

# Response to COVID-19 in Japan: Challenges and Recommendations

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## Abstract

This paper seeks to assess the actions taken by the Japanese government in the first year since the outbreak of the Novel Coronavirus infection was confirmed in Wuhan, China, on December 31, 2019. For this purpose, *the Investigation and Verification Report (API 2020)* by the Independent Investigation Commission on the Response to COVID-19 will be examined to determine the shortcomings and effectiveness of the precautions and countermeasures that were implemented throughout this period. Ten primary issues – including the revision of the Act on Special Measures Concerning Countermeasures against the Novel Influenza and the response of local and national governments – were identified in this research as having played a significant role in lowering the effectiveness of the Japanese government's response. Based on the analysis, recommendations for facing such crises in the future, such as designing and operating core-capacity and surge-capacity in the emergencies, were also made to improve the Japanese model.

## Keywords

novel coronavirus infection, the Japanese model, public health positioning, crisis preparedness

After the outbreak of the Novel Coronavirus Infection in Wuhan (Hubei Province, China) was confirmed and announced on December 31, 2019, the first case was confirmed in Japan on January 15, 2020. The government (initially, the official residence <Cabinet Secretariat>, the Ministry of Health, Labor, and Welfare, the Ministry of Foreign Affairs, the Ministry of Economy, Trade and Industry, etc.) immediately collected and summarized the data and released information on precautions and countermeasures. The World Health Organization (WHO) also discussed the response at an emergency meeting on January 22, but at this point the declaration of Public Health Emergency of International Concern (PHEIC) was postponed. However, from the time when the WHO declared PHEIC on January 30, the gravity of the situation began to be widely recognized by the masses worldwide, including Japan, and full-scale efforts were sought. Currently, a

year after the outbreak was first confirmed, most countries and regions are being hit by second and third waves, which have generally been stronger than the first wave (in spring 2020).

A common reference point for this infectious disease is the Spanish flu (another name for novel influenza), which spread more than 100 years ago during World War I (primarily in 1918 and 1919).<sup>1</sup> The number of people infected with the Spanish flu reached 500 million worldwide with over 100 million deaths. Although the case fatality rate throughout the entire pandemic was around 2%, which is not necessarily

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high, almost 500,000 people died in the United States alone.<sup>2</sup> Similarly, in Japan, from the latter half of 1918, the “epidemic flu” was rampant, and even the royal family was infected. According to records from the Ministry of Interior, the total number of infected people during this period (including the post-epidemic period in 1920) was 23.8 million, the death toll was 389,000, and the mortality rate was 1.63%.<sup>3</sup>

Prior to this pandemic, the Plague broke out in the 14th century, reducing Europe’s population by one-third and significantly changing agriculture and commerce. According to Daniel Defoe ([1722] 1928), in 17th-century London, one-sixth of the population was killed by the plague. Many other outbreaks of infectious/contagious diseases of this type, such as smallpox, cholera, and tuberculosis, have occurred throughout human history. In response to them, human beings eventually acquired immunity, while also finding certain treatment methods (at the end of the 18th century, Edward Jenner discovered the Cowpox) and successfully overcoming each of them. However, the structure in which outbreaks of new types of infectious diseases occur intermittently has not been stopped.

Therefore, although outbreaks of new infectious diseases cannot be eliminated, the immediate task and goal from the perspective of public health is to suppress the infectious capacity to a controllable level and maintain the socio-economic activities of normal times. Although from this point of view the Japanese government is still in the middle stages of its response, organizing and summarizing various findings may still be relevant. To this end, *the Investigation and Verification Report* (API 2020), published by the Independent Investigation Commission on the Response to COVID-19 (chairman: Yoshimitsu Kobayashi) on October 25, is a valuable record at least until October 2020. Not only does it include interviews with policymakers, but it is one of the few official records from the national government and local governing bodies during this period (as they are busy implementing daily

countermeasures, such documentation is not being systematically published). However, as there are various missing items in this report (either intentionally or unknowingly), it seems important to address these shortcomings, which will be the primary focus of this paper.

## THE CHARACTER OF THE CORONAVIRUS INFECTION

Such a global pandemic is likely to have been triggered by the globalization and urbanization of people, goods and services, and money, which has been accelerating since the end of the 20th century. Therefore, a reverse movement is necessary to calm it down (Onishi 2004). Although economic activity will severely decline during such a time (until the end of 2021), there is a possibility that we will hit the bottom and bounce back. Perhaps the breakthrough will be the progress and spread of digitalization to economic and social activities in general. Remote work and online lessons, which people were forced into in April-May 2020 (under the first state of emergency), marked the beginning of this process. In fact, the widespread use and sophistication of media (such as television) and the Internet and digital communication information networks, made it possible to constantly check the status of this infectious disease both nationally and internationally (not only from government officials, public organizations and international organizations in each country and region, but also from the public). This was completely unimaginable during the “Spanish flu” pandemic of the early 20th century.

First, let us organize the flow of major decisions and countermeasures over time. Initially, on December 31, 2019, the China-Wuhan Health and Welfare Committee announced a viral pneumonia outbreak with an unknown cause in Wuhan City. However, on January 7, 2020, Chinese scientists announced that the cause of pneumonia was a novel coronavirus that was 80% similar to the Severe Acute Respiratory Syndrome (SARS) (Wu and McGoogan 2020). From this, the suspicion that the infection had

already been spreading in China since the fall of 2019 emerged, despite Chinese scientists having high research capabilities. At this stage, it was extremely important that this genetic information be scientifically clarified and made public, as it was a prerequisite for implementing various measures in Japan and elsewhere.

Next, regarding to the name of this infection and virus, the novel coronavirus itself was named SARS-CoV-2 on February 7, 2020 by the Coronavirus Study Group (CSG) of the International Committee on Taxonomy of Viruses (ICTV). Later, on February 11, the WHO announced that the official name of the infectious disease was COVID-19. For this type of infectious disease, complying with the practice of not using a specific country/region name (even if it is inferred to be the place of origin) is necessary. Although the pandemic of the early 20th century was called “Spanish flu” (because many of the first infections occurred in Spain), it was likely to have been an after-effect of having American soldiers stationed in Spain during that time. Simultaneously, the WHO also wanted to keep a distance from the political implications of blaming China (one such example of this would be US President Donald Trump constantly calling the infection the “China virus”).<sup>4</sup>

### **ISSUE (1): CIRCUMSTANCES LEADING TO THE REVISION OF THE ACT ON SPECIAL MEASURES CONCERNING COUNTERMEASURES AGAINST THE NOVEL INFLUENZA (SPECIAL MEASURES ACT)**

Regarding Japan’s response to pandemics of infectious diseases, the countermeasure against the novel influenza H1N1 (for which the first infections were confirmed in Mexico in April 2009) was an important precedent. In Japan, about 20 million people were affected and about 18,000 were hospitalized one year after the outbreak, but the number of deaths was 203 and the mortality rate was only 0.16

(as of the end of September 2010). This is 1/3 to 1/26 lower than in Europe, the United States, and Mexico. However, in preparation for infectious diseases of unknown pathogenicity, the Countermeasures Review Meeting at that time compiled *the Report of the Review Meeting on Countermeasures Against the Novel Influenza (A/H1N1)* (June 10, 2010) after completing the review of facts. After that, in September 2011, *the Action Plan for Countermeasures against the Novel Influenza* was revised, and in November of the same year *the Arrangement of Legal Issues Necessary for Countermeasures against the Novel Influenza* was compiled. Furthermore, based on a “proposal draft” in January 2012, the Act on Special Measures concerning Countermeasures against Novel Influenza (Special Measures Act) was enacted in April and issued in May of the same year.<sup>5</sup> Following this, there was an outbreak of H7N9 avian influenza in China (2013),<sup>6</sup> Ebola hemorrhagic fever in West Africa (2014), and a large-scale outbreak of MERS (Middle East Respiratory Syndrome) in South Korea (2015). However, in most cases, infections in Japan were relatively minor, and neither the government nor society felt a sense of crisis. Therefore, there was no momentum for a full-scale review of the plans’ legal deficiencies.<sup>7</sup>

In the legal system of infectious disease crisis management, the Immigration Control and Refugee Recognition Act (Immigration Act) and the International Health Regulations (IHR) play important roles, in addition to the four laws on infectious disease crisis management (1- Infectious Diseases Act, 2- Quarantine Act, 3- Act on Special Measures concerning Countermeasures against Novel Influenza [Special Measures Act], and 4- Preventive Vaccination Act). In this paper, we will focus specifically on the first, second, and third crisis management laws.

As of mid-January 2020, when there was already information on the many cases of pneumonia with an unknown cause in Wuhan, China, the Japanese government implemented “shoreline operations” for returnees and immigrants from Wuhan to

carry out inspections at the National Institute of Infectious Diseases; this was based on the National Epidemiological Surveillance of Infectious Diseases (NESID) stipulated in Article 6, Paragraph 2 of the Enforcement Regulations of the Infectious Diseases Act. These measures were strengthened once Wuhan City was suddenly locked down on January 23. In response to this news, on January 28, the Cabinet decided on a Cabinet Ordinance to designate the novel coronavirus infection as “designated infectious disease” (equivalent to class 2 in pathogenicity) of Article 6 Paragraph 8 of the Infectious Disease Act, and a Cabinet Ordinance to designate it as “quarantine infectious disease” of Article 2, Item 3 of the Quarantine Act. These ordinances were originally scheduled to come into force on February 7, but as the situation worsened and the WHO made its PHEIC Declaration on January 30, it came into effect on February 1 for a period of one year.

During this time, the “quarantine infectious diseases” of Article 2, item 3 of the Quarantine Act was not subject to isolation or restriction of activities. However, it was necessary to take measures to deny entry due to the increasing number of infected people in Zhejiang Province and to detain passengers and crew on board the Diamond Princess (Yokohama cruise ship), which was anchored at Yokohama Port from February 3 due to an outbreak. Due to this, the novel coronavirus was re-designated as an “infectious disease” based on Article 34 of the Quarantine Act (Cabinet Ordinance promulgated on February 13 and enforced this the following day), which made it possible to impose isolation and restriction of activities. Furthermore, with the second amendment of the Infectious Diseases Control Ordinance (enforced on March 27), “restrictions / blockades of buildings, restrictions on traffic”, “reports of health status, requests for refraining from going out” and “progress reports by prefectures” became possible.

In the first place, the interpretation (apart from the true intention of the Official Residence) of the government (Abe Cabinet)

was that this infectious disease did not fall under the “new infectious disease” subject to the Act on Special Measures Concerning Countermeasures against Novel Influenza (Special Measures Act) (established in April 2012 and enforced in April 2013). For example, at the Financial Affairs Committee of the House of Councilors on February 28, Prime Minister Shinzo Abe and the Minister of Health, Labor, and Welfare Katsunobu Kato declared “it is not a ‘new infectious disease’ under this law, because it is known to be a new type of coronavirus (by genetic analyses conducted in China, etc.)”.<sup>8</sup> In other words, it seems that there was hesitance in applying the Act on Special Measures Concerning Countermeasures against Novel Influenza (Special Measures Act). The arguments of the Minister of Health, Labor, and Welfare (MHLW) were reflected in such judgments and interpretations. According to the understanding and recognition of many medical officers and technical officers, including the administration of public health centers, since the new coronavirus infectious disease was considered neither influenza nor a new infectious disease, it was not subject to the Act on Special Measures Concerning Countermeasures against Novel Influenza (Special Measures Act). Yasuhiro Suzuki, the (first) Medical Technology Supervisor (established in 2017), reflected this position and this baseline continued thereafter.

However, after that, the spread of infection did not stop, and it was necessary to take legally supported responses and measures from the viewpoint of crisis management including emergencies. At that time, the Official Residence decided to respond by utilizing and amending the existing legal system because there was not enough time and organizational resources for new legislative measures. Fortunately, since the Act on Special Measures concerning Countermeasures against Novel Influenza was established during the Democratic Party administration of Yoshihiko Noda (who held office from September 2011 to December 2012), it was expected that the support of opposition parties (such as the Constitutional

Democratic Party) would be easily obtained if the law was revised.<sup>9</sup>

The following are classified and stipulated under the Infectious Diseases Control Act: known infectious diseases from Class 1 (high infectivity and high severity) to Class 5 (low infectivity and low severity); infectious diseases such as novel influenza (Article 6, Paragraph 7 of the Infectious Diseases Act);<sup>10</sup> designated infectious diseases (Article 6 Paragraph 8 of the Infectious Diseases Act);<sup>11</sup> and new infectious diseases (Article 6 Paragraph 9 of the Infectious Diseases Act).<sup>12</sup> The purpose of the classification is to differentiate the measures that can be taken according to the degree of risk (such as the system for providing inpatient medical care to designated medical institutions for infectious diseases). Therefore, since the novel coronavirus infection COVID-19 could not be considered a “new infectious disease” as long as the genetic information was known, it was designated a “designated infectious disease” based on the Infectious Diseases Control Act (Article 6, Paragraph 8 of the Infectious Diseases Control Act) and a “quarantine infectious disease” based on the Quarantine Act. However, although the genetic information of the novel coronavirus infection COVID-19 was clarified more than a year ago, there are still many unclear points on the pathology and treatment of this infectious disease and no clear prospect for effective and safe therapeutic agents or vaccines. Given this, the claim and judgment of the MHLW that “it is not a new infectious disease under the Special Measures Act” is highly questionable.<sup>13</sup>

In any case, on March 10th, the Cabinet decided on measures to consider the novel coronavirus infection COVID-19 as a novel influenza (from the enforcement date to January 31, 2021), as stipulated in the Act on Special Measures concerning Countermeasures against Novel Influenza; this was established and promulgated on March 13 and came into effect the following day. With this, the novel coronavirus infection COVID-19 was subject to the

Act on Special Measures concerning Countermeasures against Novel Influenza for up to two years from the date of enforcement. In terms of the advantages of designating the novel coronavirus infection as a “designated infectious disease (equivalent to class 2)”, we can mention that (1) forced isolation (forced hospitalization) measures became possible, (2) hospitalization costs were borne by public funds, (3) notification was made obligatory, so accurate data could be obtained, (4) it became easy to identify people in close contact with the disease, and (5) the infection risk of medical staff was reduced (by limiting the response to designated medical institutions for infectious diseases). The disadvantages that were seen include the following: (1) if the number of infected people increase, the designated medical institutions for infectious diseases will be overloaded, (2) increased risk of infection due to lose alerts at hospitals other than designated medical institutions for infectious diseases, and (3) restricted free movement of mildly ill patients.

Furthermore, in terms of the response to a pandemic-class infectious disease crisis, medical measures for hospital isolation and treatment prescribed for infectious diseases, and the public health measures of social distancing stipulated by the Special Measures Act, must be the driving force. As a concrete public health measure, from the time of the initial Special Measures Act (enacted in April 2012 and enforced in April 2013), it was expected that the aim could be achieved without penalties by “requesting” people to voluntarily comply (in other words, hoping that most people would obey). In addition, the authority that the national government (prime minister) has on local governments (prefectural governors) is limited to “comprehensive coordination” (in Article 20 of the Special Measures Act).<sup>14</sup> Even if the citizens and local governments do not follow the instructions of the national government (prime minister), the system operates while expecting independence or a sense of mission (implicit mutual surveillance function). In other words, it is a soft lockdown with no coercion or penalties. Even under the

revised Act on Special Measures concerning Countermeasures against Novel Influenza (enacted on March 13, 2020 and enforced on March 14, 2020), this emergency measure has not changed, and it is simply stipulated that the novel coronavirus infection is a designated infectious disease and is subject to the law. In short, the government and the Liberal Democratic Party tried to overcome the situation by eliminating the labor, procedures, and complexity of the legal system as much as possible.

Under such a legal system, on April 7, the government issued a state of emergency for 29 days (until May 6) in seven prefectures (Tokyo, Kanagawa, Saitama, Chiba, Osaka, Hyogo, and Fukuoka), where the infection situation was serious.<sup>15</sup> Subsequently, on April 16, it was announced that this would be expanded nationwide to 47 prefectures, and on May 4 it was subsequently extended to May 31. However, after that, on May 14, 39 prefectures were excluded from the target area, excluding the eight prefectures of Hokkaido, Tokyo, Kanagawa, Saitama, Chiba, Kyoto, Osaka, and Hyogo. Furthermore, on May 21, the three prefectures of Osaka, Kyoto, and Hyogo were removed from the target area. Finally, on May 25, the remaining five prefectures were also excluded from the target area, and then the declaration was completely lifted. Thus, the number of infected people (in the first wave) decreased sharply, and the effect of the state of emergency could be seen; therefore, government officials promoted this result domestically and abroad as a successful example of the “Japanese model”. However, “request-based” soft lockdown measures that did not have coercive force (and not enough compensation in return) were based on the premise of people’s “self-restraint”, so the effect of suppression could not be clearly verified.

The second wave arrived in August and the third in November. By late December 2020, it was necessary to issue a second state of emergency, although it was difficult to issue a subsequent declaration or continue this in the medium to long term. Eight months have passed since the enforcement of the

revised Act on Special Measures Concerning Countermeasures against Novel Coronavirus (enacted on March 13, 2020 and enforced on March 14, 2020), and the seriousness of the disadvantages of establishing this legal system, especially the limited advantages resulting from the mismatch of provisions and measures for emergencies, has become a reality in Japan, which is being hit by the third wave.

## **ISSUE (2): RESPONSE AT NATIONAL AND GOVERNMENT (MAINLY POLITICAL) EVENTS**

Many events were originally scheduled for 2020 both in and outside Japan. In domestic terms, the Tokyo Olympics and Paralympics were scheduled for July 24 to August 9, 2020. This cancellation/postponement was something Japan wanted to avoid at all costs, but as the WHO declared a global pandemic on March 11, Prime Minister Abe agreed to extend the period by about one year after having a conference call (March 24) with Mr. Bach, President of the International Olympic Committee (IOC) (after that, it was decided to postpone the starting date for one year to July 23, 2021).

Initially, the President of China, Xi Jinping, was supposed to visit Japan as a state guest in April 2020. The Abe administration was in a situation where it was difficult for the Japanese side to request cancellation because China was expected to exert influence to improve and stabilize exchange, trade, and security relations between Japan and China, as well as normalize relations with North and South Korea. However, given the domestic situation of the coronavirus crisis in both countries, it was not possible to receive president Xi Jinping. Consequently, on March 5, it was announced that the visit would be postponed. According to a Japanese government official, the proposal came from the Chinese side. Until this was announced and confirmed, there were requests (mainly from the perspective of economic exchange) from the Japanese side to limit the measure

of refusing entry to people coming from China (Hubei Province as of February 1, and Zhejiang Province from February 13) based on the Immigration Control Act, and simultaneously, certain complaints were reported from the Chinese side, but quarantine was strengthened for immigrants from China and South Korea (enforced on March 6). However, compared to the measures of other countries including the US, Japan's measures on people entering from China were extremely limited. However, it is possible that the decision and judgment were slightly delayed due to the issue of President Xi Jinping's scheduled visit.

The Ceremonies of Accession to the Throne of the new emperor in the Reiwa era, which started in May 2019, were completed in the first year of Reiwa (2019), although the Ceremony for Proclamation of His Imperial Highness Prince Akishino was scheduled for the second year of Reiwa (2020). Eventually, this was held on November 8 in a very limited form, considering the intention of the Prince himself and the corona crisis.

The second Abe administration, which was inaugurated on December 26, 2012, launched "Abenomics" whereby the country would somehow escape deflation. In early 2020, when the term of the Leader of the Liberal Democratic Party was being extended, the outbreak of the novel coronavirus infection suddenly occurred. Until the summer, Abe struggled to fulfill his responsibilities as prime minister, and suddenly announced his resignation on August 28 as his health declined. From the perspective of smoothly continuing the coalition government system consisting of the Liberal Democratic Party and the Komeito Party of the current Cabinet, Toshihiro Nikai, the Secretary General of the Liberal Democratic Party, played a central role in selecting a successor. Chief Cabinet Secretary Yoshihide Suga was nominated as the prime minister on September 16 (the start of the Suga Cabinet). In this selection process, the pros and cons of the measures taken against the coronavirus infection did not come to the fore, but behind the scenes, Mr. Suga, who had become familiar with the Abe

administration in his years as Chief Cabinet Secretary, must have expected continuity and stability in this regard. However, looking back, the measures of the previous six months were not reviewed, and there is evidence that the continuation of Prime Minister Suga's (Chief Cabinet Secretary at the start) "Go To Project,"<sup>16</sup> which aimed at economic recovery after the corona crisis, was blindly continued and restructuring the system was not considered.

### **ISSUE (3): RESPONSE OF LOCAL GOVERNMENTS (PREFECTURES)**

Since they are under the jurisdiction of the health center administration, local governments (prefectural governors and mayors of municipalities) are in charge of infectious disease control on-site. In Hokkaido, Tokyo, Kanagawa, Osaka, and other prefectures where clusters first appeared in Japan, each governor requested attention and cooperation for infection control through frequent press releases from an early stage. In a sense, it was a political show by the governors who had the power to communicate. Even in the declaration of emergency, it can be said that the government was blindly searching for common ground (i.e., effective, realistic, and reasonable measures) without assessing both the government and local governments.<sup>17</sup>

With the spread of the infection in Tokyo and the fact that the hosting of the Tokyo Olympics and Paralympics 2020 was being threatened, Governor Yuriko Koike announced "the possibility of a lockdown" on March 23. People prepared themselves because they had learned about the seriousness of the "lockdown" from Wuhan. In response to the news, the government explained that it would be impossible to take such measures because the legal system does not allow forceful "lockdowns" like China, and they rushed to ask the people for their understanding. According to government officials, the originally planned announcement of the state of emergency

was delayed by about a week because they were overwhelmed by the excessive negative image of the comments given by Ms. Koike (API 2020, Part 2, Chapter 4). Certainly, the state of emergency due to the infectious disease was the first announcement, and many of the arrangements and preparations would take time and effort; however, if the one-week delay in the issuance interfered with calming the situation down, the responsibility lies primarily with the government. In addition, the Tokyo gubernatorial election was held on July 5, 2020. This was planned from the beginning, and the setting of schedules was not arbitrary. Until just before this election, every time the incumbent Governor of Tokyo, Yuriko Koike, announced the infection status and countermeasures against the coronavirus in Tokyo at press conferences, it effectively served as an election campaign, which may have disappointed potential opponents.

Similarly, another negative effect of the election was the referendum on the Osaka Metropolis Plan, which was held on November 1, 2020. The Osaka Restoration Association has long insisted on establishing the Osaka Metropolitan Area to eliminate the harmful effects of the dual administration of Osaka City and Osaka Prefecture, and a referendum was already held once before (on May 17, 2015). The Osaka Metropolis Plan was again rejected in this second referendum (although the content was slightly different from the first). First, there were considerations and concerns about this election (which are different from the Tokyo gubernatorial election that has to be held each term) including if it was something that had to be implemented at that time, or if it would have been better to inquire again once the coronavirus crisis was over. Furthermore, was it possible to avoid “the 3 C’s (Crowded places, Close-contact settings, Confined and enclosed spaces)”<sup>18</sup> during election campaigns? The fact that such an election was forcibly set and pushed through at that time, makes one feel that Hirofumi Yoshimura, the governor of Osaka Prefecture, and Ichiro Matsui, the mayor of Osaka City, prioritized their own goals as politicians.

The local governments oversee on-site measures against the corona crisis, but they are in a desperate financial situation. The fiscal adjustment fund declined after the burst of the economic bubble; however, there has been a steady accumulation since 2006, and the balance nationwide was 7.5 trillion yen in 2016 (6.2 trillion yen excluding Tokyo and its 23 wards). About 1 trillion yen (as of September 2020) has been withdrawn for measures against the coronavirus infection. Of course, this fund was put in place for unforeseen circumstances, so there is no problem in withdrawing some of it during a crisis, but not knowing its duration is problematic.

#### **ISSUE (4): WHAT IS THE BASIS AND VALIDITY OF THE NUMBER OF INFECTED PEOPLE AND DEATHS ANNOUNCED BY JOHNS HOPKINS UNIVERSITY IN THE UNITED STATES?**

In the 21st century, where globalization and digitalization have progressed to a significant level, it is almost impossible to stop situations that are occurring and information that is being generated and spread worldwide. One important mission of modern governments and international organizations is to organize, summarize, and disseminate such information while upholding certain standards. In the case of coronavirus infection, in addition to the spread of the infectious disease, how quickly the effects and countermeasures are organized, summarized, and disseminated is no less important.

The first piece of information is how many people have been infected and have died in Japan. In Japan, including the Diamond Princess (Yokohama cruise ship), 194,398 people were infected, 25,741 people were hospitalized (or that have received medical treatment, of which 609 were severely ill), and 2,836 people died (as of 7:35 p.m. on December 18).<sup>19</sup> If the first wave was in April and the second wave was in July-August, the increase from November 2020 corresponds



to the third wave. These numbers were organized and summarized at health centers throughout the country, although they initially communicated this via fax (many people were surprised at their use of such an old-fashion and rudimentary method). Subsequently, with the introduction of the Gathering Medical Information System on COVID-19 (G-MIS) and the Health Center Real-time information-sharing System on COVID-19 (HER-SYS), communication has finally improved.<sup>20</sup>

However, seeing that the situation in Japan is carefully and thoroughly summarized in this way raises the question of how the infection status is being grasped around the world. Regarding this, 74.96 million people were infected with the novel coronavirus in countries and regions throughout the world, and 1.66 million people have died. The largest numbers thus far have been recorded in the United States, with 17.21 million infected and 310,000 dead (as of 4:00 p.m. on December 18).<sup>21</sup> Judging from this data, the case fatality rate is 1.5% in Japan, but it is 2.2% worldwide and 1.8% in the United States. Given the low number of tests in Japan, it can be assumed that the case fatality rate in Japan may be even lower.

Incidentally, the source of this global data is the Johns Hopkins University team (COVID-19 dashboard team), but it was initially a voluntary effort of some enthusiasts. A team led by Lauren Gardner, co-director of the Center for Systems Science and Engineering (CSSE) of this University, used ArcGIS from Esri in the United States to perform spatial modeling of measles and Zika virus epidemics. Looking at the spread of the novel coronavirus infection in China in January 2020, Ensheng Dong, a (Chinese) graduate student, created a dashboard in a few hours using the ArcGIS Dashboards app, published it on January 22, and shared it on Twitter. It quickly attracted attention. This database seems to have spread globally.<sup>22</sup>

The lesson from this is, first, that no government subsidies or financial assistance is needed to undertake this type of action. If the people involved have the ability and

motivation, they can take on the challenge. Second, the fact that it was a Chinese graduate student who was responsible for this suggests the validity of the concerns that measures of the Trump administration to eliminate young Chinese researchers from a national security perspective could hinder the progress of current scientific research in the United States. Third, even under the Trump administration, the fact is that universities in the United States provide an abundant research environment (for example research conditions, rather than financial aspects) to many international students, including Chinese ones, and provide concrete support to develop their innovative ingenuity.

However, in my opinion, the dissemination and utilization of this dashboard was something that caused more anxiety and possibility to Japan than the threat of the coronavirus itself.

## **ISSUE (5): SMALL NUMBER OF PCR TESTS**

The MHLW and infectious disease specialists in Japan were equally against increasing the number of PCR tests. The reason was that if testing was expanded unnecessarily, the number of infected people seeking treatment and hospitalization would increase rapidly, therefore occupying the available hospitalization beds and preventing patients with other illnesses from being hospitalized.<sup>23</sup> Certainly, if beds are filled with coronavirus patients, the medical system will collapse. As of February and March, kits and equipment for PCR tests were not always uniformly distributed throughout the country, so it was impossible to expand the tests all at once. However, even after May, the number of tests did not increase much. This situation is difficult for ordinary politicians and citizens to understand, and Prime Minister Abe also ordered an increase in the number of PCR tests several times in early spring, and when things did not proceed as intended, he did not hide his annoyance using the expression “clogging is occurring”. Next, although the number of inspections did gradually increase,

it was still overwhelmingly small compared to other countries.

After all, the small number of tests is an administrative task that assumes that health centers can grasp the whole flow. Regarding the survey on people in close contact with the disease, most of the overseas surveys are prospective surveys, which are methods to identify newly confirmed close contacts of infected people and confirm whether they develop the disease. Contrarily, in Japan, in addition to prospective surveys, retrospective surveys are also carried out to investigate the past behavior of multiple infected people based on the characteristics of transmission, find places that have become common sources of infection, and comprehensively grasp close contact on the spot to prevent the spread of infection. In other words, this is a thorough survey method that attempts to grasp both the forward and backward flow. However, although this is basically effective in the case of “shoreline operations”, once the infection spread throughout Japan, it became very difficult to track it in this way. However, if this method is used, increasing the number of tests unnecessarily will also overload the follow-up survey, so it is desirable to narrow down the target in advance. Moreover, if an infection is detected in the administrative tests for “designated infectious diseases (equivalent to type 2)”, it would be necessary to take measures such as hospitalization.

In short, the health centers that oversaw the tests did not want to rapidly increase the number of subjects, because it would take time and effort to trace the test results. Afterwards, improvements were seen in the PCR testing method, such as the adoption of mass testing from individual testing and the shift from throat mucus testing to saliva testing. However, if the basic nature of administrative inspections does not change, it seems unlikely that the involvement of health centers will decrease.

This explanation is based on the existing facilities, staff and practices of health centers, and medical personnel, but it will be necessary to create a system wherein people engaged in socially indispensable work, i.e.,

essential workers—besides the elderly and people with underlying illnesses who have less resistance to infection—undergo PCR tests properly. That should lead to “not only protecting yourself, but also protecting the important people around you”.

Notably, the PCR test itself is not a very special test and not something that can only be performed at specific hospitals. It would be possible to administer a certain number of PCR tests at many universities’ faculties of medicine, pharmaceutical science, and veterinary studies. However, if the PCR test is the subject of the administrative testing (collecting and summarizing information through health centers), the inclusion of other institutions will be stopped, and it has been basically assumed that the PCR test will be conducted at the inspection agencies under the jurisdiction of the MHLW. Under these preconditions, the increase in the number of PCR tests will naturally be capped.<sup>24</sup>

## ISSUE (6): FEW PUBLICATIONS FROM JAPAN

Since the outbreak of the novel coronavirus infection, research and papers related to it have been increasing rapidly around the world, and “knowledge sharing” is progressing rapidly and widely (Ikukawa and Koshikawa 2020; Koshikawa and Ikukawa 2020). In the world of traditional journals, peer-reviewed papers have been considered valuable, but speed is becoming more important in this area. First, the number of papers called “preprints” published on the Internet before peer review is rapidly increasing. These are being published on websites including bioRxiv and medRxiv. According to the analysis of the National Institute of Science and Technology Policy of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), as of June 2020, there were more than 40,000 corona-related papers, with China at the top and the United States in second place (Japan is responsible for one tenth of these publications). Of course, many papers must be withdrawn after publication, but the texts of the papers of the Los Alamos National

Laboratory in the United States have been viewed more than 270,000 times.

China's recent breakthrough in the world of scientific papers is not limited to this field.<sup>25</sup> The National Institute of Science and Technology Policy of the MEXT published a report saying that China had overtaken the United States to become the number one in the world in terms of the number of papers in the field of natural science. According to this, in 2017 (three-year moving average), China ranked first with 300,000 papers, the United States ranked second with 280,000, Germany ranked third with 67,000, and Japan ranked fourth with 65,000. The rate of increase in the number of papers from China is tremendous (18 times that of 20 years ago and 3.6 times that of 10 years ago). Furthermore, the papers with the highest number of citations, which represent excellence and a high degree of attention, are 29% for the United States and 22% for China, which are comparable. The growth in investment in universities that produce these papers also increased 10.2 times in 2018 compared to 2000. It stands out even compared to the United States, which increased by 1.8 times in the same period.

Contrarily, the number of scientific papers published in Japan is extremely low. In Japan, the number of Nobel Prize laureates is increasing every year, which is quite satisfactory, but it only reflects the achievements and efforts of the last 10 or 20 years. At this point, the capacity to produce scientific papers is clearly below that of China. Even if this cannot be reversed overnight, at least three issues need to be pointed out.<sup>26</sup>

First, the selection of research themes must be timely. The emergence of the new coronavirus infection with high social needs calls for young researchers who boldly take on the challenge. In this regard, it is necessary to take some risks in terms of research themes and methods, while showing an adventurous spirit by going out of the comfort zone (advancing into different fields). This has the potential to open up a whole new world.

Second, there is a need for a social system that provides institutional and

financial support for such ambitious research (i.e., the enhancement of subsidies). In addition to the enhancement of Grants-in-aid for Scientific Research by the MEXT, at every citizen's level, there may be a system to encourage exploratory research, rather than getting wrapped up in the "hometown tax payment", launched at 2008, for commemorative purposes.

Third, it is highly possible that the current corona crisis has flooded today's young researchers with emergency mode tasks and issues, in addition to the normal tasks within their respective organizations and their own unique research issues. However, it is not just the responsibility of young Japanese researchers. Amidst this sudden situation, young international researchers, especially from China, should also be working on their respective research topics while exploring this topic. By sharing this situation with other countries, new collaborations and networks can be created.

## ISSUE (7): POSITIONING OF PUBLIC HEALTH

According to *the Investigation and Verification Report* of the Asia Pacific Initiative (2020), pages 264 and 340, the current curriculum of medical schools in Japan is divided into three systems: clinical medicine, experimental medicine, and social medicine; among these, the social medicine layer that covers public health seems to be the weakest one. The medical world includes not only medicine/doctors but also close connections with pharmaceutical sciences/pharmacists, dentistry/dentists, and veterinary medicine/veterinarians. Considering the interaction with the fields of surgery and examination, a certain amount of interaction with ergonomics, physiology, biochemistry, measuring instruments, and robotics is also required. Despite this breadth of knowledge, specialization is advancing in the fields of clinical medicine and experimental medicine. Contrarily, since social medicine deals with public health, it is required to set up a holistic educational curriculum, even though it is

based on an educational philosophy that is quite different from many other medical disciplines.

In particular, (1) while specialized fields have become more fragmented and sophisticated in medical education over recent years, it may be necessary to broaden insights and knowledge in the field of social medicine, as well as in specific specialties. In some cases, pursuing commitment to integrity in political decisions is also required. (2) In clinical medicine, specialties such as traditional internal medicine and surgery tend to attract talented people (because of high patient needs and high rewards). (3) As for social medicine, it is presumed that, although there are social needs, the field of activity is limited to welfare bureaucrats (medical officers), the National Institute of Infectious Diseases, and health centers. It is possible to satisfy the significance of contributing to public interest, but people must be ready to settle for relatively low compensation.

Originally, the medical schools of the former imperial universities (national universities) may have made such a public health field their primary focus. However, few professors and researchers from these universities have appeared in the media or at expert meetings since the corona crisis began. Perhaps they are devoting themselves to promoting academic research in their own fields, but the novel coronavirus infection is now the most important issue not only in Japan, but also all over the world. It is necessary to have the guidance and supervision of the MEXT to ensure that researchers at universities and research institutes can take this step to expand their focus areas.

### **ISSUE (8): (DISASTER) DISPATCH OF THE SELF- DEFENSE FORCES**

In February 2020, the dispatch of medical service corps officers to the Diamond Princess ship (Yokohama cruise ship), and the subsequent admissions at the Self-Defense Forces Hospital had a track record of

zero infected people. This was also the result of thorough infection prevention measures. After receiving such high praise, Asahikawa City requested the dispatch of nursing officers to the infected clusters at the core hospitals in the city. On the other hand, Masahisa Sato, a member of the House of Councilors (Liberal Democratic Party) and a former self-defense official, tweeted that “the Self-Defense Forces are not handymen” (on December 9, 2020), which caused controversy.

Afterwards, according to a comment made by Representative Sato at BS Yomiuri TV (on December 9, from 10:00 to 11:00 p.m.), the MHLW and the Ministry of Defense (Director-General class) agreed on the dispatch of the Self-Defense Forces in case of disasters. It was a misjudgment on the part of the local government that the request from Asahikawa City and Major Masahito Nishikawa (December 7) was delayed despite the request from K at Hospital Y (November 25). The division of responsibilities is such that the MHLW is in charge of infectious diseases, the National Police Agency is in charge of terrorism, and the Self-Defense Forces are in charge of bacterial attacks. The mistakes in linkage occurred because the classification of this kind of disaster was unknown at that time; therefore, it is now being said that the government and cabinet should have provided organizations and functions with the means to comprehensively respond to such situations.

Under the pacifist constitution after World War II, Japan became accustomed to relying entirely on U.S. military presence for international security, and there is tendency for both the government and the citizens to confuse the security of the country with the well-being of people on a national and regional scale. Of course, these two are not in conflict, but they are not unconditionally interdependent either. It is necessary for the government, local governing bodies, and the public to have a careful tension when working on and putting into practice a way of reaching such a balance (taking this novel coronavirus infection as an opportunity to do so) (Fukuda 2020).

**ISSUE (9): HOW SHOULD THE DESIGN AND OPERATION OF SYSTEMS AND ORGANIZATIONS BE DURING PEACETIME AND DURING EMERGENCIES, AND HOW SHOULD THIS GAP BE CONNECTED?**

Even in a normal macro economy, if there is a mismatch between the supply side and the demand side, fluctuations will occur when trying to adjust this. The structure of supply and demand may fluctuate not only due to domestic conditions but also due to overseas circumstances that are difficult to control depending on the country. Keynes theory has shown that these adjustments in the macro economy can be done by using the principle of effective demand. Most of the economic policies in peacetime have been clarified by this (Ishi 1980; Buchanan and Wagner 1977). Of course, the switching cannot be done mechanically or automatically; under a democratic form of government, stakeholders with vested interests will desperately resist the possibility of losing their position. In the end, such resistance makes it difficult to achieve a switch that is theoretically easy to do. Therefore, even in peacetime, it is not easy to level such fluctuations.

However, large-scale structural changes that occur once every 50 years or once every 100 years can bring about major changes in society and the economy. During such large changes, economic agents will fall down spectacularly if they try to deal with the situation using the conventional inertia. However, if each party is prepared, it is possible to break through individually even against all expectations. In other words, it would be good if we could prepare to face new circumstances. However, if we cannot at least estimate what the new circumstances will look like, we will not be able to properly prepare. It is not realistic to be prepared for the maximum damages and changes possible. Such preparations are often excessive and will interfere with normal operations during peacetime. Rather, even

if the scale of preparations is individually small, there is room for unexpectedly exerting power by adding combinations and changing the usages. In short, a situation like the novel coronavirus infection is a black swan phenomenon that rarely occurs, but once it does occur its effects are extremely serious (Taleb 2007). It is not necessary to be prepared for it with a strong wall or a deep bottomless crevasse. In other words, excessive self-defense is unnecessary, and its maintenance will become a burden. In case of emergency, it is better to flexibly combine existing parts and maintain a common goal.

For example, the local tax-allocation system distributes 94% of the total tax allocation to ordinary tax allocation and 6% to special tax allocation. As of early March 2011, the Ministry of Internal Affairs and Communications, which has jurisdiction over local tax allocation, had proposed reducing the ratio of special tax allocation to 4%. The reason is that this special tax allocation is issued to a specific area without any conditions when things like large-scale floods occur in that area. If such a disaster does not occur throughout the country, it will eventually be distributed on the same basis as ordinary tax allocation. In recent years (at that time), since there had been few large-scale disasters and special tax allocation was turned into ordinary tax allocation, the idea was that it would be appropriate to raise the ratio of ordinary tax allocation to 96% and reduce the ratio of special tax allocation to 4%. However, this draft budget was not implemented because on March 11 a large-scale earthquake, tsunami, and nuclear accident occurred in the Pacific coast of eastern Japan. This was the so-called Great East Japan Earthquake. Faced with this situation, the government (the Ministry of Internal Affairs and Communications, to be more specific) operated the local tax allocation according to the conventional rules. This system has become indispensable (although insufficient) in dealing with such situations, no matter how infrequently they occur.<sup>27</sup>

Disasters occur precisely when people

forget about them, but this does not always have to be the case. This raises the following question: How should the core-capacity and the surge-capacity be set for such “tail risk” (phenomenon with low frequency of occurrence, such as the Great East Japan Earthquake or a pandemic, but that can develop into a national crisis when it does occur)? Basically, it will be necessary to have a two-step approach: properly preparing the core-capacity and responding flexibly in line with surge-capacity.

“Politics” is responsible for this change. In legal systems operating under existing rules and organizations that comply with them, responses in peacetime proceed smoothly, but in emergencies, judgments are often interrupted and delayed. “Politics” breaks through all of that. Who is responsible for this? Conventionally, it is the politicians (parliamentarians, local councilors, chiefs, etc.), but the people elected in such elections are not necessarily the only “politicians” here. Shiroyama (1975) vividly described the situation in which bureaucrats were working hard discussing high affairs of state and building a national strategy when it was just the beginning of the high economic growth of Japan’s post-WWII period. At this point, the bureaucrats (as Shiroyama (1975) depicted them) were, in a sense, acting as “politicians”. Apparently, bureaucrats, along with business owners and executives, shared the same awareness of problems and principles of action.

Since the reorganization of central government ministries in 2000 (particularly since the administration of the Democratic Party of Japan), the discourse of “political initiatives are the responsibility of politicians” is recognized as “bureaucrats who are only limited experts, and academic experts have no business interfering in these matters, because the politicians are the ones making the judgments.” This has been strengthened and reinforced under the administration of the Liberal Democratic Party. However, judging from the experience (success and failure) of state management since the Meiji era, it is probably the pride of today’s politicians

(even though they are elected). Elected officials are not the only ones responsible for political decisions at major turning points in society. Rather, politicians should be willing to provide and engage in “places of discussion” to make these decisions.

### **ISSUE (10): LACK OF SPECIALIZED INTERNATIONAL HUMAN RESOURCES THAT CAN UTILIZE FOREIGN LANGUAGES**

From the perspective of reporting the situation of the corona crisis around the world, Japanese people living in Europe and the United States, as well as other countries and regions, were used in the media. Looking at this, it is encouraging to see that many Japanese people are engaged in various activities and live all over the world. However, in today’s globalized world, the number of Japanese people at the top of international organizations is of great concern. In a sense, it is directly linked to the level of Japan’s presence in the international community. The death of Mr. Yukiya Amano, the Director General of the International Atomic Energy Agency (IAEA) (from December 2009 to July 2019), in 2019 was a great loss. Additionally, after Mr. Nobuo Tanaka, who was the Director General of the International Energy Agency IEA (from September 2007 to August 2011) retired, it is hard for the Japanese to reach any more posts in the international organizations. In the case of Japan, bureaucrats with diplomatic experience are selected for such roles. However, in Western countries, especially in the Nordic countries, posts at these international organizations are generally for politicians with specialized knowledge and practical skills. In the case of Japan, where it seems that politicians and members of the Diet who only know about political elections make up the majority, it is difficult to take up a post at such an international organization (because of a lack of specialized knowledge and practical ability, as well as a lack of

proficiency in foreign languages).

In addition, it is disappointing that we cannot take a top post at the World Trade Organization (WTO) or the WHO. The candidates for the role of the next Director-General at the WTO, whose incumbent resigned in the middle of his term, are Korean and African natives. Tedros Adhanom Ghebreyesus (from Ethiopia) was elected as Director-General of the WHO with support from China. Regarding the dispatch of human resources to these institutions and fields, it is necessary for the government to formulate a strategy for the medium- to long-term, rather than working on it immediately before it occurs.

In that respect, Dr. Shigeru Omi (Chairman of the Community Health Care Organization), Vice-Chairman of the Expert Meeting on Countermeasures against Coronavirus Infection, and Chairman of the Subcommittee on Countermeasures against Coronavirus Infectious Disease, was also the Regional Director of the Western Pacific Regional Office for the WHO. He was also a candidate for the position of Director-General at the WHO, but was defeated by Margaret Chan (from Hong Kong), supported by China. Looking at this process, it is difficult to suddenly obtain a core post at an international organization. Therefore, as a steadier method, the possibility of working as a staff member at such international organizations must be explored. Japan has contributed significantly in terms of funding for these organizations, making it possible to secure a reasonable amount of staff recruitments. In fact, there are signs that the United Nations and the OECD are also soliciting applications from Japanese people. The Japanese labor market is also starting to become quite fluid, so at this time, it is desirable for young Japanese researchers to take on the challenge of applying for jobs in these international organizations.

## DISCUSSION & CONCLUSIONS

In this paper, I could not touch on the economic policy and budgetary provision for measures against the novel coronavirus

infection. Although this ought to be further discussed in relation to the MMT theory (Wray 2015), it was outside the scope of the current paper.

Up until publication (October 25, 2020), consequential to the policies of the Asia Pacific Initiative (2020), certain (positive) evaluation was given to the “Japanese model” because the number of infections were successfully suppressed at nursing care facilities. However, during the third wave after November 2020, there were many infected people in such nursing care facilities and facilities for the elderly. Apparently, the success of the “Japanese model” up to the second wave was influenced by various coincidences. Consequently, although the number of infected people could be suppressed, the essential logic cannot be explained. Even if “avoiding the 3 C’s” message was effective, it lacked general versatility, because it has many problems in terms of reproducibility and generality.

There have been concerns about mutations of the novel coronavirus in the UK since November 2020, but according to the previous “Corona Genome Information of 9,973 Samples in Japan” (as of October 26, 2020), clusters from China appeared between January and February, and European strains appeared in mid-March; After July, although they seem to come from two separate origins, all specimens are connected. It is not clear which part of the mutation strain is currently in progress in the UK and South Africa since November 2020.

Even in the Japanese model to COVID-19, which were not adopted without any special preparations, I have noticed some important challenges and lessons.

As of December 22, 2020.

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## Notes

1. *The NIKKEI* articles on March 15, April 16, April 17, May 6, and May 11, 2020.
2. The end results of the contrasting measures of two cities in the United States at that time were impressive. In St. Louis, Missouri, Midwest, shortly after infected people were discovered, movie theaters and schools were closed, and events and gatherings were banned for six weeks; however, medical care did not collapse, and the infection was suppressed. In contrast, in Philadelphia, eastern Pennsylvania, the number of infected people exceeded the medical limit and many people died because nothing was done until the infection rate exceeded 10%. Based on this lesson, Prime Minister Shinzo Abe seems to have requested the temporary closure of elementary and junior high schools, high schools, and special schools nationwide on February 27, 2020 (remarks of Prime Minister Abe at the House of Councilors Budget Committee on March 3).
3. Hayami (2006) estimates that the death toll has reached 453,000.
4. Such a consideration of the WHO regarding China was also reflected in the greatest compliment of “China is containing the infection” given when Director-General Tedros Adhanom Ghebreyesus (from Ethiopia) visited China together with Michael Ryan, director of the Health Emergencies Program (from Ireland), to observe the infection and response status, and meet with President Xi Jinping (January 28, 2020).
5. It was passed and established by the majority of the Democratic Party and Komeito Party at the House of Councilors plenary session on April 27, 2012. The Communist Party and the Social Democratic Party opposed it, and the Liberal Democratic Party was absent from the plenary session because the bill was passed by the Cabinet Committee during a refusal of deliberation after a censure motion on another issue.
6. Due to this pandemic, the enforcement of the Act on Special Measures concerning Countermeasures against Novel Influenza (Special Measures Act) was advanced by about one month on April 13, 2013.
7. As deficiencies we can mention that “establishment of a compensation system for medical personnel” and “authority of the governor” should be similar to that of the Basic Act on Disaster Countermeasures.
8. In other words, the premise and basis of such a claim was that the genetic information of the new coronavirus had already been elucidated and published by Chinese researchers.
9. The government temporarily considered the application of the Basic Act on Disaster Countermeasures, but it seems that it is impossible to interpret the spread of the novel coronavirus infection as a “disaster” (answer given by Yasutoshi Nishimura, minister in charge of COVID-19 response, to a question of Representative Yukio Edano at the 201st Diet Budget Committee on April 28, 2020).
10. Both, human-to-human infectious influenza, and re-emerging influenza.
11. At that point, a known pathogen that is not a pathogen classified by law but that can pose a threat is designated by a Cabinet Ordinance, and measures based on the Infectious Diseases Control Act can be taken for only one year (can be extended for another year) in principle.
12. An epidemic unknown to humankind, with human-to-human transmission.
13. In this regard, although not explicitly pointed out in the Asia Pacific Initiative (2020), it is similar to the fact that the pre-war Japanese army made formal and theory-focused decisions that prevented it from considering a substantive strategy (Tobe et al. [1984] 1991)
14. This “comprehensive adjustment” is a method of adjusting through two-way manifestations of intention based on advice, requests, recommendations, etc., and it is not assumed that the national government (prime minister) will unilaterally command and order local governments.
15. On April 3, just before issuing this state of emergency, Hiroshi Nishiura, a professor at Hokkaido University, released data requesting 80% reduction. This had a great impact on society, but it is equivalent to a contact limit of 80% and a 55% reduction in going out (Kobayashi and Nutahara 2020). In that sense, it must be said that there were some problems with risk communication at the expert meeting.
16. The “Go To Project” campaign actually started on July 22, but “trips to Tokyo” and “trips of Tokyo residents” started on October 1. However, following the third wave, which began to expand in November, Prime Minister Suga announced on December 14 that he would suspend “Go To travels” nationwide from December 28 to January 11.
17. Ex-post impressions of Mr. Nishimura, minister in charge of COVID-19 response (Asia Pacific Initiative (2020), Part 3, Chapter 7).
18. The office of the Prime Minister (disaster and crisis management information) received the three conditions at high risk of infection submitted to the 6th Expert Meeting on March 9 and posted them on Twitter on March 18.
19. The figures are based on the morning edition of *the NIKKEI*, Saturday, December 19, 2020.
20. However, in some metropolitan areas, such as local governments, as another information management system has already been operated, there are still problems such as double input and insufficient cooperation with other systems (Asia Pacific Initiative (2020), Part 3, Chapter 4).
21. The figures are based on the morning edition of *the NIKKEI*, Saturday, December 19, 2020.
22. This information is from <https://blog.esrij.com/2020/04/17/post-35916/> (accessed on August 10, 2020).
23. Dr. Nobuhiko Okabe (director of Kawasaki Institute of Health and Safety, member of expert meeting / subcommittee in the government) expressed a similar view at the ASPOS Online Study Group of the Association for the Study of Political Society (June 13, 2020).
24. However, recently, a considerable number of private PCR laboratories have been deployed, and the testing itself is possible at a low cost and in a short time. But the outcomes are not obliged to report to the health centers.
25. Ohkoshi et al (2020) and *The NIKKEI* article, morning edition, August 8, 2020.
26. The following recommendations reflect to some extent the results of the modest challenges I have taken on (Harada 2012a, 2012b, 2013, 2019).



27. The circumstances during this period were described in detail in Harada (2021).

## References

- API (Asia Pacific Initiative). 2020. *Shingata Korona Taio Minkan Rinji Chosa Kai: Chosa Hokokusho* (Report by The Independent Investigation Commission on the Japanese Government's Response to COVID-19). Tokyo: Discover Twenty-One.
- Buchanan, James M., and Richard E. Wagner. 1977. *Democracy in Deficit: The Political Legacy of Lord Keynes*. New York: Academic Press.
- Defoe, Daniel. [1722] 1928. *A Journal of the Plague Year: Being Observations or Memorials of the Most Remarkable Occurrences, as well Public as Private, which Happened in London during the Last Great Visitation in 1665*. Oxford: Basil Blackwell.
- Harada, Hiroo. 2012a. *Higashi-Nihon Dai-Shinsai to Sosharu Kyapitaru* (The Great East Japan Earthquake and Social Capital). *The Journal of Social Capital Studies* 3: 5-20.
- Harada, Hiroo. 2012b. *Kokyo Sentaku to Sosharu Kyapitaru* (Presidential Address: Public Choice and Social Capital). *Public Choice Studies* 2012(58): 4-17.
- Harada, Hiroo. 2013. *Higashi-Nihon Dai-Shinsai to Sosharu Kyapitaru: Saiko* (The Great East Japan Earthquake and Social Capital: A Reconsideration). *The Journal of Social Capital Studies* 4: 5-22.
- Harada, Hiroo. 2019. "Proposal for Social Well-being Studies in Asia: A Challenge beyond GDP." *The Senshu Social Well-being Review* 6: 3-11.
- Harada, Hiroo. 2021. *Sengo Nihon no Seiji Keizai: Seijuku to Kadai* (Political Economy in the Post-War Japan: Maturity and Challenges) forthcoming in *Ku-ru Daun Ekonomi: Nihon no Rekishi-teki Keii to Chugoku no Genjo* (Cooldown Economy: Historical Trajectories in Japan and the Current Situation in China), edited by Xu Yirui. Tokyo: Senshu Daidaku Shuppan Kyoku.
- Hayami, Akira. 2006. *Nippon wo Osotta Supein Infuruenza: Jinrui to Uirusu no Dai-ichiji Sekai Taisen* (The Spanish Flu Hitting Japan: The First World War between Humankind and Virus). Tokyo: Fujiwara Shoten.
- Ikukawa, Satoru, and Chiaki Koshikawa. 2020. "Chi no Kyoyu, Sekai de Kasoku, Korona Ronbun Sudeni SARS no 100 Bai, Supido Jushi, Nihon Kage Usuku ("Sharing Knowledge" Accelerates in the World, Over 100 Times of COVID-Related Articles Have Been Published Than SARS-Related Ones, Swiftsness Is Valued, Weak Presence of Japan)." *The NIKKEI*, June 7.
- Ishi, Hiromitsu. 1980. *Keinzu Seisaku no Kozai* (Pros and Cons of Keynesian Economic Policies). Tokyo: Toyo Keizai Shinpo Sha.
- Kobayashi, Kei-ichiro, and Kengo Nutahara. 2020. *Kansensho Kakudai Moderu niokeru Kodo Seigen Seisaku to Kensa Kakuri Seisaku no Hikaku* (A Comparison between lockdown policy and test-isolation policy in expanding epidemic model). CIGS Working Paper Series No. 20-005J.
- Koshikawa, Chiaki, and Satoru Ikukawa. 2020. "Ronbun Kyuzo, Kyoyu Subayaku, Sekai 4-man Bon, Sadokumae Kokai ga Atooshi, Gakujutushi Tekkai mo, Shitu to Ryoritu Kadai (Rapid Sharing of Growing Articles, 40 Thousand in the World, Preprints Accelerate the Speed, Withdrawals in Some Journals, Challenges for Reliability)." *The NIKKEI*, June 22.
- Ohkoshi, Yuki, Tatsuya Ozaki, and Masaaki Idemura. 2020. "Korona Chumoku Ronbun, Beichu ga Atto: Wakuchin Chiryō, Kyoyu Susumu, Seiji Tairitsu Kenkyu Suishin ni Kenen (The US and China in the COVID-Related Articles: Sharing Information on Vaccine and Medicine under Concern over Political Conflicts)." *The NIKKEI*, September 21.
- Onishi, Takashi. 2004. *Gyaku Toshika Jidai: Jinko Genshō-ki no Machizukuri* (The Age of Reverse Urbanization: Community Development under Shrinking Population). Kyoto: Gakugei Shuppan Sha.
- Shiroyama, Saburo. 1975. *Kanryo Tachi no Natsu* (A Summer of Government Officials). Tokyo: Shincho Sha.
- Tobe, Ryoichi, Yoshiya Teramoto, Shin-ichi Kamata, Takao Sugino-o, Tomohide Murai, and Ikujiro Nonaka. [1984] 1991. *Shippai no Honshitsu: Nihon Gun no Soshikiteki Kenkyu* (The Essence of Failure: Organizational Research of Imperial Japanese Army). Tokyo: Chuo Koron Sha.
- Taleb, Nassim Nicholas. 2007. *The Black Swan: The Impact of the Highly Improbable*. New York: Random House.
- Wray, L. Randall. 2015. *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*. 2nd ed. Basingstoke: Palgrave Macmillan.
- Wu, Zunyou, and Jennifer M. McGoogan. 2020. "Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention." *JAMA* 2020; 323(13): 1239-42. doi:10.1001/jama.2020.2648.
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