ASIA PACIFIC PANDEMIC PREPAREDNESS AND RESPONSE REGIONAL FORUM

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Ministry of Economy and Finance

ROLE OF ICT DURING THE COVID-19 PANDEMIC

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COVID-19 RESILIENCE

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The Covid Resilience Ranking

The Best and Worst Places to Be as World Enters Next Covid Phase

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Covid Resilience Ranking

← Worse Better →

Get info and sort on table headers

REOPENING PROGRESS | COVID STATUS | QUALITY OF LIFE

RANK	CHANGE	ECONOMY	BLOOMBERG RESILIENCE SCORE	VACCINE DOSES PER 100	LOCKDOWN SEVERITY	FLIGHT CAPACITY	VACCINATED TRAVEL ROUTES
1	▲5	South Korea	80.9	244	14	-50.1%	438.5
2	▲2	UAE	80.7	268.5	30	-20%	438.5
3	▼1	Ireland	80.5	223.4	11	-6.9%	438.5
4	▼3	Norway	80.1	211.7	11	-2.4%	438.5
5	▲5	Saudi Arabia	79.8	190.5	25	-12.6%	436.5
6	▼3	Denmark	79	227.2	11	-17.1%	438.5
7	–	Canada	78.8	229.3	19	-15.5%	437.5
8	▼4	Netherlands	78.6	203	16	-11.1%	439.5
9	▲14	Australia	78.1	234.2	14	-16.2%	436.5
10	▲11	Turkey	77.3	176.8	14	-8.2%	436.5
11	▼3	Switzerland	77.2	183	11	-18.4%	438.5
12	▲4	Colombia	76.7	170.3	20	15.5%	437.5
13	▲2	Chile	76	303.7	25	-19.9%	437.5
14	▼2	Singapore	75.6	249.7	32	-48.1%	439
15	▼2	Belgium	75.2	222.6	21	-16.2%	438.5
16	▼5	Israel	74.8	197.3	15	-24.3%	438.5
17	–	France	74.7	227.4	19	-13.8%	438.5
18	▲4	Vietnam	74.6	235.7	26	3%	435.5
19	▲7	Italy	74.5	231.7	19	-6.4%	438.5
20	▼11	Sweden	74.4	218	11	-26.1%	438.5

Show all 53 ▾

Note: Latest data as of June 28, 2 p.m. Hong Kong time. Flight Capacity and Vaccinated Travel Routes metrics were introduced in June 2021, whereas the Positive Test Rate indicator was phased out in February 2022. See more here.

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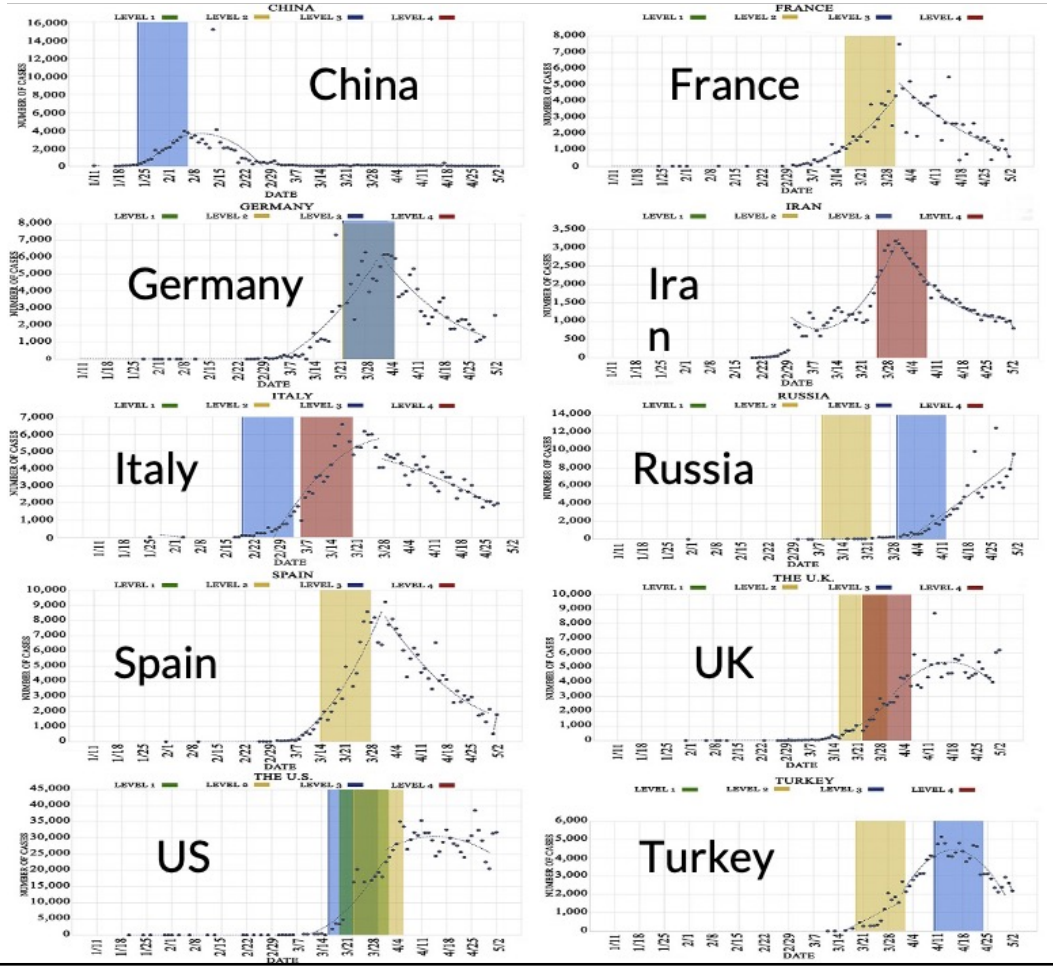
IMPORTANT MEASURE to PREPARE & RESPOND PANDEMIC

"Social Distancing"



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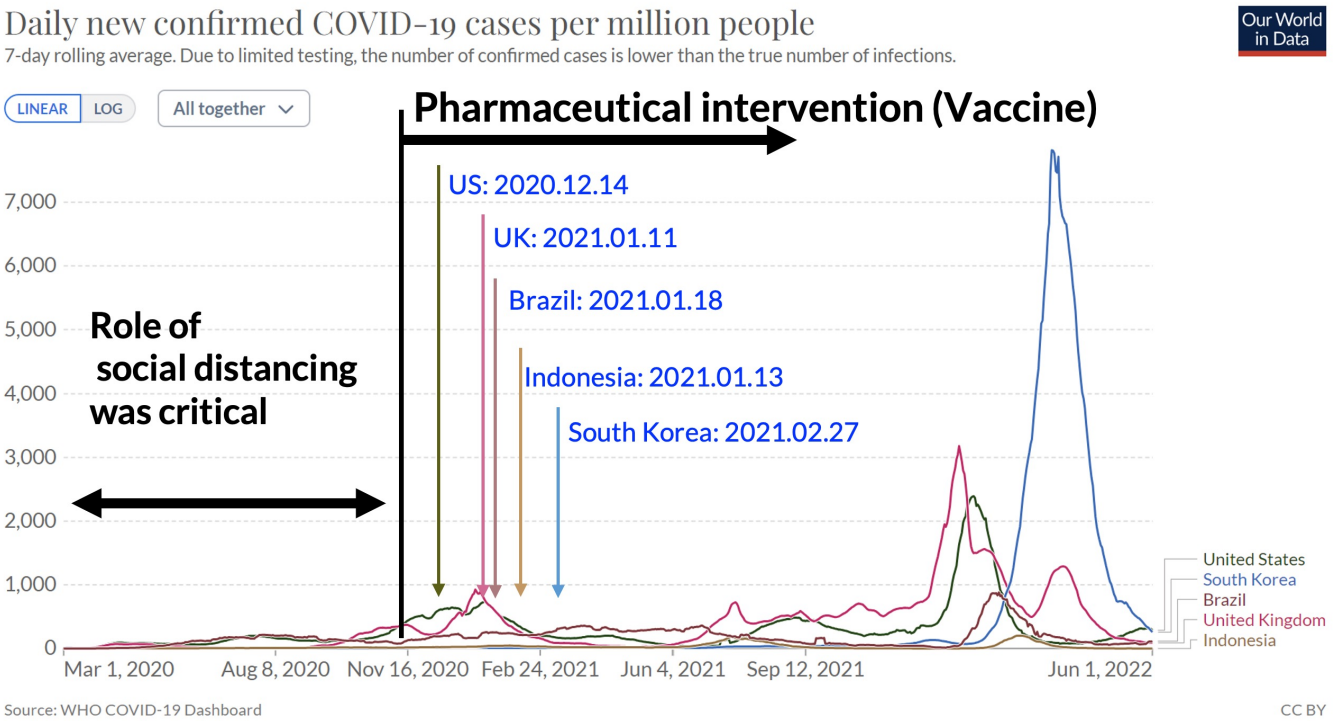
UTILIZATION of ICT to PREPARE & RESPOND PANDEMIC

"Social Distancing"

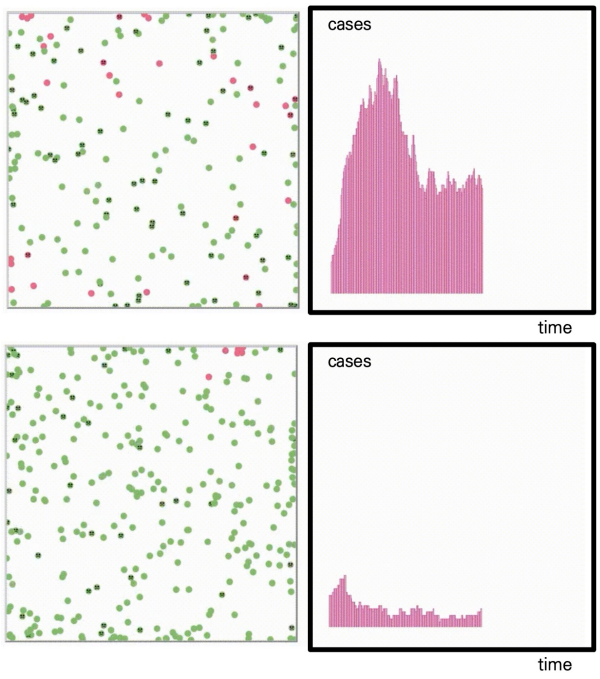
- *Flattening the pandemic curve*

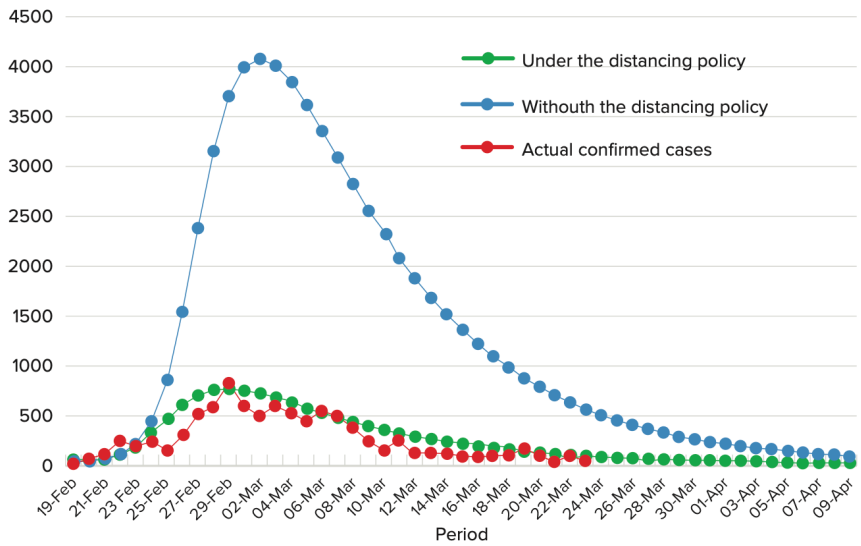


UTILIZATION of ICT to PREPARE & RESPOND PANDEMIC

- Optimal Policy Development
  using (parallel) Supercomputers (AI) and Data
- Contact Tracing
- Telemedicine
- Working at Home
- Online Education
- Social Networking Services

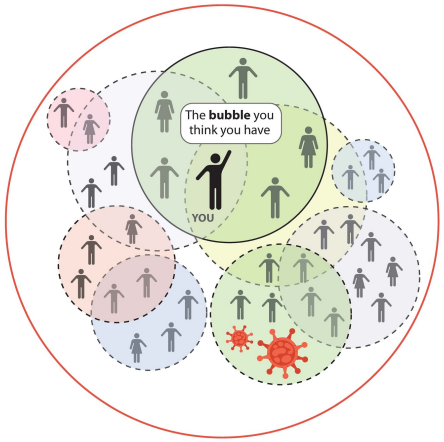
‘SOUND’ POLICY DEVELOPMENTS



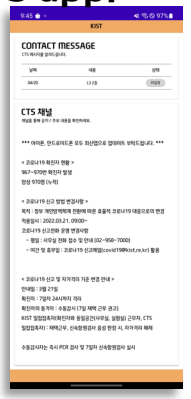


CONTACT TRACING

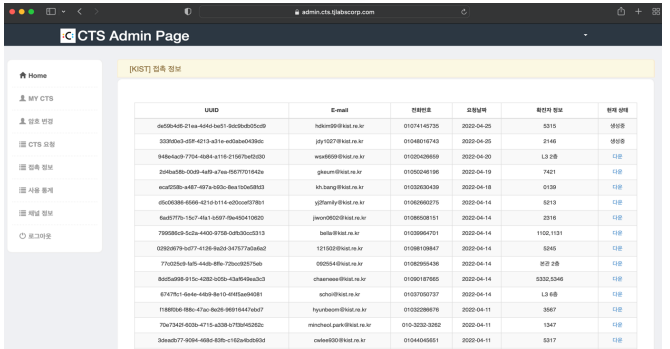
"Social bubble"



CTS app.



Wearable Tag



CTS 관리자 웹페이지

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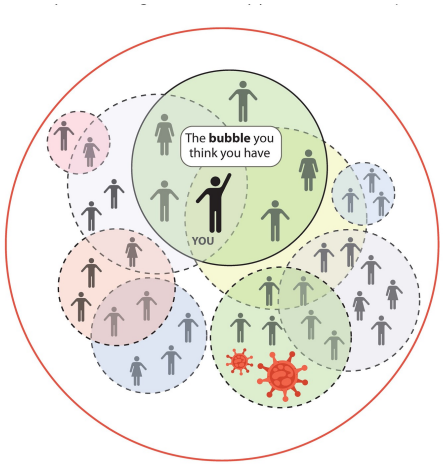
CONTACT TRACING

"Social bubble"



Country	IDI rank	Contact Tracing
Korea	2	The Ministry of the Interior and Safety (MOIS) introduced a contact tracing app called "Safe-Quarantine Safety Protection." All visitors entering Korea are required to install the app. Users must submit daily symptoms during self-quarantine.
UK	5	The National Health Service (NHS) rolled out NHS COVID-19. Users can be instructed to self-isolate if the app detects that they are close to someone with the infection.
Japan	10	Japan developed the Contact Confirming Application (COCOA), which automatically records close contact on Android and IOS devices using Bluetooth technology.
Germany	12	The Corona-Warn-App is based on Privacy-Preserving Contact Tracing. When two users are nearly two meters from each other for 15 minutes, their apps share data over BLE (Bluetooth Low Energy).
Australia	14	The Australian government developed the COVIDSafe App. When a person registers for the COVIDSafe App, the Australian Department of Health collects personal information with the Digital Transformation Agency as the COVIDSafe IT service provider.
France	15	TousAntiCovid enables simple access to other resources, providing a map of local testing centers, wait times, and "MesConseilsCovid," which provides individualized advice on how to protect oneself and others.
US	16	The Care19 App anonymously catches a person's location and asks if they want to share their location history with the state if they test positive for the coronavirus.
Russia	45	Moscow's IT Department created the Social Monitoring App. The app monitors self-isolation and quarantine for persons being treated at home and who are limited in leaving their homes.
Saudi Arabia	54	Tabaud notifies users if they have had contact with others confirmed to be infected with COVID-19.

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TELEMEDICINE

Health services and information delivered or enhanced by *internet-related technologies.*

- Motivation : COVID-19 cases started to increase worldwide, many people went to hospitals to get tested, *increasing their risk of contagion.*
- *With telemedicine,* health care professionals have transformed the crisis into a safer and more interactive health care experience
  - reduce transportation time and cost
  - less displacement of professionals and patients

Country	IDI rank	Telemedicine
Korea	2	Korea introduced telemedicine in 1988, but it has yet to be formally accepted owing to stakeholders' resistance and legal restrictions. The COVID-19 pandemic has triggered fundamental changes in every country's health care services system. However, the Korean health care system is still not being prepared to accept telehealth services. The Korean government temporarily applied patient-doctor telemedicine to the entire population of Korea in the wake of COVID-19 pandemic. However, the number of telemedicine users ceased to increase, indicating patients' stagnant interest in non-face-to-face care and doctors' continuing resistance to government policy.
UK	5	All health care providers are subject to the same restrictions as in-person providers, as they are all required to register with the CQC (Care Quality Commission) and demonstrate that they comply with all applicable laws. The General Medical Council (GMC) regulates individual medical practitioners. All doctors who practice medicine in the United Kingdom must be registered with the GMC and follow specific GMC-established standards for proper medical practice.
Japan	10	Takeda Pharmaceutical and Kanagawa Prefecture implemented Care for One, a pilot project for remote monitoring of patients having Parkinson's disease. Aiming to reduce the burden of health management and in-person hospital visits, the organizations developed an integrated platform that monitors patients with wearables, providing virtual medication guidance and prescribed drug delivery.
Germany	12	The use of telemedicine has increased due to the COVID-19 epidemic, and case conferences and case discussions are now more frequently conducted through video consultation. In addition, the National Association of Statutory Health Insurance Physicians (NAS) provides financial support for doctors and psychotherapists who perform video consultations.
Australia	14	There are barriers to telehealth uptake in Australia, including a lack of technological infrastructure and internet access and a risk that access will be reduced for vulnerable population groups. Another barrier to using telehealth is the limitations inherent in performing physical examinations remotely.
France	15	After the first lockdown in 2020, teleconsultations increased dramatically. Apizee Health provides real-time web video communication on all kinds of mobile devices. The patients can receive an invitation to the teleconsultation by SMS or email.
US	16	In the US, existing telemedicine platforms like Amwell and the University of Pittsburgh Medical Center's (UPMC) virtual urgent care services have reported a rapid increase in their use. A recent poll found that 23 percent of adults have used telehealth services in light of the COVID-19 pandemic.
Russia	45	The Moscow City Health Department launched an around-the-clock remote consultation service via video and audio communication. Doctors assess people who apply to them according to established criteria and assist patients with COVID-19.

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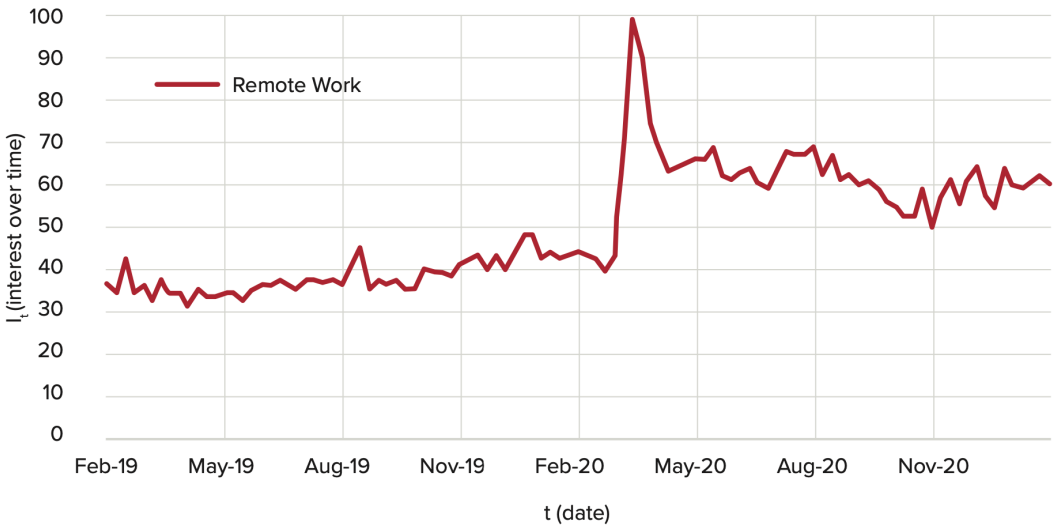
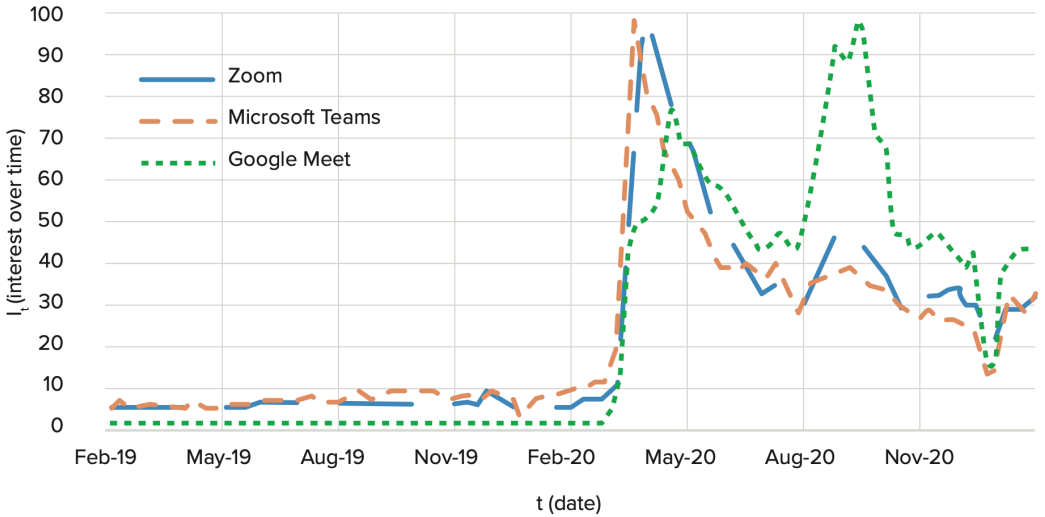
WORKING at/from HOME





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ONLINE EDUCATION

Country	IDI rank	Online Education
Korea	2	Despite the Korean government's effort to establish online education, many teachers and students are still looking for a better quality of education. Many students and teachers are not satisfied with the quality of online education.
UK	5	The UK faced the same situation as Korea did during the pandemic. The UK has difficulty providing high-quality online education compared to face-to-face teaching. The other issue was the digital divide. The digital divide means unequal access to digital technology, including tablets, laptops, and the internet. Students from low socio-economic backgrounds have less opportunity to experience online education due to limited access to ICT at home.
Japan	10	The Japanese government initiated a Global and Innovation Gateway for All (GIGA) program before the pandemic. The GIGA's primary goal is to provide every school with adequate ICT resources so all students can access digital devices by 2023. The GIGA is expected to help students in poor ICT-environment schools where four to five students, on average, share one computer. However, not many teachers are prepared to provide quality of online education.
Germany	12	The German government started a program called Digital Pakt to improve the internet infrastructure in schools. With Digital Pakt, the German government wants to ensure that schools are better equipped with digital technology. However, many schools in Germany still need digital devices to educate all students.
Australia	14	The biggest challenge in Australian universities is that most students are not satisfied with the quality of online education. According to an article in *The Guardian,* 50 percent of students were unhappy with their online education.
France	15	During the pandemic, French universities provided students with opportunities to continue their education during the pandemic. With these efforts, students can adopt new learning practices and help to maintain the quality of education.
US	16	The education system needs more than just providing every professor with a Zoom account and allowing instruction to follow its natural path for the system to work well, because not all students have access to online courses. Many students are not satisfied with the quality of online classes.
Russia	45	The Russian Ministry of Education created online learning platforms for each region. Some regions gave teachers school computers and helped them link personal computers to the internet so they could teach from home. Senior students from teaching institutions assisted teachers unfamiliar with computer technology in acquiring online learning essentials.

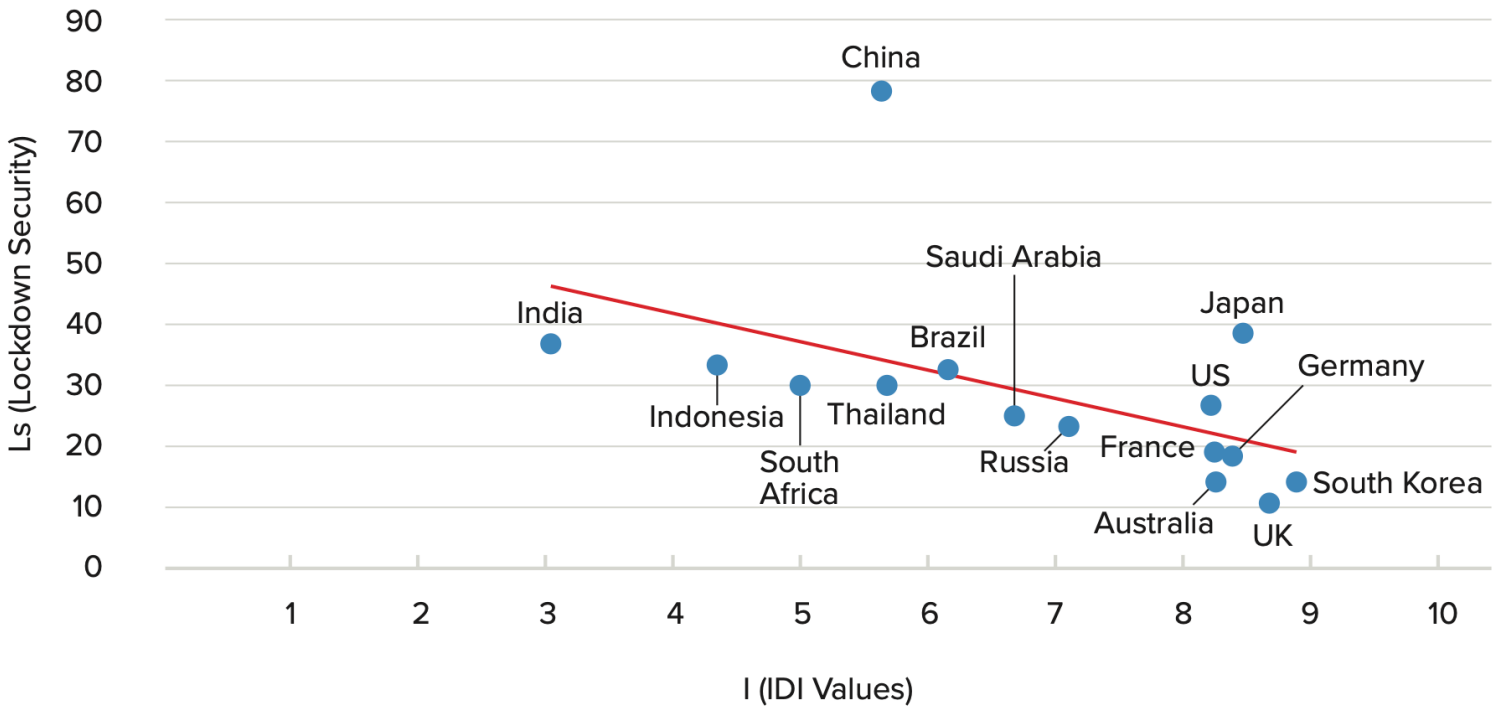
ICT DEVELOPMENT and COVID-19 RESPONSES

- Bloomberg Resilience

Country	IDI values	Bloomberg Resilience Score	Confirmed cases per million
South Korea	8.85	80.9	354,221
UK	8.65	74.2	337,352
Japan	8.43	71.4	74,702
Germany	8.39	74.2	337,865
Australia	8.24	78.1	313,679
France	8.24	74.7	459,955
US	8.18	69.4	259,749
Russia	7.07	52.2	125,140
Saudi Arabia	6.67	79.8	22,099
Malaysia	6.38	69.3	134,455
Brazil	6.12	69.1	150,270
Thailand	5.67	70.2	63,130
China	5.60	54.7	623
Mongolia	4.96	Not Provided	Not Provided
Fiji	4.96	64.4	67,238
South Africa	4.43	Not Provided	Not Provided
Vietnam	4.43	74.6	109,440
Indonesia	4.33	65.2	22,232
India	3.03	69	30,870

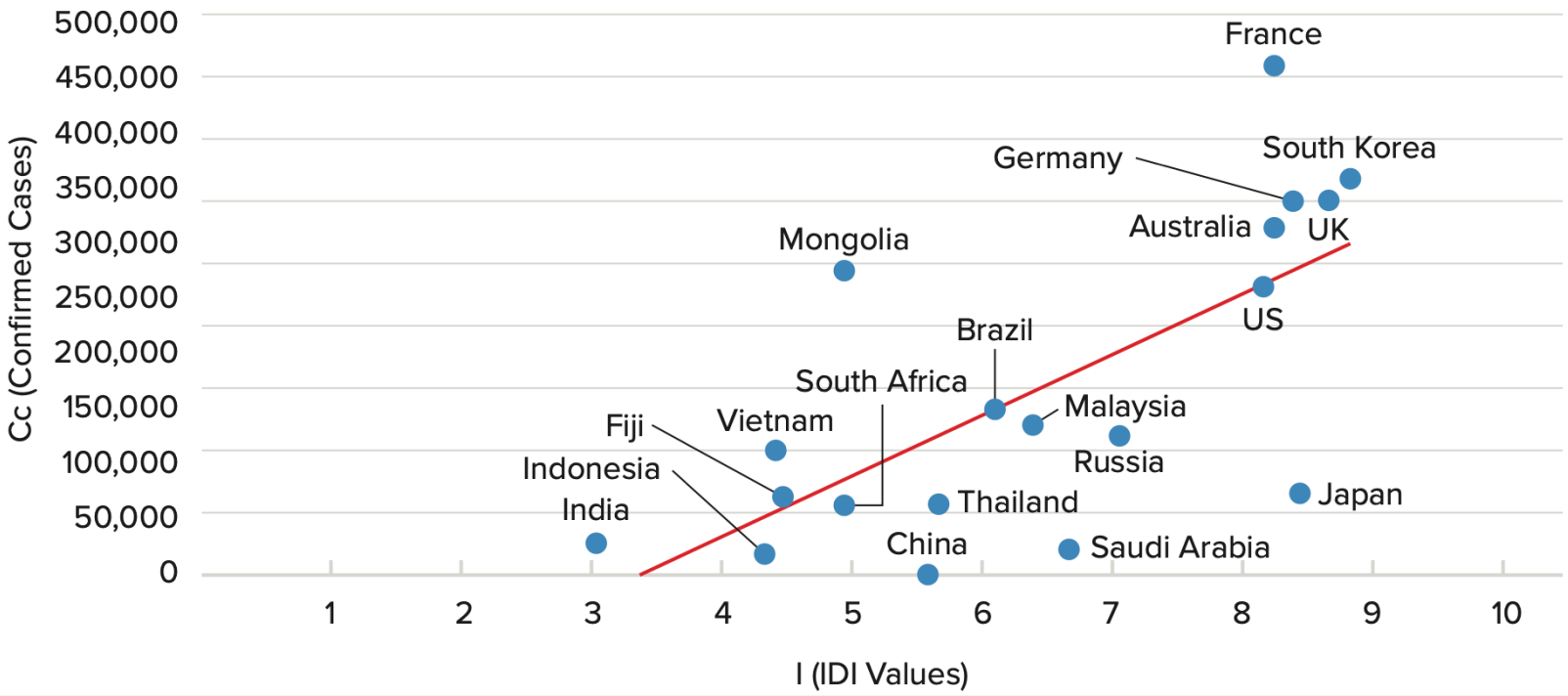
ICT DEVELOPMENT and COVID-19 LOCKDOWN SEVERITY

- Lockdown Severity



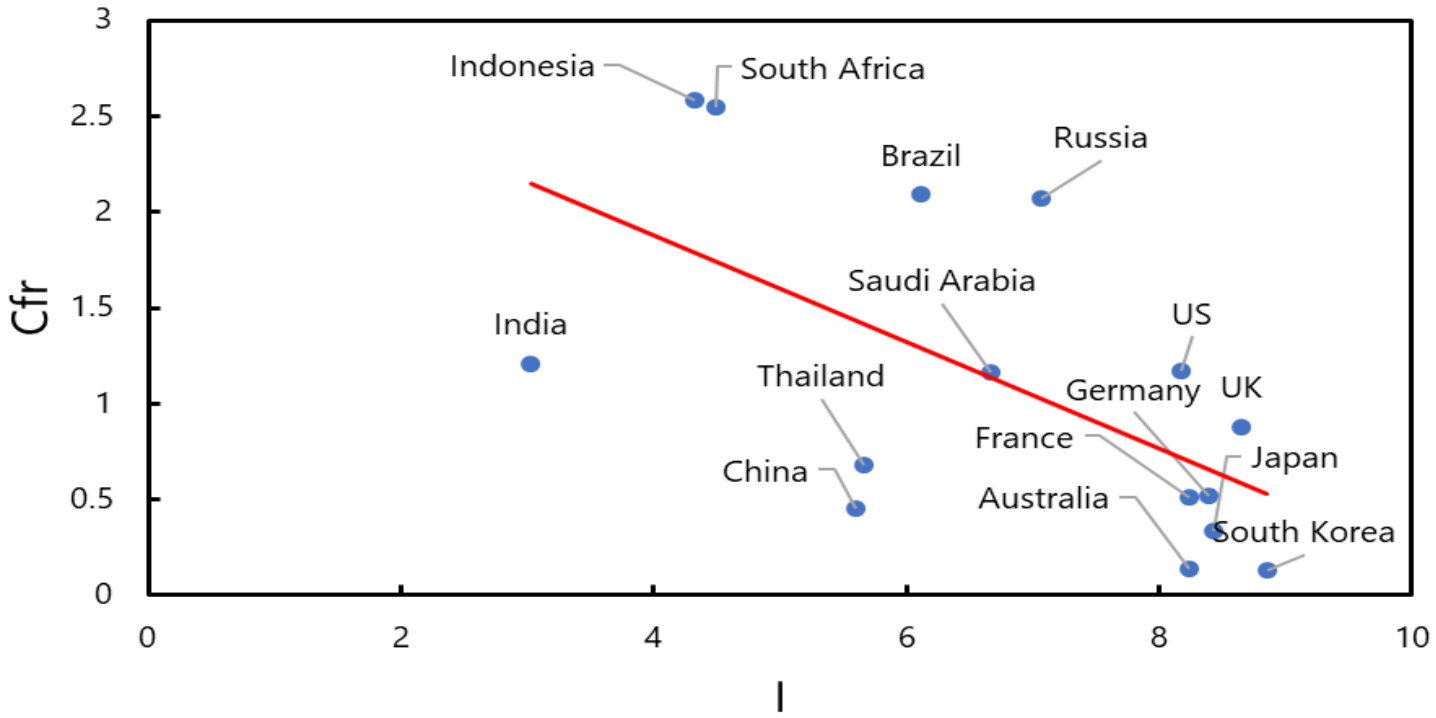
ICT DEVELOPMENT and COVID-19 RESPONSES

- COVID-19 cases



ICT DEVELOPMENT and COVID-19 RESPONSES

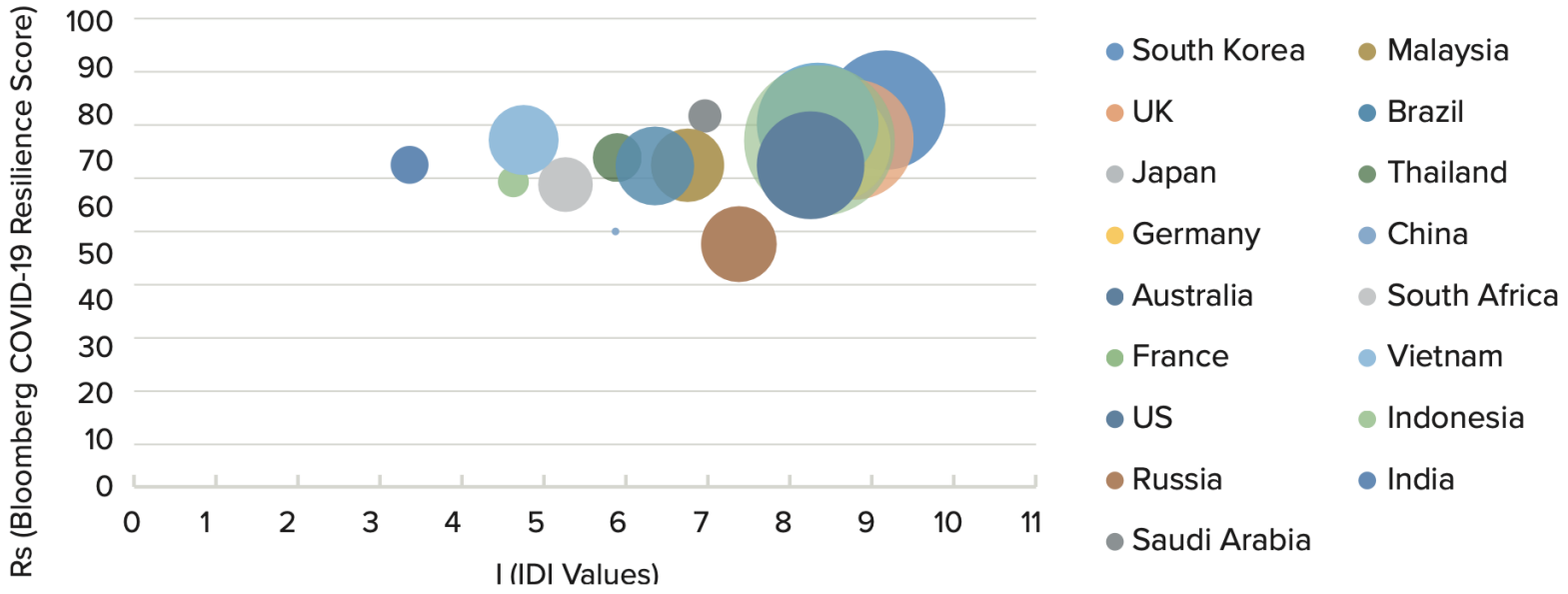
- COVID-19 fatality rate



ICT DEVELOPMENT and COVID-19 RESILIENCE

- IDI
- Resilience

- Cases



LESSONS LEARNED – *"Effects of ICT in healthcare"*

- (ICT Utilizations) Various methods such as *contact tracing*, *online education*, and *telemedicine using ICT* were implemented in many countries.
  - To implement these government policies effectively, *good user manuals* are necessary.

- *Countries with a high level of ICT infrastructure* could rapidly transform traditional education systems into online systems.
  - They've *responded COVID-19 pandemic well.*

LESSONS LEARNED – *"SUPPORT"*

- *Countries with relatively low IDI values,* building and improving ICT infrastructure should be *a top priority to make the ICT policies effective.*
  - Governments should endeavor to *increase the accessibility of remote areas to ICT* infrastructure other than only big cities.
  - Policy makers should consider how many people in rural areas with low income can *obtain access to the services.*
  - *Lack of digital literacy* is also a big issue. Therefore, governments should *provide guidelines for teachers to use technology* to deliver quality education.

LESSONS LEARNED – *"one thing cautious"*

- Of course, still there are *privacy* and *data concerns*,
  - They should ensure *clarity by delivering correct information* regarding COVID-19
  - The proper use of PPE through the media so that people *are not exposed to misinformation* and disinformation.
  - Data privacy in contact tracing apps must be considered.

THANK YOU and
reach out to me at *eau@ust.ac.kr*