new technology triggered by the corona crisis

- Track contact with infected people by digital data such as location data and payment data.
- Trial for tracking of movement in China and Korea, monitoring high-risk contact in UK and Singapore
- Self-diagnosis system using AI
- Serving, monitoring and disinfecting in contaminated areas using robots and drones
- Widely used in China for safe and efficient control of infectious diseases
- Remote medicine, education, work rapidly expanded
- Introduction of 5G and VR in some hospitals

Examples

- App monitors the movement of the infected person and announces attributes and movement information (South Korea)
- Megvii has developed an AI system that can identify hyperthermia from the crowd of 15 people/sec within 5 m. (China)
- PingAn GoodDoctor conducted 1.1 billion remote medical treatments after corona which are covered by insurance. Also available for 24 hours. (China)
- Alibaba provides telework support software to 10 million companies free of charge. Increased the number of members to 200 million. Baidu and others follow (China)
- Centrally managed by linking mask distribution data and health insurance card ID (Taiwan)
- Unmanned transporters for delivering drugs and food to isolated patients and drones for monitoring, measuring body temperature, and disinfecting (China)

(Source) wall street journal
(Source) Nikkei
(Source) Toyo keizai
(Source) NHK
(Source) MIT technology review
Implications for the challenge of "inequality"

- While the economic inequality between “nations” has narrowed, there were concerns about the expansion of economic inequality “in each country”.
- How will the corona crisis affect the issue of “inequality” in the future?

Gini coefficient (between “nations”)

(Source) Created based on Francois Bourguignon (2015)

Ratio of national income by income class (US)

(Source) World Inequality Database