INNOVATING GOVERNANCE:
Building Resilience against COVID-19 and Other Risks

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Philippine Institute for Development Studies
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

Innovating Governance: Building Resilience against COVID-19 and Other Risks

Proceedings of the
Sixth Annual Public Policy Conference 2020

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Foreword

In barely less than a year, the world has changed dramatically amid the ongoing coronavirus disease 2019 (COVID-19) pandemic. During the Fifth Annual Public Policy Conference (APPC) in September 2019, the Institute has already hinted about the possible economic repercussions of a pandemic scenario, highlighting the value of investing in global health. Still, no one anticipated that a pandemic this severe would hit us almost immediately.

The outbreak has given our generation a first-hand experience of the dire reality of a pandemic. In the Philippines, it has exposed serious governance issues that demand immediate action. These include coordination failures, lack of protocols, outdated information systems, inefficient social protection programs, and challenges in human resource capacity.

While this crisis is like no other, we still have many reasons for optimism. We have already witnessed several countries that have managed to suppress the spread of the virus. This has led them to ease their lockdown protocols and gradually open their economies. These only show that informed and smart policy decisions can help insulate people and businesses from the damaging effects of COVID-19 and provide opportunities for recovery.

In line with its commitment to serve as the country's foremost socioeconomic think tank, the Philippine Institute for Development Studies has dedicated the sixth APPC to assist the government in addressing this crisis. This APPC has embraced the theme "Bouncing Back Together: Innovating Governance for the New Normal" to emphasize the need for innovation in our governance system as we navigate our path to recovery and resilience.

Through a four-part webinar series, experts from across the globe shared insights on country cases, policy frameworks, information tools, and the lessons that can be gleaned from these as we face the COVID-19 crisis. These conference proceedings serve as a collection of the presentations and discussions during the APPC webinar, together with their rich and analytical insights and recommendations that the government should consider to ensure the rebuilding of our economy.

We hope that this publication will guide our recovery efforts from this pandemic. Our Institute remains a reliable partner amid the unprecedented times we are in.

CELIA M. REYES
President

Preface

As we grapple with the impacts of the COVID-19 pandemic, we need evidence-based resources to help us make sense of this crisis. We offer the contents of these conference proceedings as our humble contribution to improve our response to the COVID-19 pandemic. We also put a premium on the need to continue boosting the public literacy on development issues and elicit their support for our recovery efforts.

We are indebted to the Philippine Institute for Development Studies (PIDS) for allowing us to share our insights about the current crisis through the Sixth Annual Public Policy Conference webinar series. We join PIDS in highlighting the importance of innovating our governance system amid this pandemic with "Bouncing Back Together: Innovating Governance for the New Normal" as our collective battle cry.

This publication reflects our commitment to respond quickly to the need for timely and reliable information regarding the socioeconomic aspect of the COVID-19 pandemic. We invite the public, our policymakers, and our leaders to join us in refining the recommendations we raised in our presentations.

Let us work together as we navigate our path to recovery and resilience.

AUTHORS

Acknowledgment

The Philippine Institute for Development Studies (PIDS) would like to express its sincerest appreciation to the following individuals and institutions whose dedication and generous spirit made the APPC 2020 possible amid the COVID-19 pandemic:

The 2019 Development Policy Research Month (DPRM) Interagency Steering Committee consisting of the National Economic and Development Authority, Philippine Information Agency, Civil Service Commission, Presidential Management Staff, *Bangko Sentral ng Pilipinas*, Department of the Interior and Local Government, Department of Budget and Management, House of Representatives – Congressional Policy and Budget Research Department, and Senate Economic Planning Office, which serve as permanent members; and the Department of Health, Department of Social Welfare and Development, and Department of Information and Communications Technology, which serve as additional members for 2020;

All the conference presenters, panelists, and moderators; and

The 2020 APPC Scientific Committee composed of Dr. Aubrey Tabuga, Dr. Justine Sicat, Dr. Sonny Domingo, and Dr. Val Ulep; the Knowledge Dissemination Committee led by Dr. Sheila Siar; the Administrative and Finance Department headed by Director Andrea Agcaoili; and the Research Services Department, particularly the Information and Communications Technology Services Division, headed by Director Renee Ajayi.

List of Acronyms

2G	–	second generation
3G	–	third generation
4G	–	fourth generation
4Cs	–	creativity, critical thinking, collaboration, and communication
A&E	–	accident and emergency
AAAH	–	Asia-Pacific Action Alliance on Human Resources for Health
AAPA	–	Asian Association for Public Administration
ADB	–	Asian Development Bank
AI	–	artificial intelligence
AIM	–	Asian Institute of Management
ANC	–	antenatal care
APPC	–	Annual Public Policy Conference
API	–	application programing interface
ARI	–	acute respiratory infection
ARTA	–	Anti-Red Tape Act
ASEAN	–	Association of Southeast Asian Nations
ASU	–	Arizona State University
ATM	–	automated teller machine
AWA	–	alternative work arrangements
BDA	–	bank deposit account
Bob	–	BSP Online Buddy
BSP	–	*Bangko Sentral ng Pilipinas*
BTS	–	Bangtan Sonyeondan
CCSA	–	Center for COVID-19 Situation Administration
CCU	–	critical care unit
CDVRA	–	Climate Vulnerability and Disaster Risk Assessment
CLUDP	–	Comprehensive Land Use and Development Plans
CoG	–	Center of Government
COVID-19	–	coronavirus disease 2019
CREATE	–	Corporate Recovery and Tax Incentives for Enterprises
CSC	–	Civil Service Commission
CSI	–	Civil Service Institute
CSO	–	civil society organization
DAP	–	Development Academy of the Philippines
DBM	–	Department of Budget and Management
DDC	–	Department of Disease Control
DICT	–	Department of Information and Communications Technology
DMV	–	Department of Motor Vehicles

DOF	–	Department of Finance
DOH	–	Department of Health
DOST-ASTI	–	Department of Science and Technology-Advanced Science and Technology Institute
DPA	–	Data Privacy Act
DPRM	–	Development Policy Research Month
DRRM	–	disaster risk reduction and management
DSWD	–	Department of Social Welfare and Development
DTI	–	Department of Trade and Industry
ECQ	–	enhanced community quarantine
Egov	–	electronic government
EOC	–	emergency operating center
ESRD	–	end-stage renal disease
FETP	–	Field Epidemiology Training Program
FIST	–	Financial Institution Strategic Transfer
GAD	–	gender and development
GCQ	–	general community quarantine
GDP	–	gross domestic product
GOCC	–	government-owned and controlled corporation
GovTech	–	government technology
GUIDE	–	Government Financial Institutions Unified Initiatives to Distressed Enterprises for Economic Recovery
HIV/AIDS	–	human immunodeficiency virus/acquired immunodeficiency syndrome
HR	–	human resource
HRSL	–	High-Resolution Settlement Layer
HTHT	–	High Touch High Tech
IATF	–	Inter-Agency Task Force
ICML	–	International Conference in Machine Learning
ICT	–	information and communications technology
ICU	–	intensive care unit
IHPP	–	International Health Policy Program
IMF	–	International Monetary Fund
INGO	–	international nongovernmental organization
IoT	–	Internet of Things
IT	–	information technology
IT-BPM	–	information technology-business process management
ITS	–	Intelligent Tutoring System
K-12	–	kindergarten to 12th grade
K-pop	–	Korean Pop
KDD	–	Knowledge Discovery in Databases

KDI	–	Korea Development Institute
L&D	–	learning and development
LCCAP	–	Local Climate Change Action Plan
LDRRMP	–	Local Disaster Risk Reduction and Management Plan
LGU	–	local government unit
LTFRB	–	Land Transportation and Franchising Regulatory Board
MBC	–	Makati Business Club
MC	–	Memorandum Circular
MERS-CoV	–	Middle East respiratory syndrome coronavirus
MIT	–	Master of Information Technology
MOPH	–	Ministry of Public Health
MOPH EOCs	–	Ministry of Public Health Emergency Operating Centers
NBP	–	National Broadband Program
NCD	–	noncommunicable diseases
NDHS	–	National Demographic and Health Survey
NEDA	–	National Economic and Development Authority
NGA	–	national government agency
NGO	–	nongovernment organization
NHSO	–	National Health Security Office
NPC	–	National Privacy Commission
NRPS	–	National Retail Payment System
OFW	–	Overseas Filipino Worker
PDP	–	Philippine Development Plan
PhilHealth	–	Philippine Health Insurance Corporation
PhilPaSS	–	Philippines Payment and Settlement System
PhilSys	–	Philippine National ID System
PIDS	–	Philippine Institute for Development Studies
PNPKI	–	Philippine National Public Key Infrastructure
PPE	–	personal protective equipment
PRIME-HRM	–	Program to Institutionalize Meritocracy and Excellence in Human Resource Management
PRC	–	Professional Regulation Commission
PSA	–	Philippine Statistics Authority
PTMS	–	Philippine Talent Management Strategy
QR	–	quick response
QR Ph	–	National Quick Response Code Standard
RegTech	–	regulatory technology
RSP	–	recruitment, selection, and placement
RT-PCR	–	reverse transcription-polymerase chain reaction
SALN	–	Statement of Assets, Liabilities, and Net Worth

SARS	–	severe acute respiratory syndrome
SD	–	standard deviation
SEL	–	social and emotional learning
SHAP	–	SHapley Additive exPlanations
SMS	–	short message service
SPMS	–	Strategic Performance Management System
SRRT	–	Surveillance and Rapid Response Team
SUCs	–	state universities and colleges
SupTech	–	supervisory technology
TB	–	tuberculosis
UHC	–	universal health care
UK	–	United Kingdom
UP	–	University of the Philippines
UPRI	–	University of the Philippines Resilience Institute
UNESCO	–	United Nations Educational, Scientific, and Cultural Organization
UNICEF	–	United Nations Children's Fund
USA	–	United States of America
USD	–	US dollar
VR	–	virtual reality
WHO	–	World Health Organization
WGI	–	Worldwide Governance Indicators

About the Conference

The Annual Public Policy Conference (APPC) aims to convene policy experts and researchers to analyze critical issues relevant to development planning and policymaking. It is the main and culminating activity of the Development Policy Research Month (DPRM) held every September by virtue of Presidential Proclamation 247.

As the convenor of the yearly DPRM celebration, state think tank Philippine Institute for Development Studies (PIDS) envisions the APPC to serve as a platform to cultivate a strong culture of research and use of data and evidence among the country's national and local decisionmakers in policymaking and program planning.

Since it was launched in 2015, the APPC has served as a useful platform to discuss important socioeconomic issues and actionable recommendations.

OPENING PROGRAM

Welcome Remarks

Celia Reyes | President, Philippine Institute for Development Studies

Socioeconomic Planning Secretary Karl Kendrick Chua, representatives from the government, academe, business sector, civil society, and media, and to our viewers on Facebook, good morning.

September is an important month for the Philippine Institute for Development Studies because it is Development Policy Research Month or DPRM, as mandated by Presidential Proclamation 247. Through the DPRM, we hope to promote the importance of policy research in crafting evidence-based policies, plans, and programs, as well as foster a strong culture of research among decisionmakers. We also intend to increase the public's knowledge of development issues and elicit their support to participate in efforts aimed at advancing the standard of policy research in the country.

Every year, we select a theme for the DPRM celebration from an array of current or emerging issues that require the attention of policymakers, stakeholders, and the general public.

For 2020, we chose the theme, "Bouncing Back Together: Innovating Governance for the New Normal", or in Filipino, "*Makabagong Pamamahala para sa Sama-samang Pagbangon sa* New Normal", to highlight the importance of innovating our governance system so we can better respond to the COVID-19 pandemic and other threats. We want to send the message that the Philippines needs to have an agile and innovative government to thrive under the new normal.

Indeed, the outbreak has thrown a curveball that brought significant impacts on a global scale. In the domestic front, it bared serious governance issues that need immediate action and resolution, such as coordination failures, lack of protocols or manual of operation for handling large-scale crises, outdated information systems, lack of a verified tool for targeting social protection beneficiaries, and challenges in human resource capacity.

Our four-part webinar series for this year's Annual Public Policy Conference or APPC, which is the main activity of the DPRM celebration, will tackle ways by which we can address governance issues by looking at local and international practices that the Philippines can adopt to be able to move forward from this pandemic and be resilient in the face of future challenges.

Today, September 15, we open our four-part APPC webinar series with the topic "Innovation in Public Sector Governance for Resilience under a New Normal: Theory and Practice". The second webinar on September 17 will talk about the topic "Institutional Innovations and Reforms under the New Normal". The third webinar, which is happening on September 22, will present the topic "Strengthening the Civil Service under the New Normal". The fourth and last webinar

on September 24 will revolve around the topic "Smart Systems for Agile Governance under the New Normal".

Before I end, let me take this opportunity to thank everyone. To our speakers, thank you for accepting our invitation and for your willingness to share your valuable views in this virtual event. To our guests and participants, thank you for taking the time to be with us this morning. To the PIDS technical team assigned to prepare this year's DPRM concept paper composed of PIDS research fellows Dr. Aubrey Tabuga, Dr. Justine Sicat, Dr. Sonny Domingo, and Dr. Valerie Gilbert Ulep, with the guidance of Vice President Marife Ballesteros, thank you very much for your efforts and comprehensive inputs. To our team from the research information department led by Dr. Sheila Siar, thank you for the various activities that you have organized to promote the DPRM and the APPC, and for putting together all our webinars.

We also thank the *Bangko Sentral ng Pilipinas* or BSP for always extending its support to PIDS in the yearly conduct of the APPC.

Let me also take this opportunity to acknowledge the continued support and cooperation of the permanent members of the DPRM Steering Committee composed of the National Economic and Development Authority, Civil Service Commission, Philippine Information Agency, BSP, Department of the Interior and Local Government, Presidential Management Staff, Department of Budget and Management, Senate Economic Planning Office, and Congressional Policy and Budget Research Department. We also thank the Department of Health, Department of Information and Communications Technology, and Department of Social Welfare and Development for accepting our invitation to be part of this year's DPRM Steering Committee.

Before I end, let me emphasize that dealing with this pandemic, as well as other crises, is the responsibility of everyone. This challenging time calls for a 'whole-of-society approach'. Big or small, our efforts can help the country get back on track. May this conference inspire us to work together so that we can bounce back stronger from this pandemic and be able to rise above other crises in the future. Thank you and good day.

Before I give back the floor to our emcee, I would like to invite all of you to watch this APPC video, which sums up the message of this year's DPRM theme.

(Watch the APPC video here: https://www.youtube.com/watch?v=MXuWb57D2FU&t and https://www.facebook.com/PIDS.PH/posts/5140948752597391.)

Keynote Message

Karl Kendrick Chua | Acting Socioeconomic Planning Secretary

Dr. Gerry Sicat, first NEDA Secretary; Dr. Jim Brumby, who was one of my bosses in the World Bank many years ago; Dr. Celia Reyes and our partners from the Philippine Institute for Development Studies (PIDS); colleagues in government; ladies and gentlemen; good morning to all of you.

Thank you for inviting me to the Sixth Annual Public Policy Conference. I would like to give special thanks to PIDS, led by President Celia Reyes, for organizing this conference and helping equip the government address this crisis. Throughout the years, PIDS has contributed to the pursuit of evidence-based policymaking in the country. Today, better and timely policy research in crafting our development plans, programs, and policies are even more necessary as we face an unprecedented crisis that requires critical collaboration among stakeholders, policymakers, and other decisionmakers across various fields and disciplines.

This year has brought enormous challenges, not just to the Philippines, but also to all economies around the world. Our country faced significant economic shocks from the eruption of Taal volcano in January to the need to implement various forms of community quarantines around the country to contain the COVID-19 pandemic.

Strong fundamentals

Before the pandemic, we had a very strong economy and were on track to becoming an upper middle-income country by 2022. We had low and stable inflation, which averaged 3 percent from 2016 to 2019, largely supported by the passage of the Rice Tariffication Law. We had the highest revenue-to-gross domestic product (GDP) ratio in decades at 16.1 percent and the lowest debt-to-GDP ratio in 2019 at 39.6 percent, enabled largely by the comprehensive tax reform program.

Our Build, Build, Build infrastructure program doubled as a share of GDP compared to the past five decades, at over 5 percent of GDP in 2019. We also achieved the highest credit ratings in history from various agencies in the range of BBB+ to A-. We had one of the lowest unemployment rates at around 5.3 percent and underemployment rate of 14.8 percent in January of 2020, and also the lowest poverty incidence of 16.7 percent as of 2018. All of these have led to significant results. The 2022 promise of lifting 6 million Filipinos out

of poverty was achieved in 2018, or four years ahead of the target. This was made possible by the significant drop in the overall poverty rate from 23.5 percent to 16.7 percent between 2015 and 2018.

Unfortunately, no one anticipated that the COVID pandemic will strike the global economy. In the first three months of the quarantine, we prioritized saving lives from COVID and improving our health system capacity.

Road to recovery

With around 75 percent of the economy effectively shut down due to the implementation of strict community quarantines, our GDP contracted by as much as 16.5 percent in the second quarter. The good news is that as quarantine restrictions eased starting June, we saw a gradual recovery. Some monthly indicators, such as the growth of the power transmission energy delivery, volume of manufacturing production, and merchandise trade, have generally begun to U-turn since May and June and continued to show improvement in the more recent data releases. Meanwhile, our inflation remains low and stable due to recent reforms like the Rice Tariffication Law and the adequate supply of basic commodities.

More importantly, what we find in the past three months is that the lower quarantine restrictions actually opened more sectors of the economy and helped bring back jobs quickly. We are seeing a significant decline in the unemployment rate from 17.7 percent in April at the height of the quarantine to 10 percent in July when we relaxed the quarantine, and also a decline in the underemployment rate. All in all, 7.5 million jobs were restored to the economy in just one quarter as the quarantine restrictions eased. This is a testament to the very strong economic foundation that we have today.

The contraction of the economy this year, however, may result in the temporary yet slight reversal of the significant gains we have made with respect to poverty reduction. Given the disruption in economic activities, poverty incidence may temporarily increase up to 17.5 percent. However, we believe that even with this setback, the goal of bringing down poverty to 14 percent by 2022 is still certainly doable.

As new data come in, what we currently see suggests that economic recovery will rely on how much we are able to help our economy open, while practicing appropriate social distancing and proper health protocols. The GDP is projected to contract by 5.5 percent in 2020 with a band of 4.5- to 6.6-percent contraction before recovering to around 6.5- to 7.5-percent positive growth in 2021 and 2022.

Building resilience

Even as we see some light at the end of the tunnel, we must remain vigilant against possible risks to our growth outlook and ensure that our policy strategies are responsive to the evolving circumstances that we are in.

The task ahead requires innovative and creative solutions that can effectively balance both our COVID and other objectives. That is why the government's response is a phased and adaptive recovery approach that prioritizes health as well as the recovery of consumer confidence toward opening up more of the economy.

Between March and May, Congress passed *Bayanihan* 1, which is what we have been using to address the emergency stage of this crisis. From June to December 2020, we are in the recovery stage and that calls for a combination of key legislations such as the recently enacted *Bayanihan* 2, which the President signed on September 11, and the passage of the GUIDE, the FIST, and

the CREATE bills to aid in the recovery of the country. The GUIDE bill is basically our support to strategically important but insolvent firms; the FIST bill is our support to the banking sector to sell or offload nonperforming assets so they can free up more capital to lend to micro, small, and medium enterprises; and the CREATE bill is our tax incentive program that will lower the income tax for all businesses while ensuring that we give tax incentives in a performance-based, time-bound, and transparent manner.

For 2021, we are working with both houses of congress to pass a budget that will be more responsive to the needs of the country, including the creation of 1.6 million jobs as the infrastructure budget is increased to PHP 1.12 trillion.

Innovating governance

What this crisis has made apparent is the need for us to innovate governance and the importance of effective coordination if we hope not just to outlast but also build resilience against adversities such as this. The government must be the one to provide the direction and impetus for innovation to prosper. We must set the example by recalibrating our own systems and processes to suit the needs and demands of the new normal. This entails using new technologies in developing tools that can make the delivery of public services more effective and efficient.

Innovation—whether under ordinary or extraordinary times—thrives best when ideas are shared freely, debated, and refined. The development and diffusion of innovation across the bureaucracy cannot take place if people are working in silos.

Lastly, I wish to emphasize the value of forging dynamic multistakeholder partnerships. The reality is that the government does not have all the resources to respond to this pandemic nor all the capabilities to develop digital tools that can support people in this crisis. Building strategic partnerships with the business sector, academe, and the scientific community is an effective way to address resource constraints and tap the wealth of ideas, technologies, expertise, and networks that reside outside of government. Effective public-private cooperation in technology generation, testing, polishing, and transfer is crucial to make governance innovation happen, especially in the new normal.

Closing

We each have had to make immense sacrifices throughout this pandemic, whether in our personal capacity or in the work that we do, and the road ahead of us still remains uncertain. Now is the time for us to come together to find solutions, not just on what to do but also on how to do them.

These are extraordinarily trying times and the road ahead of us continues to be challenging and uncertain. I call on all of us—public servants and researchers and the rest of the country—to work together on further building the economy toward a healthy and more resilient Philippines.

Thank you and take care.

APPC WEBINAR 1

INNOVATION IN PUBLIC SECTOR GOVERNANCE FOR RESILIENCE UNDER A NEW NORMAL: THEORY AND PRACTICE

SESSION OPENER

Coco Alcuaz | Executive Director, Makati Business Club

Thank you to PIDS for inviting me and the MBC to participate again in the APPC.

I would like to welcome everybody to the first of four webinars in this year's APPC. Our topic today is "Innovation in Public Sector Governance for Resilience under a New Normal: Theory and Practice". This is a great topic because while we are all coping and adjusting—hopefully with data but, inevitably, most of these are ad hoc—it is important to think about the governance part of how we, the government, and the private sector are arriving at these interventions. COVID-19 has changed not just the problem but also how we are producing and implementing solutions. Moreover, we are going to be doing these in this manner for a while.

Presentation 1

It's Not a Matter of What Your Government Can Do for You

James Brumby | Senior Adviser, Governance, Equitable Growth, Finance, and Institutions
Vice President, World Bank Group Singapore

There have been three prongs in the World Bank's response to COVD-19: (1) addressing the health emergency; (2) supporting jobs and businesses; and (3) protecting the poorest and the most vulnerable.

The World Bank, for instance, makes available USD 160 billion over a 15-month period in support of these responses to the pandemic. These operations are overwhelmingly focused on these three areas. Today, we will discuss what could be called the missing middle, the glue that might decide how the world comes through this testing time—that is, how the state can adapt to the post-COVID-19 world.

Don't look back

The first lesson of COVID is a difficult one for us all—the past may not be a good guide to the future. We have a temptation to say that this is the worst pandemic since the Spanish flu and the worst global downturn since the great depression of the 1930s, but as none of us has lived to experience these on the one hand, and the world is a completely different place on the other, suggests that these comparators of specifics are at best a distraction.

Let's suspend that orientation and look to our imaginations to re-think a future, while drawing on more generalized lessons from the past.[1] We may revert to the mean in some areas, but we are unlikely to revert to the mean in every area of government.

We do know that when crisis hits—unexpected crises, in particular—it does make us rethink our approaches over time. The crisis creates attitudinal shifts that lead to behavior changes.[2] September 11 did create change, but in many ways, it was more of a correction than a new normal. Many of the systems were already in place; they were just not being enforced properly.

If we were to think of a model of adaptation, it is broadly as follows: shock…shape…shift.

The shock stimulates a reshaping of our reality and then a shift in how we act in the context of that reality. But the shock does not happen in a vacuum; it occurs in the context of many

[1] May and Neustadt (1988) provides a wonderful trip through the uses and abuses of historical reference and rationalization for what overwhelmingly yields public policy failures.

[2] There are high visibility changes, such as changes to airport security that followed the September 11 attacks in the United States, but there is also a myriad of smaller changes that may not be as visible to all—such as the detailed adjustments to immigration policies and procedures, money transfer, hotel security, and design of and access to some landmark office buildings.

other things. Consequences can be nonlinear and difficult to foresee.[3]

Governments are wrestling with this change and doing variably well at different times. We do know that calls of victory have proven premature; COVID keeps coming.

Early attempts to characterize the responses to COVID drew on examples from disaster risk management, with three discrete stages of broad response, recovery, and reconstruction.

This is a Ready, Aim, Fire approach to disaster risk management, but in fact, we have seen something in many countries that could be described as 'Fire, Aim, Ready'.

Governments generally announced a determination to take action before they had worked out what to do. Those with fiscal capacity announced far-reaching fiscal support packages. Sometimes called stimulus, these were packages of support, not really stimulus. Then, the governments would adjust the parameters of the policy announcements, that is the aiming, prior to getting ready to launch them. In most cases, countries have continued to recalibrate their approaches, with subsequent announcements.[4]

Although there is a yearning to focus on the recovery from COVID, we are still not truly there as yet. But it is a good time to think of the construction of the post-COVID reality: what expectations may come from citizens and how government may be placed in this world.

Today, I would like to focus on the following:

- the evolving role for the center of government;
- the reforms to service delivery;
- re-orientation in financial management to focus more on stocks to augment flows;
- an acknowledgment of the changing world order; and
- finally, consideration of the implications for nontraditional sources of information and what it means for the way the government conducts its business.

The effects on government, its structure, organization, and what it does are still emerging.[5] This still has a long way to run. The only thing helping some governments look good is that some other countries may look worse in how they are managing this crisis.

As one newspaper reported—no (previous) government has been mugged by reality quite like this. 'Building back better' and 'resilience' have become the catch-phrases of this pandemic. The meaningful protracted execution of both, especially for developing countries and for at-risk populations, is not truly clear. While some reversion to the mean may occur, we can expect more nonlinear events to unfold.

Co-ordination and control; the government command center

The ability to deal with COVID has shed light on what happens at the center of government.

[3] For many countries, sending men to fight in World War II did stimulate supply of women into the workforce. The response to the global financial crisis meant, for instance, that countries with formerly little international clout, such as Argentina and Australia, now sit beside the world's largest economies at the G20.

[4] Just to be clear—'Fire Aim Ready' is exactly the opposite of preparedness. Although there had been a great deal of work and thought about preparing for a pandemic like this, very few decisionmakers seemed ready to deal with something for which the lessons of their own lived experiences had no real relevance.

[5] We should recognize that it is a terrible time to be a politician in power—many parties are likely to lose office over the next year or so. Voters and citizens do not like recessions, and they do not like public policy failure. Political change will be the norm. Government actions are likely to become increasingly unpredictable as windows for re-election or similar get narrower and narrower.

Countries have used their center of government functions differently, depending on the systems and processes in place, and the complexity or size of their country and prevailing institutions. For instance, big countries (in size and population) are typically federations or federation like (as in the case of China and arguably Indonesia) so managing across levels is fundamental.

In many countries, the systems at the center of government have been found very lacking, hence, the reliance on 'Fire, Aim, Ready'.

When emerging from COVID-19, countries will reconsider how they operate at the center of government and the way in which it can or cannot function as a command center, that is, how it can move to 'Fire Aim, Ready' in the face of a crisis.

The work we did several years ago traced the concentration of financial authority at the center of government. For many countries, the development process was often associated with the consolidation of the financial functions to exercise greater control. As countries develop, with more sophisticated and disciplined processes at the center of government, the need to collocate functions in single agencies reduce.

In time as the center of government becomes stronger, the state can empower specialist agencies. Some countries have not gone through this process very fully. Often, this is associated with a slower process of reform with more contestation at the center of government.

The desirability of this transition has been learned the hard way.

Paul Collier and John Kay, in their recent book *Greed is Dead* (2020), showed that much of the British postwar economic malaise (and Soviet collapse) was driven by an excessive use of centralization, with assumed benefits in scale. Whereas, in fact, many presumed 'economies of scale' created diseconomies of management and execution. There is more evidence for agility.

COVID responses have leveraged four identified areas of concentration at the center of government: policy setting and decisionmaking, operational coordination, information gathering with monitoring and evaluation, and communication. More than 30 developing countries, and a host of developed countries have unleashed center-of-government strengthening actions. Drivers of the actions being taken reflect the size and complexity of the country context, and the capabilities of the government administration and its mechanisms. A colleague has different countries placed in each of these cells.

These trends for a calibrated center of government, with specialist agencies, may be reflected in changed modes of service delivery.

Service delivery and payment; socially distanced delivery

The shape of future government service delivery is influenced by at least three main factors:

- **Contagion risk** – determined by the prevalence of physical proximity within the public service workforce for a given function, the proximity between workers and customers or clients, the degree physical objects need to be shared for the execution of a function or service, and the shared air for client groups or employee groups or across the two groups. Take an overpopulated immigration arrival hall, where passengers bring with them their pathogens, then congregate sometimes for hours sharing

air and space and some materials with passengers who have other pathogens, and immigration officials. These arrangements will change.

- **Technological process substitution (in particular, digitalization)** – the ability to replace processes that historically have required physical presence with ones that do not require presence. The point is here that digital substitution for events and delivery need not lower the satisfaction from the experience. Different, yes, but worse, not necessarily. That was my Zoom wedding experience in June.
- **Fiscal and wider public sector financial stress** – the large economic support programs in 2020 will crowd out public spending in future years. High-cost delivery is likely to be replaced by lower-cost delivery, and market-based and private-sector solutions are likely to dominate.

At the World Bank, we have looked at the first two factors in the context of the third factor, that is, where contagion risk can be lowered and digitized delivery can be used while saving money. Research shows that public service work is performed by occupations that generally involve a high degree of person-to-person contact. On average, the public sector has more of this than in the private sector on average.

When we look at services across the public sector, there are many that can benefit from rapid adoption of new technologies. Some that have been identified, many of which we are supporting, include the following: tax admin in countries still using manual processes; one-stop shops; low-risk prisoners; immigration at airports; police desk work; motor vehicle licensing; customs; employment services; airports; train stations; secondary schooling; foreign immigration office; public transportation; voting; center-of-government policy functions through home-based work; and courts (already adapting quite rapidly).

In some cases, reduction of viral contagion risk may involve capital works and redesign, in addition to or rather than the use of digital or other government technology (GovTech) devices, other changes in work practices, or actions to manipulate demand.

These forces were already at hand, but COVID has accelerated them. Threats of new pathogens will continue to stimulate these changes. Viet Nam, for instance, has set itself an objective to be digital by 2025, and to be among the top handful of countries in the region.

Singapore knows that its role as a regional travel hub depends on creating a safe space for passengers at Changi Airport. A contactless Changi experience is the objective, and reforms are well on the way to that end, with proximity sensors and iris and facial recognition immigration lanes to complement the robots that spurt out disinfecting mist to deep cleaning.

In recent years, there has also been an energetic questioning of the ongoing use of cash money, especially large denomination bills.

In a post-COVID world of heightened concern for viral transmissions, where investment in digital technologies has been pushed forward rapidly, where governments can less afford the leakages associated with illicit transfers, it is reasonable to question the outlook for cash money. In India, for example, the United Payments Corporation recorded the highest ever monthly digital payments during the pandemic.

In our own work, under the heading of GovTech, we have identified the actions likely to

assist government's successful adoption of these technologies. Measures to address access are an essential element.

These sorts of changes will alter the demand for workers in the public sector. The future for work was already under massive pressure to change now that the pressure has intensified in public and private sectors.

Post-COVID may look different across the sectors. For some countries, public transportation may be at a tipping point. Having been thought of as a socially desirable aspect of living in cities, it is now being questioned. Suddenly, the nature of the commute may be changing, and the relative desirability of public transport from a health perspective is being examined.

The managing director of Ile de France Mobilities, Laurent Probst, said the investments in public transport should stop now. As a British transport economist remarked at a recent event, after having spent his whole career with the singular objective of increasing ridership, that objective is suddenly being questioned.

He notes that public transport had for 100 years been resilient, but technology changes that seem attractive to many people are making it hard for public transport to stay relevant. The Dutch have noted that their working week has been transformed by the COVID lifestyle.

The complexity of this shift for many cities and states should not be underestimated. Fixed costs are high; a deterioration in ridership or even changed time-of-day pricing may compromise much of the current model and expose parent governments to considerable fiscal risk.[6] Sunk costs may be sunk, but operating cost decisions keep recurring. It is extraordinary to think that some public transportation assets may become stranded.

Agility may be one way through this, especially for those who have not invested so heavily in high capital cost systems. Governments have been prepared to make reforms, such as introduce bike lanes or bus lanes to major thoroughfares, when before there was not the will, such as the 644-km bike lanes announced here in Manila.

Financially bigger but likely weaker states

My colleagues at the Bank have reviewed the 2,500 or so fiscal measures that were initially introduced in response to COVID. With such an emphasis on speed, health, and those most in need, the spider diagram is no surprise.

It was common to select policies that did not conflict with social distancing requirements, brought relatively fast relief, were scalable in terms of time, magnitude, or targeted beneficiaries, and were possible to discontinue at the intended time (reversible).

On the other hand, most countries chose policies for which the benefit felt by beneficiaries was entirely paid for by the government (low affordability). Additionally, performance on targetability, administrative complexity, abuse resistance, and predictability and cost control was unexceptional on average and varied significantly by country.

As the economy has been put to sleep in many countries, governments have had to borrow much more but also take over considerable numbers of assets, for instance, in aviation. The net result for many will be that while liabilities and contingent liabilities through guarantees will have increased substantially, so too will have assets. But coming out of the COVID period, it is likely that there may be a shift in emphasis in fiscal management.

[6] See https://fsr.eui.eu/fsr-transport-publishes-manifesto-for-a-post-covid-19-recovery-towards-smarter-and-more-sustainable-transport/ (accessed on July 29, 2020). The Florence School of Regulation said: "Because of the virus, national priorities have come to overshadow common European interests. These fragmented approaches have thrown us back to pre-single European Transport Area times… judging by the allocation of State aid…the main beneficiaries have been the aviation and the automotive sectors."

There is a good reason to think that this may be concentrated in developing countries, where spending multipliers are generally found to be lower than in developed countries, and the recovery period may be longer.

Using spending induced by World Bank lending (and that of other creditors), Kraay (2012, 2014) finds that spending multipliers for developing countries are only around 0.4-0.5, much less than 1, which is usually considered the minimum for developed countries. This may drag out the recovery phase in developing countries, encouraging a closer look at the value tied in their balance sheets to see if some of this cannot be released to assist the recovery effort.

The International Monetary Fund, in its balance sheet project, has noted that once governments understand the size and nature of public assets and start managing them efficiently, the potential gains could be as high as 3 percent of gross domestic product (GDP) a year. These are quite substantial gains and roughly equal to annual corporate tax collections across advanced economies (IMF 2018). Many developing countries collect less than 15 percent of GDP in all taxes, so a 3-percent increase through trading revenues would be massive.

Effective asset management allows governments to raise expenditures during times of crisis and help maintain macroeconomic stability.

Governments with strong balance sheets come out of recessions faster. While it is not possible to backfill the asset side of the balance sheet, action can be taken to increase the returns from the assets already available. This can be done through better management and to recall that the largest and most important contingent asset is the ability to collect taxation, which, as the Philippines has done, is a contingent asset that needs to be nurtured. While the increase in debt levels is unprecedented in more than 100 years, the drive to take a more complete take on the financial health of government should help manage this part of the transition. While liabilities may be large, they are often balanced by equally large assets.

By 2023, about two-thirds of the world will be using accrual accounting to capture its financial position. This is highly desirable and timely. The Philippines already produces accrual statements that show its sizeable assets.

The challenge for many countries is what to do with this information. Countries that have been producing and using accrual information for a long time, such as New Zealand, now have this information at the heart of fiscal decisionmaking. But some other countries, such as the United Kingdom (UK), seem to flounder on bringing to bear accrual information and traditional fiscal management.

Necessity is said to be the mother of invention, and a reasonable expectation is that we will see much more effective use of balance sheets and intertemporal management of fiscal policy going forward.

Spillovers from reset geopolitics

The global financial crisis gave the world the G20 and an increased concern for mutuality and addressing global imbalances. The trade wars were already underway when COVID hit.

We are not yet sure what the pandemic will give us, but some of the hallmark international drivers over the past decade or so such as the Belt and Road Initiative have become lightning rods for some interests.

The Economist has pondered the effects of the uncoupling. Perhaps the response will be so-called 'Economic Prosperity Networks' where like-minded countries band together to reduce their dependence on one country, or the adoption of Chinese-plus supply chains to reduce dependency on China, such as that being used in Japan.

One thing is for sure—there will be unintended consequences with collateral damage. Australian winemakers, for instance, are now

under threat of having to meet heavy imposts for allegedly having dumped their wine in China. Trade retaliations, such as this, have become more standard, with spillovers to 'innocent bystanders'.

Government information to be challenged

The events around the crisis have made clear that nontraditional information sources may be increasingly important and profoundly influential.

Governments need to get used to the idea that big data and other nontraditional information generators can mean citizens not in the chain of command may know more about what is happening than those relying on official information.

Human mobility data, satellite data, crowdsourced user data, transactions data, text mining, and data fusion are available, and access can empower an individual. Access is an issue, as many of the platforms are controlled by quite narrow commercial interests. Even a relatively simple compilation of internet searches, for instance, may prove as reliable an indicator of changes in an environment as a specialist agency.

A study from Harvard suggests that big data can place the origin of the virus earlier and further south than the Chinese bureaucratic information systems would seem to suggest (Nsoesie et al. 2020). The study, which looked at indicators such as parking lot traffic in Chinese hospitals, may or may not be right—but it acts to contest the information monopoly usually associated with expert bureaucracies. Perhaps, that is why the Chinese authorities were so damming in their response to these findings.

These nontraditional sources of information can inform more direct action by citizens, empower the challenge to the state's policy actions, and may change the reactions from the state. As well as telling us, for instance, where relief transfers are being used for purchasing staples (such as the work by Raj Chetty) and therefore how this economic stimulus is working relative to expectations, these sources can act to inform public discourse or bring to light the use of excessive force by security staff, as we have seen.

Technology, access, and voice are currently something of a shifting game. It is not clear how it will end, but it is possible that more of government will need to be conducted on the assumption that everything is potentially in the public domain. The new platforms effectively give citizens a credible threat of exposure. Singapore has found that 70 percent of its citizens believe the government should consult with them in the design and delivery of public services.

Micro-actions can lead to macro-reactions

There are many public policy issues to work through in this space. Most of the information sources do rely on big players, such as Facebook, Google, and Apple, or other large network companies, such as MasterCard and Visa.

The regulatory power of the state is being tested to stay abreast of the technical capabilities of these, with data protection and privacy being concerns to address continually, and the complexities of the taxable nature of their activities.

Importantly, the state itself should be able to make better quality decisions by having more relevant data available in a timely fashion.

To make use of these data will require systems and a working culture that wants to access and make use of them irrespective of the nature of the findings. Not all polities are ready for this.

Conclusion – a profound reshaping and shifting

In many countries, leaders and their governments got a 'trust bump' at the outset of COVID. Citizens looked to government first as a source of

potential help. Citizens had to trust government, as government was the obvious most potent source of response to the crisis. But this pandemic is far from over. Even countries that looked to be winners have had shocks. Yesterday, the UK and Israel announced stricter measures for the lockdown.

Citizen trust in government has generally now been battered. To regain that trust and legitimacy, governments will need to respond. Today, I have tried to lay out some of the areas for the response:

- Around strengthening and codifying the role of the center of government, coupled with an empowering of specialist agencies;
- Around fiscal management that takes more of a balance sheet view involving more active positive management of assets and more prudence on the liability side;
- Around adopting contactless forms of service delivery; and
- Working to make the new world order work for its citizens.

Citizens will have an increasing ability to hold government to account. Government will need to respond in an agile way, making use of new forms of information and data.

COVID has been desperately difficult for many, and not that difficult at all for some.

This unevenness requires government to be especially conscious in its longer-term response of addressing the needs of those suffering, and not providing a free ride to those who have not suffered much at all.

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Presentation 2

Taking a Whole-of-society Approach to Building a Just Future

Panthea Lee | Co-Founder and Executive Director, Reboot

In early April 2020, Arundhati Roy published a piece on the *Financial Times* where she talked about the COVID-19 pandemic as a portal: "Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next."

Our conversation today is about reimagining the future.

The early days of the pandemic were difficult and scary, but we also had hope. It was easier to think about differences in how we govern, organize, and collaborate. We saw a lot of international repositories being set up around reporting, collaboration, and reimagining the new possible. For instance, a project called "The New Possible" (https://thenewpossible.space/) documents the different responses of international governments, the private sector, and civil society to COVID-19. We have read stories where we are housing the homeless, treating migrants as real people, ditching outdated economic models, and prioritizing citizen safety over economic growth.

Yet, today, as the pandemic continues, it can be hard to consider "reimagining" when this is the daily reality… but we must. Old thinking will not save us—and those responsible for the crisis will not get us out. Hence, we need new paradigms. We need to reimagine the social contract, which will only be legitimate (and upheld) if we design it with our people. In the United States (US), for example, the strength and momentum of the Black Lives Matter movement is only showing how broken and illegitimate the social contract was.

The power of community response

Many of us say that communities do not have the resources and expertise, but I hope to share an example of community response to illustrate a pathway where we can work together with the civil society and community groups.

In Brooklyn, New York—a vibrant, culturally rich, and diverse community—there is a lot of existing inequalities (racial and socioeconomic) within the Bed-Stuy neighborhood, where I live. Early in the crisis, we were badly hit; there were food insecurity and mass unemployment.

What did we do? People bonded together. We thought about ensuring how neighbors can take care of each other. There was a group of community organizers who started a community called "Bed-Stuy Strong". We started by taking calls around supporting neighbors during the pandemic. In just two weeks, we built up an incredibly robust rapid response system. Neighbors who needed support were able to call our hotlines. We used chat bots and artificial intelligence in real time to pull the system together. It is one of the most robust and sophisticated service delivery systems

that I have seen, surpassing anything that I have seen in the public sector that works with the most advanced government innovation groups.

In about six months, Bed-Stuy Strong has served about 7 percent of the population in the neighborhood, delivering 264,000 meals through 4,300 members. We served the most vulnerable: the elderly, those with low income, and those who were immunocompromised. We have raised USD 500,000 for our community fund from more than 1,000 individuals.

When I talked to governments about this, I was often told that while they would love to partner with communities, the latter do not have partnership and legal frameworks, that it will be complicated (i.e., activists will yell at them), and that they are not sure what the partnership will deliver. Yet, Bed-Stuy Strong accomplished a lot.

Our experience is not unique to Bed-Stuy, to Brooklyn, to New York, and even to the US. I have always been impressed by how robust and active Filipino civil society is, putting together creative, innovative, forward-thinking, and agile responses to COVID-19.

The limitations of institutional response

International agencies, multistakeholder fora, and governments, on the flipside, have very different responses. In the highest levels of governments, we see worst responses in the forms of denial of the problem, blaming of the citizens, corruption of stimulus funds, unwillingness to face the truth, gross incompetence, and the use of executive force to crack down on dissenters.

This handicaps civil service and partners who wanted to do the right thing. People have become exhausted, as internal politics have deepened. Existing fragilities have been highlighted and exacerbated. There is an even greater mistrust of outsiders and "amateur changemakers", and unwillingness to open up and collaborate.

Mistrust goes both ways. When we mistrust our citizens and the civil society, it works as a self-reinforcing loop: they will not trust us either. This can be illustrated in a number of ways, such as in Jeremy Heimans and Henry Timms's "Old Power Values vs. New Power Values" (*New Power*, 2018). Many government institutions and bureaucracies operate in a top-down managerialism approach (i.e., plan-plan-plan then execute), which is not in tune with how the world is evolving and how communities are self-organizing.

As an ethnographer, I have studied both intuitionally-driven change and community-driven change, where I have seen a real difference in operational orientation being taken. Institutions tend to 'asses' first, then 'plan' and 'do'. Yet the scale of the challenges that we face—and how quickly they are evolving—means this approach is not always working. Communities, on the other hand, are doing the work, assessing which ones are working, and then planning to scale and invest in what works. Institutions ask what the right approach is, while communities ask what needs to be done right now. The fundamental difference between how institutions and communities operate does not mean one is better than the other. It means we both need to understand how we can work differently, without enclosing the other.

On a personal note, I see most of the change that is happening on community-driven initiatives that respond to the urgent challenges that we face, and I do not think I am the only one.

In March 2020, Kenyan philanthropist and activist Ory Okolloh Mwangi tweeted a question that said: What is a government? Some of the fascinating responses that she received included: "organized violence", "an archaic English noun that means harassment", "a species of the leech variety", "the strongest most organized gang in the territory", "a business", and "do we even need one".

People around the world ask this question—and for good reasons. Even Ronald Reagan said: "The most terrifying words in the English

language are: 'I'm from the government, and I'm here to help.'"

Learning from communities

Institutions can learn from community responses that we are seeing around the world. Some of these lessons include the following:

- Adopt a bias toward action.
- Identify concrete problems in your field—and get to it.
- Harness civil society and "amateur" energy to respond in the present—and to reimagine the future.
- Set up infrastructure from community support.
- Do what is right, right now—even without a sustainability plan.

Implications for the future

There is a lot of talk about the new normal and building back better, but there are not enough ideas on how we are going about these design and planning conversations. The people are fed up, and they are sick of talking about reform.

Angela Davis, a prominent civil rights activist in the US, said: "The problem with reform is that reforms have often rendered the institution itself more permanent." The people are fed up with tinkering on the edges and with wanting to work with big institutions and then having the reforms be too incremental, too narrow, too marginal, and too slow.

We need to fundamentally reimagine what it is that we are doing. We need systems change, and systems change requires all of us.

For instance, artists, activists, researchers, civil society, companies, governments, and journalists all play different roles—but roles that are only commonly understood (i.e., artists to imagine, activists to protest, researchers to assess, journalists to monitor). In an increasingly complex and fast-moving world, these archetypal roles are too idealistic, simplistic, and even naïve.

To change systems, we must change ourselves. It is not enough for artists to help us reframe our world and imagine futures; they need to become advocates for these new realities.

Activists cannot just protest and talk about what is wrong; they need to help us define paths toward what works.

Researchers cannot just assess different possible paths to a better future; they need to shape discourse and policies toward a better future. Governments cannot just create policies and deliver services to the people; they need to protect citizens against corrupting influences.

Right now, we need to counter the business models that set out divisiveness and hate. We need robust public discourse and dialogue about what the future should be. A media that is free—one that supports positive narratives—is essential.

To reimagine governance, we need to answer these questions:

- How do we bring the right actors to the table?
- How do we overcome mistrust, fear, shame, and inertia?
- How do we agree on a common vision when we all come from different backgrounds?
- How do we move past talk and into action?
- How do we sustain momentum for the long haul?

We all bring our superpowers to the table: activists contribute moral clarity and courage; researchers provide intellectual rigor; the civil society brings power to compel action; the private sector has the production and distribution capacity; and journalists can shape public agendas. We need all of us because the government alone cannot solve the problems we are facing now.

This is not utopian. Systems and structures that enable and sustain injustices, inequality, and oppression were intentionally designed. Futures that honor and protect justice, equality, and liberation can also be designed.

Take Taiwan as an example. Taiwan is leading effective intragovernment collaboration (e.g., via the Central Epidemic Command Centre), collaborating with the private sector for health innovations, working with the civil society to develop real-time data and analysis, and promoting a culture geared toward a whole-of-society collaboration.

Policy follows culture

A whole-of-society approach does not mean we are all doing the same things at the same time. We need to structure and sequence these conversations—to let artists and activists lead, to let researchers and civil society determine how we set these paths in building the creative work that they are already doing. With these, governments and the private sector can help us figure out how to set policies and organize markets to realize these more courageous futures.

Adrienne Maree Brown said: "Trust the people and they become trustworthy." It is essential so we do not fear collaboration.

In conclusion, I believe that policy follows culture. We are seeing massive cultural changes, and policies need to follow. We need to embrace the rapid changes that are happening and think about how we can line them up and support them.

Reaction 1

Maria Teresa Magno-Garcia | Director, National Planning and Corporate Management Bureau, Department of Information and Communications Technology

The challenge that the government faces now is how to bridge the new normal and how to govern using information and communications technology (ICT).

The rise of Smart Governance

Technical advances have substantially changed the way humans produce, interact, and govern things. The First Industrial Revolution in the 18th century saw the impact of steam engine on productivity, which has been carried up to now, where we are faced with fast-paced applications of ICTs not only in production but also in governance. By the speed these transformations are recurring, a Fifth Industrial Revolution is already around the corner, which scholars said will add personalization in technology or production, wherein businesses will move from for-profit to benefit.

This inevitable revolution places immense pressure on governments, especially in the Philippines, to keep up with the trends. The rapid adoption and application of artificial intelligence, triggered by access to Big Data and better hardware processing capabilities, ushers a new phase on how the government responds to the clamor of its citizen for better and efficient services. This scenario gives rise to Smart Governance or the use of technology and innovation to facilitate and enhance decisionmaking and planning.

Smart Governance is about having reliable, up-to-date, and accurate data. The data collected from different stakeholders can be used to get a better grasp of the country's needs, as well as to allow decisionmaking to become evidence-based, citizen-centric, and impactful.

With Smart Governance, the delivery of public services becomes more efficient; information becomes transparent and accessible to the public; communication and collaboration between officials and citizens are improved; and confidence and trust of people toward the government increase.

Envisioning a digital Philippines

The COVID-19 pandemic has transformed the landscape and created a "new normal environment". Working in the new normal environment may not be new for some private sector companies, but it is a new experience for the public sector. It is challenging, but we must continue government operations like it is business-as-usual. For the government, the pandemic has brought a paradigm shift in terms of its operations.

How are we going to move forward? To move forward means pursuing digital transformation. This is the goal of the Department of Information and Communications Technology (DICT) from the moment it was institutionalized through

the enactment of Republic Act 10844 in 2016. The DICT is set to lead digital transformation through its "Digital Philippines Vision". The Digital Philippines Vision is the DICT's support to Smart Governance, where technology and data are combined and used to improve democratic processes and transform the ways that public services are delivered.

Realizing the importance of baseline ICT data for informed decisionmaking and planning, the DICT commissioned the conduct of the National ICT Household Survey in 2019. The Survey was part of the long-term strategy to address the gaps in ICT statistics by gathering data from households and individual respondents. Some notable results include the following:

- 18 percent of the population has Internet access.
- 47 percent of households have radios.
- 24 percent of the population has communal cellphones.
- 8 percent of the population has fixed telephone lines.

This means that we need to catch up with the situation to address the challenges of the Fourth Industrial Revolution, prepare for the Fifth Industrial Revolution, and respond to the new normal scenario.

The DICT shall continue to support data-driven governance, as we have lined up various surveys. In 2020, we will hold the Women in ICT Development Index Survey (i.e., women and girls' access to ICT) and the Information Technology-Business Process Management (IT-BPM) Baseline Survey that will gather baseline data on the IT-BPM sector. These activities will enable the government to design responsive government interventions to support these stakeholders.

In 2021, to address concerns on the new normal and the dearth of data in local government units (LGUs), we will hold the National Government Agency (NGA) and LGU Survey to gather ICT-related administrative data in NGAs and help determine LGU readiness for digital transformation.

ICT as a catalyst to recovery

The DICT has identified and is implementing various initiatives so the country can bounce back and recover from the pandemic. By recovery, we mean better and secured connectivity, improved government services, a strengthened human resource, and greater public reach in the countryside.

A safer, protected, and reliable connectivity is the key to ensuring efficient work from home arrangement and zero-contact delivery of frontline services, especially in the new normal. This can be achieved through the following DICT initiatives:

- *National Broadband Program (NBP).* The NBP aims to provide faster Internet connection in government offices by the end of 2021. About 1,200 agencies (national and local) will be connected.
- *Free WiFi for All Program.* We target to provide wireless Internet access in public areas (about 23,000 sites) by the end of 2021.
- *Philippine National Public Key Infrastructure (PNPKI) Project.* To ensure a secured exchange of data across the government, the DICT will provide PKI service, which is helpful for government employees under work-from-home arrangements.

To help LGUs bridge the new normal, the DICT likewise initiated the Digital Cities Program. Under this program, select LGUs will receive tailor-fit interventions to strengthen their capacity to effectively and efficiently use ICT.

In mid-2020, we have announced the initial 25 digital cities and provinces that we are going to support until 2022.

To complement this, we established the Digital Governance Awards, a joint project of the DICT, Department of the Interior and Local Government, and the National ICT Confederation of the Philippines. It is an annual search for best practices in LGUs in using ICT to effectively deliver public services.

Noting the changes brought by the pandemic and the new demands in terms of education, skill, and talent, we also started the Digital Education Program and the Digital Workforce Program. These are going to be implemented from 2020 to 2021. They aim to build the capacity of those who are employed, underemployed, and unemployed, as well as women and out-of-school youth.

Leveraging technology and data in the new normal

With the prolonged COVID-19 pandemic, everyone must embrace a new normal of live, learn, work, and play. In the absence of a vaccine, the pandemic is proving to be a test of long-term resilience, especially for the government and that of the people. To thrive in the new normal, the key is for Smart Governance to leverage technology and data. To emphasize what James and Panthea mentioned in their presentations, we have to design plans and programs with the people. In this way, the citizen will trust the government—and this is the only way to go.

Reaction 2

Gerardo Sicat | Professor Emeritus, School of Economics, University of the Philippines Diliman

My task today is to react to the presentations I heard. Mr. Brumby's presentation is an interesting, broad-ranging assessment of the developments in the area of responding to the COVID-19 pandemic. Many of the developments that he talked about are related to trends and emerging outcomes out of the Fourth Industrial Revolution, which we know has been happening for some time now. These have been of great consequence to the manner in which economies are adjusting to what is happening to the world. I agree with a lot of what Mr. Brumby said; they are thought-provoking, as well as helpful in creating a widespread presentation of the landscape in which all the current problems toward managing the government are to be approached.

Let me just simply summarize the main points that he said—in my own words:

- Governments have to be in control by strong coordination, or else they might lose their total relevance to the situation.
- Governments are challenged by a weakening of the overall finances because revenues are not rising as much as the increase in demand for government spending. The COVID-19 pandemic has enlarged the responsibilities of governments. This has many implications in the way governments respond to the problems that we face. The requirements of socially distanced interactions in response to some of the problems related to COVID-19 have led to the acceleration—or further acceleration—of payment systems. The best governments will be able to adjust to this much more, but those that will fail to do so will lag behind.
- Geopolitics can be a game changer for most of us. Yet, the world is not likely to be simply standing aside; new leaders will be coming up to provide us with new adjustments. As a result of this, countries will need to adjust; otherwise, they might be left behind with the adjustments being made. The digital revolution has reduced, in the context of our problems, the great asymmetry in information between those in power and those who are not. It is a very important and powerful element in the way our responses are to be judged in the context of how the governed react to the policies made by the various actors in government.

Session 1 Open Forum

Question | Jessica Reyes-Cantos, Action for Economic Reforms: This question is for James Brumby. For the Philippines, which is immensely challenged by connectivity and Internet access, what would be an alternative approach to have rapid and reliable data for targeted support and intervention for government and private sector programs?

Answer | James Brumby: To a large extent, the presentation from the DICT goes to these issues and to what the actual plans are. Things we have invested in the past may not be as valuable as some of the things we can invest in now. For instance, if people start working from home, then the nature of investment in public transportation systems changes. In this space of connectivity, I think the opposite is occurring. The losses associated with not being as connected (e.g., not having new forms of technological communication and work) are increasing. In a sense, the return is going up quite dramatically for investing in connectivity, and the opportunity cost of not investing is therefore also increasing.

An issue to consider is whether the circumstances have changed sufficiently to say the plans need to reorient and double down very quickly.

The bike lanes in the Philippines are an example—it was a decision that was not foreseen but was taken very quickly because of the stimulus from COVID-19. Colleagues in the Philippines would be very well-placed to review where we are in terms of the starting position and on what options there are. But in general, the returns now are much higher. The opportunity foregone of not investing in rapidly has some risks.

Answer | Maria Teresa Magno-Garcia: In terms of what the DICT is doing, it is getting the broadband network in place nationwide across Luzon, Visayas, and Mindanao. The broadband backbone is very critical, and without it, it will be difficult for us to provide what we call the "last mile connections". The primary consideration is to give priority to the connection of the government. We have to make sure that the online services of the government are there. We can help provide connectivity to the public through the LGUs. The national broadband backbone will be made available to the LGUs at some point in time. From Luzon to Mindanao, you will have different access points that can be accessed by interested LGUs. In return, the LGUs can have a local broadband network, which they can use to provide connectivity with their citizens.

I can only mention the strategy for 2020 to 2021 because the strategy might change because of technology, funding, and infrastructure. In addition, we have also set policies to have more cell towers. With the help of DILG and the Anti-Red Tape Authority, LGUs have already issued permits

for several thousand cell towers. Within DICT, we are also improving some of our tower facilities.

Question | Ross Empleo, UP Institute for Small-Scale Industries: Based on your analysis of the job market during COVID-19, what do you think are the kinds of jobs that will be more in demand in the post-COVID world? What kinds of skills should workers strengthen now to make us more competitive as the pandemic recedes?

Answer | James Brumby: In general, I think the way the future of work is seen can be described in two things: (1) the nature of the relationship between the provider of labor and the workplace and (2) the nature of what is being done. The way individuals are connected to the workplace is changing to be more agile; the concept of life-long employment and even the nature of employment contract itself are changing dramatically. One of the reasons these are changing is that workers may provide these skills to more than one employer (i.e., having a relationship with one employer, one payer or more, virtual services). There will also be sectoral shifts in some services, such as health.

The other thing is digital numeracy to feed into the specification of many jobs.

Answer | Coco Alcuaz: Let me pick up from a webinar I attended to answer your question: Don't we all think that there will be many more healthcare jobs, logistics or delivery jobs, or call center jobs? These are the kinds of jobs that might pick up in a post-COVID world.

Question | Mario Aguja: Is the Philippines in the third or in the fourth technological revolution? I think we need to clarify where we are exactly. Our problem in the education sector under COVID-19 only highlights the dismal state of our digital environment. Digital divide is affecting education today under the new normal.

Answer | Celia Reyes, PIDS: The state varies across sectors. Some sectors are more advanced than others. This poses challenges in terms of how we deliver our services. In the case of the education sector, we are still quite far in terms of being able to make use of all the technologies out there, but the pandemic is pushing us to take advantage of this opportunity to accelerate the pace of adoption in the education sector and other sectors as well. The pandemic is likewise forcing us to look at the best practices out there and whether we can immediately implement some of them.

Question | Jed Rabena: The National Economic and Development Authority announced that it is high time for the Philippines to put greater priority on digital economy/connectivity. How could foreign investors help in this regard?

Answer | Maria Teresa Magno-Garcia: Currently, we are encouraging foreign investors to partner with local telecommunication companies in building cell towers. Several foreign investors have already signified interest in partnering with Globe or Smart to establish the needed cell towers. There is a limit in foreign ownership when it comes to telecommunication companies, until the law is changed.

Question | Thelma Manuel, NEDA: To Miss Lee, I like your presentation. It gives a new perspective to a whole-of-society approach to governance. Could you elaborate how this approach could be more real, especially in the time we are in now?

Answer | Panthea Lee: I think we often talk about whole-of-society approaches because we recognize that the social fabric is shifting. Citizens are having more and more urgent and loud demands. There is a recognition that we need to engage all actors

of the society, as we do not have the capacity, resources, and know-how to do all of these. Whether you call it whole-of-society or co-creation, there is a real desire to do this, but I think—right now—it is still largely in the lip-service stage. I do not think this is intentional. I do not think people are intending to bring lots of different actors and then they do not do it. I think it requires recognizing that all the different actors that you are trying to bring in from different parts of society come from different backgrounds, with different expertise and power dynamics.

So, when you are trying to bring in actors from a more marginalized part of the society and expect them to participate in dialogue in the same way as people from the academia and those who work for the government, it is simply not real. We take inputs one after another, but because they are not easy for us to use, we often do not know what to do with them, so we end up just relying on one another (i.e., same actors). Hence, workshop participation nowadays is a professional skill—how you speak in soundbites and how you use terminologies that everyone else understands.

We also do not invest necessarily in resources to understand ideas that are coming from folks outside or far from the elite. Again, I do not think this is intentional, but there is still a lot of work to be done.

Question | Vicente Paqueo, PIDS: It has been said that systemic changes require change in all of us. What gives you hope that these changes will occur in the face of deep divisions among the country's citizens in regard to attitudes, core values, and our views on facts and truth—and the rise of obscurantism and the undermining of science and evidence-based policy (witness what's happening in the US)?

Answer | Panthea Lee: I spent a lot of time thinking and talking to people about this question. As I have been processing all of these, whether it is in the US or other countries, there is a lot of trauma that we do not talk about. In the US, there is a conversation happening right now around systemic oppression, structural racism, white supremacy, and what that means. Globally, a lot of countries I worked in have not had conversations about the impacts of colonization and what that had done to us as a people.

There is a lot of technocratic ways that we want to change things. In those conversations, I am usually surrounded by economists and lawyers—and as an anthropologist and a journalist, I try to keep them up. I am fascinated by practitioners working in the areas of systematic practice, embodied justice, and around understanding this trauma. It is because humans resort to narratives that we might deem conspiracy theories (e.g., the 'American dream' which is not true). Social mobility in the US is not a reality anymore. You have big media, big corporations, and big governments telling people that policymaking is something you could not possibly understand—that the government is too complicated to be understood. I think this is why people resort to "disinformation".

I do not think we give enough attention to the "soft" side of things. I think there is a lot of trauma that we need to heal from and talk about.

Answer | James Brumby: I do not know if I am 100-percent optimistic—a lot of things that have happened in other countries have shaken to the core some of my views about institutions. Karl Popper, a British philosopher, said the characteristic that matters in a democracy is the peaceful transition of power when you have a poor leader. To me, it resonates in its simplicity and profundity. Some countries are, perhaps, testing that in ways we have not seen before.

This changing reorientation of power and information that I talked about—the realignment

or the breakdown of the traditional asymmetry of information between government and people and within government—does give rise to the idea that communities and individuals can have more leverage than they did before. Now, the missing link there is that a lot of those platforms rely on (or are owned by) very narrow interests. A big issue for government is to work on regulations to expand those narrow interests to serve broader interests. Government has a role to play to ensure that these platforms do not get captured.

I do not necessarily think that this will happen in one step or two steps—it may take more. In the meantime, I think, the way information is going to circulate will contribute to a more communitarian orientation.

Question | Coco Alcuaz: To paraphrase Dr. Paqueo's question, we have a huge new kind of problem now, and it is happening at a time when it is contributing to the kind of division that we have. As an economist and former economic manager, how should economic managers and the private sector try to attack this problem?

Question | Marc Erico Ong: Is the 'new normal' here to stay? A lot of innovations have been introduced in government processes with the help of ICT, but all of these are introduced only in an interim nature. Should we expect to revert to the usual physical processes once the vaccines arrive or once the country has developed localized immunity? If it is going to be the new standard, I believe it should be fully embraced and be enshrined in our respective government manuals and laws to some extent.

Answer | James Brumby: These are some of the questions I tried to address: when do we revert to the mean and when do we go on a different path? When the world is beset by a shock or a response to a shock, it takes a different path. For example, the attitudes and the welcoming of women in the workforce changed in some countries because of World War II, which was not a conscious policy. What happened was an adaptation to meet the requirements of the time, and then that led to a different trajectory.

It is a very good question, and quite frankly, we do not know the answer. We could take a step back. We can treat this as a once-in-a-lifetime event, but we do not know that. It could be something that occurs every 18 months—we certainly hope that is not the case. If we think that with variations in biological make-up, the responses to other viruses in the last 20 years, such as SARS and MERS-CoV, could have led to a different outcome. For sure, if it is a recurring event, the consequences will continue to be profound.

Some argue that this is just an aberration, and it will be solved when there is a vaccine, and we will all go back to normal. I am not so sure that this is going to happen; the cost-benefit of many different things that we have done in the past will be challenged going into the future. The lockdowns have produced information we did not have previously. For instance, an unintended consequence is that we can see how quickly the quality of air can improve in the face of changed work and social practices. We have also seen how the behavior of animals has changed in some places, as they are less crowded out by the overzealous work and mobility habits of people. This puts into focus how our relationship with the environment can adjust quite quickly.

You have a whole lot of things that are pushing in a direction that says that, for sure, the new normal will not be like an updated old normal. The question is, how many facets will be different.

Question | Ramir Balquin: What does it take for new changes in public sector governance to become co-equal contributors to doing improved public service when some public institutions are

hard-wired to business-as-usual thinking?

Answer | Panthea Lee: We need to raise the stakes. The current approach of asking nicely does not necessarily work. I am in Denmark, where it seems so shockingly normal. But, no, I do not want to go back to normal. Normal sucks; it is terrible. Normal means tons of people are oppressed. The pandemic has exposed huge inequities, so I do not want to go back to the normal. Many community and advocacy groups feel the same.

At the same time, the way that we are doing advocacy is not particularly effective—we are yelling at government and companies in the media, telling them we need big structural change. Yet, we are not either monitoring the implementation or defining the mechanisms that we want to see. A lot of civil servants are rightly exhausted; they are good people who are trying to do the right thing, with less resources. They are overworked and underpaid. How do we bring these spaces to have these conversations where people can bring their superpowers—radical imagination, moral courage, technical expertise?

We need new spaces that are not just defined by institutions of power because, like it or not, power likes to hold on to power. We need to raise the stakes of what happens if we do not. Jeff Mulligan wrote a paper around the lacking civic and public imagination. We cannot imagine positive alternatives, so we just tweak incrementally. I hope we can seize the momentum from this moment to make big changes.

Answer | Gerardo Sicat: I would like to point out one important experience we had in the past. Let me illustrate this with a past policy. What worked in the past need not work well in another time. We had relative success in getting Filipino workers to work abroad as Overseas Filipino Workers (OFWs). This policy was designed to cope with the temporary unemployment at home. The idea was that in due time, jobs will become abundant at home with the growth of the economy. Domestic growth was to be achieved through a policy of developing the domestic economy controlled by Filipinos and attracting foreign investments mainly in the export sector, particularly in export manufacturing.

The business-as-usual model for the domestic market was inward-looking high protection, which essentially favored domestic capital investment producing mainly for home-market sale. Foreign capital was attracted mainly in the export sector, not in the domestic sector, which continued to be highly protected. As a result, the domestic industrial economy became a drain on the earnings of the export sector. Because it could not support its own import needs, it also became a drag rather than an energizer of export performance.

Leaders and domestic policymakers need to understand that strengthening the domestic economy requires also opening it to foreign capital to fill in important gaps that promote competitive domestic industries. This is the bridge toward integrating the domestic economy with the export manufacturing sector where foreign capital dominates. To enlarge and become more dynamic, the export sector manufacturing has to have, eventually, a direct linkage of productive inputs from the domestic economy even while it sources some of its major needs from imported raw materials. The highly protected home industries failed to provide that support.

OFWs went to foreign countries, and there, they were more productive and earned higher incomes because of an abundance of capital in the workplace. The lesson of this is that we must have a high level of investments at home—both from domestic and foreign capital—so that our workers will find productive employment at home. We should fill the domestic economy with more capital, including foreign investments. Investment incentives should include attraction

of foreign capital not only confined to the export sector but also in important segments of the domestic economy.

As things stand, because there is not much attraction of foreign direct investment into the economy widely, we are not even in the conversation when it comes to the plans of foreign investors trying to transfer their operations from China. They are more likely to consider countries like Viet Nam, Indonesia, India, Thailand, or other countries. This important problem of attracting foreign capital into the economy—long expressed as a need but seldom effectively put into good policy—I hope is being addressed in the discussion of the current reform of investment incentives.

In a well-functioning high-growth economy, the employment opportunities at home should be sufficient to enable workers to work at home and not need to go abroad to find work. When incomes are steady and needs are met at home, families are well-off and contented.

APPC WEBINAR 2

INSTITUTIONAL INNOVATIONS AND REFORMS UNDER THE NEW NORMAL

SESSION OPENER

Charlotte Justine Diokno-Sicat | Research Fellow, PIDS

What are institutions? In the new institutional economics, Nobel Prize-winning economists Douglas North and Oliver Williamson define institutions as "the rules of the game" and they include laws, mandates, procedures, and guidelines that affect governance, which is the play of the game. One of the main ideas central to this webinar is that information should be viewed as an institution—whether because it is an input or outcome of the public education system, or of upskilling the workforce, or as an input to improved public service delivery, such as integrated information systems for the vulnerable. All of this requires fully implementing existing laws or innovating and enabling complementary laws, regulations, and guidelines to allow information to become an institution—one that is systematically gathered, safely stored, and shared across national government agencies for agile and innovative governance in a volatile, uncertain, complex, and ambiguous world. The goal of the webinar today is to come up with a set of specific recommendations for institutional and policy plans or actions aimed at innovating governance and promoting innovation to the public sector toward recovery and resilience.

Presentation 1

High Touch High Tech: Transforming Education after COVID-19

Ju-Ho Lee | Professor, School of Public Policy and Management, Korea Development Institute

I am very honored to give a presentation in front of such distinguished participants in this APPC seminar organized by PIDS. I am going to talk about education in the era of the Fourth Industrial Revolution. I will suggest High Touch High Tech as a major direction for change. As the former Minister of Education, Science, and Technology of South Korea, I will discuss the K-EDU. Also, as Chair of Commission Asia, I will share the experience of High Touch High Tech Initiatives.

In Seoul, South Korea, in 2016, Go Master Sedol Lee was defeated by a United Kingdom (UK) player, but this UK player was not a human being. It was an artificial intelligence (AI) made by a machine learning company called DeepMind. This shows the beginning of the era of the Fourth Industrial Revolution.

AI in education is a major driving force in the Fourth Industrial Revolution. In the same year that Sedol Lee was defeated by an AI, the World Economic Forum highlighted that 65 percent of current elementary school students will have jobs that do not yet exist today due to the AI-led Fourth Industrial Revolution. They said education should incite fundamental change in what we learn and how we teach.

In teaching the next generation

In the typical or traditional classroom, we usually focus on teachers, different knowledge, and students memorizing and understanding the content. But, according to experts, the size of knowledge for the content is doubling—almost every 12 hours. You cannot make students memorize detailed analysis in the classroom. What we should do is focus on the core concept and make students know the essential knowledge. The typical national curriculum—like what Korea has—should be changed fundamentally to focus more on core concepts.

Based on these foundations, you must emphasize data literacy, technological literacy, and human literacy. You also have to think about nurturing the 4Cs: creativity, critical thinking, collaboration, and communication. This menu of learning is what we should all aim to teach the next generation.

In education, "what to teach" and "how to teach" are major areas. The way we teach has to be changed fundamentally (e.g., from the best protection system to the best customization systems in the product and service market; from mass

standardization systems to mass personalization in the education sector). Personalized learning should be provided to everyone.

Mass personalization learning began from the old ways of learning, but it used to be provided to the selected few—private education, very expensive private tutors, and so forth. But due to the technological change, personalized learning can be basically provided.

In this direction of change, learning to take tests can be changed to learning to learn. Vertical learning in the classroom with lectures should be changed to horizontal learning with projects among students. Shallow learning focused on memorization and understanding should be developed into deep learning to provide students high-order skills.

To make that kind of shift, harnessing the power of AI in education is critical. AI can help identify what a student does and does not know through testing, as well as develop a personalized learning care for each student. For example, you can now see the beginning of a really important game changer in the education field, the Intelligent Tutoring System (ITS). Maybe we can call this AI Tutor.

AI can play a very important role as a tutor for each individual student for personalized learning. ITS can be applied in Dialogue-based Tutorial System or even Exploratory Learning Environment, and you can think about the tools like chatbots, virtual reality, and AR on top of ITS. This ITS can be further developed to become an AI Learning Companion or an AI Teaching Assistant in the future.

Teachers as designers of learning environment

On one hand, you can think about big changes in education to embrace AI technologies. On the other, you can reimagine the teacher's role transformed by these changes. Teachers are not the sage on the stage anymore, and they should be transformed into the designer of a learning environment.

There are a lot of important pedagogies for teachers to use, such as blended learning, gamification, multiliteracies and discussion, embodied learning, and experiential learning, among others.

These have been widely tested in the past 20 years and have become effective. This change in teachers should be accompanied by embracing AI technology in the classroom. Otherwise, teachers will be too burdened. This is the direction that I am suggesting for the global community. Education should become High Touch High Tech education, which I defined in Figure 1.

On the right-hand side, you can see the role of AI. By embracing AI technologies, you can have it do diagnostic testing to identify students' prior knowledge. Levels are quite important. Also, the instructions have to be tailored to the individual learning levels. AI can offer optimized learning for everyone based on their need of learning.

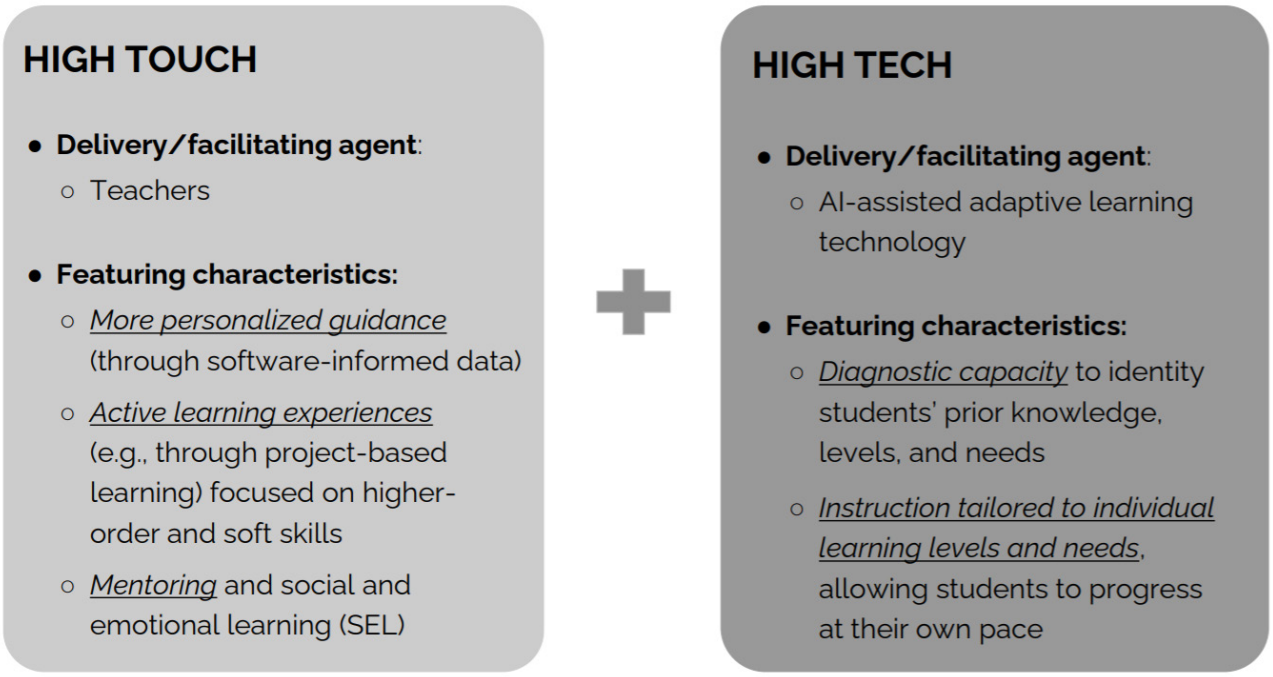
On the left-hand side, you have to combine this technology with new roles for teachers. Teachers can focus more on personalized guidance, active learning experiences like project-based learning, or mentoring and socialized and emotional learning.

You can see the clear division of roles between human teachers and AI teachers. Hence, you have to bring in AI to help teachers make innovations in their roles.

Evidence of High Touch High Tech education

In a typical classroom, according to Benjamin Bloom, the famous education thinker, students first learn to remember and to understand. Based on what they remember and understand, they can

Figure 1. High Touch High Tech education for the global community



Source: Author's rendition

apply, analyze, evaluate, and create, particularly through human connections. Usually, in a traditional classroom, they just focus on understanding and remembering because it takes much more from teachers to provide all learning experiences.

High Touch High Tech can provide a solution by bringing in AI technology into different areas of learning, understanding, and remembering. This way, teachers can be radically relieved of these responsibilities, and they can move up and focus more on higher-order learning—to apply, analyze, evaluate, and create.

There has already been past evidence for High Touch High Tech education. For instance, around 65,000 students in 12 courses benefited from High Touch High Tech at Arizona State University (ASU) in the United States. ASU offers basic courses like mathematics, ethics, biology, and economics through adaptable learning systems. They bring in McGraw-Hill's ALEKS to teach college algebra and CENGAGE Learning to teach economics. They utilize diverse AI software to help students study with AI tutors, while professors focus more on higher-order learning. In India, meanwhile, Mindspark has caught a lot of attention by showing an increase in test scores.

Especially with the pandemic, many schools and universities have been paying attention to online learning platforms, but you really have to develop online learning platforms to use AI-distance schools. For example, in ASU, they use more than 140 digital tools and assisted AI technology. This is an example of High Touch High Tech. But high tech cannot stand alone. We really need teachers

to adapt and adjust to the new environment where AI can help teachers in content knowledge, so that they can focus more on higher-order learning, experiential learning, and so forth.

K-Edu: New developments in Korea's education system

K-Pop is an example of High Touch High Tech in the cultural sector. One of the reasons why BTS has made a very huge positive influence globally is because they actively utilize digital communication platforms like YouTube, where they share their personal connection, songs, and sentiments with the young generation.

We have been having a big debate within South Korea whether education in Korea can also become like K-Pop, providing positive influence globally. The reason why we are discussing this is because Korea could become a good example of investing in human capital, which could become a key factor in the success of the economy and the political environment.

Korea's education sector has rapidly developed and democratized. Increase in enrollment was very rapid, with focus on progressive universalism.

Moreover, the country's best students enter the teaching profession: the top five aspire to become teachers. For the young generation, they want to become teachers ahead of doctors and lawyers because teaching is a very respected job with very good payment.

How can we turn this potential into opportunities? I would like to suggest three strategies of K-Edu—and maybe this can also be applied in other countries like the Philippines. I want to discuss three ways to harness the power of AI in education.

The first step is to **set up AI in education by opening up internally to private companies**. If you really want to embrace AI technology in education, you first have to open the doors to private companies. Korea used to close its doors to private companies for schools. In return, many schools and universities did not really want to purchase high-tech products. Rather, they wanted to order public institutions to provide the required technology. Yet, the private sector is more active in innovation, especially in AI technology in education.

The second step involves **opening up externally**. This High Touch High Tech education change should be applied to everyone in the global community. We really have to share experiences and learn from each other. As a major strategy, you really have to nurture an ecosystem of education and innovation, where globally competent companies are emerging and expanding globally. This should be done in collaboration with education pioneers in applying, evaluating, and creating High Touch High Tech solutions, as well as making them collaborate with schools, teachers, professors, and universities. We do not need a very heavy ecosystem where you can expect innovation in learning solutions and technologies every day.

The second strategy is turning crisis into opportunity. The COVID-19 pandemic has made the education sector reconfigure education. Ironically, this is a really valuable moment.

One of the reasons why we think Korea could become a leader in this area is because Korea achieved a top performance in the old education learning system. We put huge emphasis on the test-taking business and making teachers push students to improve their test scores. But there was also a sharply rising discontent. Students were not happy in school. Teachers had low self-efficacy despite the high salary. This really made Korea rethink education and become more open to new ways of learning and teaching.

The COVID-19 pandemic has provided a momentum for this kind of change. As I said, Korea used to close its doors, especially to remote learning tools and opportunities. But it opened up

after the pandemic. The Google Classroom, for example, had never been allowed to be used in the classroom in Korea before, but after the pandemic, everything changed. After the use of these tools, there has been an important change in the mindset of teachers. They have shown a high satisfaction with these tools, and they even said that they would use remote learning in the future.

Maybe, without the pandemic, we could not have expected to see this high response rate, high level of appreciation, and support for further use of remote learning. The pandemic gave good teachers the opportunity to experience these technologies and change their mindset by embracing them.

The third step is to **gradually implement fundamental change**. When I was a minister, I was not really ambitious to make this fundamental change. I did not know about these new technologies, or how they could really impact education. But now I have come to believe that we really have to go for fundamental change rather than incremental change.

However, it should be done step by step, just like a start-up community that starts small and then scales up smartly. We should also think about the gradual implementation of fundamental change.

Progress in the area

I want to share the High Touch High Tech Initiatives of Education Commission Asia. I was the Minister of Education, Science, and Technology from 2010 to 2013. From 2015, I was invited by the Global Education Commission as a commissioner. They saw my experience with working for the global community. I helped establish a new institution, Education Commission Asia, and the High Touch High Tech Initiatives for many in this area.

The first one is the High Touch High Tech consortium for universities. I asked university presidents to join forces and work together to introduce AI tutors in their courses, like what ASU has been doing for the past 10 years.

Education Commission Asia provided the platform. On one side, you can invite university innovators, so we invited 15 universities to form a consortium. On the other side, we invited the edu-tech companies that are able to provide services. We invited global companies like McGraw-Hill, CENGAGE, Pearson, and Wiley. At the same time, we also tried to nurture Korean companies. While they are not nearly as globally effective yet, the Korean company called Riiid provides very good AI-assisted personalized learning in English. We invited both domestic and global companies to work with Korean university innovators to design High Touch High Tech curriculums.

The Education Commission Asia helped develop and distribute AI-led education, offer training and seminars for university faculty members, host forums to create an atmosphere of university education innovation, devise measures to motivate participating faculty members, and support the selection and operation of pilot programs for personalized learning.

For the companies, we provide testing opportunities with universities, so that they can test their AI tutor software for Korean students. We also provide universities an opportunity to learn from each other and also from experts (e.g., we invited experts from ASU to share their experience in High Touch High Tech education).

We started in 15 universities last month and this gained momentum. We have an additional 15 university members this month.

The second program is the K-12 program focusing on disadvantaged kids. First, we experimented with High Touch High Tech with North Korean defectors. Because they escaped from North Korea, their level of learning has been really diverse. Implementing the typical Korean

education is really not easy. We discovered that this AI tutor has been effective in teaching North Korean defectors.

We likewise have many multicultural students whose parents came from the Philippines, Viet Nam, and other Asian countries. They have problems with basic courses. We have addressed this through the High Touch High Tech program, with funding from other foundations that are interested in multicultural student learning.

We are really trying hard to benefit low-income students. Even the Gangnam area has many students from low-income families, so we provide AI learning devices and mentoring services for those children. We work with the local city government. Daegu City has started a similar program for nearly 1,000 students.

Lastly, High Touch High Tech can also go global. An example is the interesting prototype project for Viet Nam, funded by the Vietnamese Ministry of Education and Training and the UK's Department for International Development. Experts from ASU and McGraw-Hill came to Hanoi and Ho Chi Minh City to provide training programs for Vietnamese teachers, so that they can deliver High Touch High Tech learning experience for these prototype schools (i.e., two in Hanoi and two in Ho Chi Minh City).

The impact was impressive. The test showed that the students improved their score by 0.436 standard deviation, equivalent to two years of learning. More importantly, the students who were left behind showed much bigger improvement through High Touch High Tech learning. Now, Education Commission Asia plans to carry out a feasibility study after the very successful prototype project. We were in talks with the Asian Development Bank earlier this year to expand this project, and we are in collaboration now.

As a final example, I want to talk about High Touch High Tech Uruguay. Uruguay is one of the advanced countries in distance learning in Latin America, so we have co-designed the High Touch High Tech program for Uruguay teachers—more than 100 teachers in 30 schools teaching 2,500 students.

To summarize, we have not had a very long period in designing and implementing all these interesting projects for higher education and K-12, involving underprivileged students and global students. But I have a very big aspiration that while our experience is relatively short, we can share this experience globally. This is something we can work with Philippine leaders, so we can make a fundamental change for the next generation.

Presentation 2

Building a Digital Public: Public Interest Technology, Data, and Trust

Sean McDonald | Co-Founder, Digital Public | Chief Executive Officer, FrontlineSMS | Senior Fellow, Center for International Governance Innovation

I started a lot of this coming from an organization called FrontlineSMS, where what we do is build technology for humanitarian response and public service. We have, in a lot of ways, worked on the other end of the technology spectrum (i.e., from the previous speaker), in a sense that we have worked with very low tech and, often, in very last-mile type of circumstances.

That work led me to start exploring contact tracing in response to the Ebola epidemic. Some of you may recall there were a significant number of calls to use mobile phone data and Big Data to do contract tracing during that response effort. After a significant amount of research, we found that those approaches fundamentally were not effective. They were not effective not because the data was especially bad, but because data was not able to capture the things that underpinned Ebola transmission.

In the last five years, I have been looking at how we both ensure quality in the way that we build technologies during disasters, as well as—more broadly—how we roll out public and public-interest technology. With COVID-19 and the global response and, in many ways, the global digital response, we have seen a significant amount of the development effort going into technology and technology-led responses. Again, contact tracing has become a key part of that.

Learning from the Ebola crisis

It is valuable to remember that we are seeing quite a number of different ways that narratives around contact tracing are presented.

When we think about what it is that COVID-19 has taught us about the process of developing technologies in response to it, I want to share a few of the lessons that emerged from the Ebola experience, which very relevant to the global process.

One of them is about validation. Fundamentally, the technology industry, generally, and most governments, specifically, do not have a very strong infrastructure for evaluating whether or not technologies not only work—in the sense that they perform the technological functions that they espouse to—but also if they have a meaningful impact in solving the problem that the technology is being deployed to solve.

One of the things we often forget when we talk about contact-tracing apps is that the goal is

not a successful app deployment per se. The goal is a successful public health response. We found that even in places where adoption has been very high (e.g., 40% of Icelanders have adopted one form of contact-tracing app or another), it has not proved to be a meaningful intervention or a meaningful addition to the public health response.

One of the most important things to remember when we are talking about public-interest technology, whether about education or disaster response or any other sectors, is that we need a strong validation infrastructure to do not only quality assurance testing but also comparative and contextual testing to ensure that the technology helps solve the larger problem.

The second is the quality of the deployment to an extent. One of the things that we have learned from the COVID-19 response is that for it to be effective, we need the COVID-19 response efforts to reach as many people as possible, if not everybody. A lot of the technology platforms that we use are fragmented; some people use Android, which means a million different things, while others use different software systems.

There are several different factors that go into how easy it is to roll out new technology solutions on platforms that reach everybody. One of the things that is historic about the private sector response was that Google and Apple, as dominant players, joined forces for this intervention—for this protocol. Yet, underlying that, they were not able to reach a significant number of people.

And, of course, technology is not a standalone solution. We have to recognize that each time we deploy technology into the world, we are also deploying into context and power relationships and concerns that people have around the technology. In a lot of instances, we have to recognize the fact that law enforcement will play a role in the way that we approach big public-interest initiatives, particularly those administered by and through technology. And that kind of law enforcement may not pay the same amount of attention to the technical details or technological nuances as we do when we are developing algorithms and assigning and analyzing data structures.

Moreover, there are all kinds of commercial linkages in the system. There are several ways in which it is difficult for people in technology to trust the integrity of the systems—that commercial providers will not take information collected by them, repurpose it, and resell it. This sounds like a dire thing, but it has certainly happened, not only with companies, but also with the humanitarian organizations designed to solve these problems.

To top it all off, there are political problems where governments or the appearance of governments are used to target political ends.

All of these factors are tremendously influential in the minds of people who are experiencing emergency as cost-benefit factors for whether or not it is a good thing for them to adopt public technologies.

Trusting the technology

Oftentimes, we try and calculate, program, or code trust—or we build things that are so sophisticated that they seem like they deserve trust. But, in a lot of instances, trust issues are significantly larger than the technology itself. When the public is not brought along with advances in these approaches, and when education and the transparency and the accountability do not accompany public technology initiatives, typically, they can actively harm response efforts.

Some of you may have heard of Edelman, a firm that annually surveys people's trust in sectors. What they have found is that trust issues in technology cause incremental change in how people feel about different sectors. It is worthwhile to say that technology is not just a factor, it becomes an interface, an intermediary in the way people experience different services.

But it also becomes a surface and a channel through which public officials may delegitimize or damage the effectiveness of public programs. I am sure you have seen, in one way or another, that the United States has the most severe version of the COVID-19 outbreak in the world. It is no small fact that we have very low participation in public efforts. Some of that come from the fact that public officials are messaging in ways that are counterproductive.

We have technology that is amplifying trust issues, and we also have technology that is amplifying damaging messaging. An example is a study where they found that there is a correlation between people's news sources and their likelihood of getting infected by COVID-19 or dying from COVID-19 in different populations in the United States.

Hence, thinking about the public messaging footprint and the relationship that different technological and public initiatives have is extremely important not only in the design of the technology, but also in the way that that technology is introduced and explained back to the public.

Too often, what we only do when we evaluate technologies is, we look at whether or not it does the technological thing: whether or not it sends the text message, automates the process, or runs the algorithm. But, unfortunately, contextual factors very often overwhelm the importance of any specific technological feature.

Contact tracing as fundamentally political

Said more bluntly, contact-tracing apps, like many public-interest technologies, are fundamentally political. They are not only political in a way that people respond to them, but they are increasingly political in the way that they are required and deployed in a growing range of settings. Our natural risk aversion and, often, commodification of risks—the way we use things like insurance to manage risks—start to encourage us to adopt things like contract-tracing apps even before the science is clear enough to be sure that it is adding any real value.

This is not just happening in any one place. We are starting to see a range of institutions making technology compulsory. The legal justification for this and the policy justification for this are interesting. But rather than getting terribly into them, this adoption and compulsion are relatively inevitable once we start putting them into production.

It is important to recognize that contact tracing is a process that is trying to be linked to care. Analogue or nontechnological contact tracing is designed to help connect people to healthcare systems and testing. When you are reached by a contact tracer, you are talking to a person. But when you get a notification from an app, where you deal with a technology interface, it is much harder to have the kind of basic conversations that you want, or receive the reassurances that you need. You do not receive any connection to care.

Most importantly, if someone tells you that you have a disease or the likelihood of a disease, which you know is not true, and then you get referred to customer service, as opposed to someone who can help you, this may affect your job or your mobility, which are all very real issues.

Customer service is so often governed by terms of service, perhaps, the least read document on the Internet. But they are, unfortunately, where a lot of major governance decisions are made, and a lot of people do not have the time to learn how those terms affect their rights. Fundamentally, reading a long contract that tells you that you do not have a lot of rights or resources is not a great use of anybody's time anyway. So, there is a growing perception in the majority of people who worry that technology is out of control. Both the

people and the institutions who could or should be reining them are not doing it effectively. As we adapt and increase the amount of technology that we put into our fundamental public systems, we are really seeing a trust and adoption blowback.

Not only are we seeing lack and diminution in trust and decrease in overall perceptions of these institutions, but we are also seeing in them a lack of fundamental honesty. In other words, the effects of digitization are, in some ways, raising concerns about the underlying transparency of institutions. That is, of course, not the goal of any digital transformation. It is, in fact, not endemic or necessary at all.

Experimentation and innovation

From my perspective, this starts back at how we acknowledge what we do with experimentation and innovation. A lot of us have seen that important ethics and trials have driven things like the fundamental architecture of biomedical ethics. Biomedical ethics came from elements during the Nuremberg trial, after World War II, and then fleshed out a much more robust practice from the Belmont Report.

Fundamentally, experimentation ethics tries to ensure that when we ask people to take risks, those risks are calculated based on science and values, and the experimentation setting provides a higher level of protection for patient's awareness and ability to leave. Those basic principles are now implicit in the way that we govern biomedical experiments. But they are not implicit in the way that we develop technologies or the way that we talk about innovation.

In a lot of ways, that also made science and innovation—and, consequently, experimentation conversations—very political. We are starting to see quite dangerous political influence affecting the rollout not only of technology products but also of science and the way we conduct research in really critical times.

One of the things that we have all experienced in different ways, and are certainly seeing play out across the world, is that expert systems—and science is no different—are increasingly recognizing their need to be able to cope not only with intra-organizational or intra-industrial politics but also with resistance and independence to externally created politics and political pressures.

This is a very high-level set of differences between the way experimental ethics and the law treat research settings versus the way they treat applied clinical practice. I think that the valuable thing to recognize here is that when we roll out new technology, whether it is in public institutions or in response to disasters, we are fundamentally rolling out experimental work or what would historically happen in research contexts, in practice.

That is not totally new. We have the infrastructure to do this. Medicine does this with vaccine trials quite regularly. The world, in response to the COVID-19, has done some of the most inspiring vaccine initial research coordination work in modern public health. But there are these accountability infrastructures; the governance infrastructures are not just broadly stated principles. They are not buried in contracts. The things that make that kind of experimentation and go-to-market process ethical and viable in a public way are all of these infrastructures that create real accountability for bad science, negative impacts, and a range of other harms.

The real argument or question is: what does the infrastructure for public-interest technology look like? This question is what brought me to Data Trust.

Data Trust

Trust is a broadly used term. The legal form of a trust originated from common law, but it has a lot of analogies in different kinds of law. It is a legal tool that enables one person to oversee the rights or the property of another person. It creates

a fiduciary duty, which is a legally enforceable duty of accountability to the people whose rights and assets you are managing.

Data Trusts have the same construction, same relationship, same assignment of authority as experimentation ethics—but applied to digital rights. The goal here is that, in many of our contexts, around data and digital rights, we just fundamentally do not have the tools for enforcement. There are all kinds of ways that we can build those infrastructures but relying on a perfect solution is not how experimentation works.

Data Trusts can also be used to create continuity and sustainability to ensure that if a project goes bankrupt or bust, then that data still cannot be used to harm the interests of the people who participated initially.

Data Trusts are also ways to start creating governance, so you can involve the diversity of people who are affected by a program in designing it and in influencing how the data in that system, or the technology underlying it, develop over time.

This may sound theoretical or conceptual, but there are a number of critical data rights issues already hurtling through the headlines and a number of public policy debates. There are, as a result, already a number of Data Trusts that deployed to manage these issues.

One example is Johns Hopkins Medicine, which uses Data Trust to broker the data between its clinical care contexts and applied research. This ethical layer enables them to ensure they apply all the highest standards and legal requirements, so the data is not misused or overused.

Similarly, a group called Open Corporates maintains the largest registry of beneficial ownership data in the world. They were concerned that after all this work, if they were to become financially insolvent, the world would lose this important database. So, they put it in a trust. Now, even if their core organization becomes compromised or has to close, this core data asset becomes a public good that will outlive them.

Similarly, there are a number of political conversations that are happening both in data and in the administration of management of digital platforms. A number of important movements believe that having possession and ownership of their data, as well as having control over the fundamental rights embodied in their data, is a critical part of their ability to participate in communities. They are using Data Trusts to organize that governance and that representation.

In some ways, on the other side of the pond, Facebook itself has recently announced a Trust and Safety Oversight Board. When you look at how legally it is organized, it is, in fact, a Data Trust.

There are a number of reasons that one might consider using Trusts. My goal here is not to suggest that it is the perfect solution to every problem. But it is unique in that it is something we and many different legal jurisdictions around the world are able to build and start thinking in terms of (1) what are the things that we need digital systems to do; (2) what are the things that we need technologies to accomplish; and (3) who needs to be at the table not only to ensure that they are well designed and that we have avoided the largest potential harms prior to deployment but also to ensure that their ongoing management and use benefits the people that they were originally designed to benefit.

Data Trusts become a very flexible form-fit tool to build this.

For instance, we recently helped the World Health Organization to navigate quite a bit of the political challenges associated with being the holder of a global perspective on health on something as dangerous as COVID-19. Tensions between powers have created and illustrated the importance of being able to govern data in a way that is independent and credible in the face of political contexts.

We have also worked with an organization called MEEDAN, which has been helping the service infrastructure around WhatsApp

fact-checking. WhatsApp obviously has enormous misinformation problems, and they are looking to external organization and civil society groups to help understand how to flag and monitor that kind of traffic. That work has also been really interesting from a research and governance perspective.

Many of you are government officials. The United States, quite like your organizations, is trying to figure out how they regulate their own public institutions going through digital transformations. We have worked to help the National Oceanic Atmospheric Administration to start building private relationships with industry, with fishermen. They are not just based on a compliance mandate but on a mutual interest in conservation and fisheries management.

Lastly and, perhaps most importantly, Trusts are built because they recognize that power asymmetries exist. Those power asymmetries may often be the most dramatic for people who are unable to represent their own interests. Of course, children are one example of that in digital settings. So, we are helping the United Nations Children's Fund figure out how to talk about ways that digital systems can proactively design governance for children's rights, or to protect the rights of those who are least advantaged.

When we have historically thought about deploying technology, we have done it from a purely functional and infrastructural lens. What we are finding particularly in response to major social issues and major epidemics and pandemics that affect us all is that public trust, public education, public engagement, and the ability for the public to credibly understand and enforce their rights in these systems are critical for ensuring their success.

Reaction 1

Raymund Liboro | Commissioner and Chairman, National Privacy Commission

Thank you to all the guests of PIDS. It is always a pleasure guesting here at your annual conference. I have also used this annual conference as a platform for introducing some of our policy initiatives and recommendations. I remember, two years ago, this is also the venue where we introduced our regulatory approach in data privacy. We introduced the Constructive Stakeholder Engagement and Responsive Regulation Protection and Privacy.

Let me also congratulate our previous speaker, Sean McDonald, for your very compelling presentation, as well as Professor Jun-ho Lee for touching on a very timely topic about education amid the pandemic.

So, let me just share with you some of my insights coming into this webinar.

Let me first discuss the Data Privacy Act (DPA) and the Philippine COVID-19 Response. The second part of my presentation will focus on the Philippine Responsive Data Initiative. This is purely conceptual, but if you are interested in this initiative, I would be more than willing to let you take the cudgels on this one.

Public health versus data

This pandemic has created a lot of debate and discourse. For most people, it has been framed as public health versus data, which I really feel is a false dilemma. We firmly believe that data privacy and public health should be on the same side, as we have witnessed what happened in the country. Everyone is familiar with what COVID-19 has caused; people with COVID-19 are being discriminated against and stigmatized—primarily because they are being identified.

There has always been this question of whether we should be announcing the names of those that have been infected by COVID-19 to effect better contact tracing.

But, recently, I just came across the news that months after COVID-19 infections, patients report breathing difficulty and excessive fatigue. This means that for those who have suffered from the disease, the effects are lingering. Just imagine that if you have identified those who have been infected, they could possibly be subjected to discrimination—to be discriminated from work.

I am showing these concrete examples because this has been our journey in the COVID-19 response. We have always toyed with so many ideas on how we can defeat this. But our concern, basically, is not just data misuse but also data misused that we are not fully able to maximize the beneficial use of personal data.

Data privacy is about maximizing the beneficial use of personal data while mitigating risks to prevent harm. There should be a free

flow of information to help defeat the pandemic. It has been said that data will be key in defeating COVID-19—this is actually my own quote. The Spanish flu has been mentioned many times, but we have a better chance really because of these factors: technology and data. But our recent experience in the country has put focus on Philippine data governance, and exposed the gaps in overall data management, costing missed opportunities for the beneficiaries of data. That is really the task of the presenters earlier, especially Mr. Sean McDonald.

The DPA and the National Privacy Commission (NPC) are here to ensure that we uphold the data of our subjects right and pave the way for free flow of information.

How does the DPA contribute to defeating COVID-19? It enables widespread trust, which Mr. Sean McDonald touched on at the tail-end of his presentation. It is really about trust in the government and business responses to address the pandemic and defeat COVID-19. I particularly liked his segue on how technology has been foisted on the government, and this is happening across the globe.

We are here to enable widespread trust in everything that we are doing as a government, and also in the business response. We ensure widespread trust is promoted by reminding government and business of their responsibilities and obligations as stewards of the citizens' data. Again, this is very relevant, especially in contact tracing. We remind them that they should be transparent, that they are lawful and legitimate in their purpose, that they balance public safety and citizens' rights, and that their actions are science- and evidence-based. These are the basic questions we ask the government and businesses in responding to COVID-19.

We also ensure that widespread trust is promoted by reminding them, as heavy information controllers, to secure personal data, to prevent its misuse and abuse, and to uphold citizens' rights over their data. How is this going to be used and shared? Can citizens have access to their data? How can they raise concerns over its use?

Having said all of this, how do we actually remind our stakeholders? We do this through advice, information, dialogue, and support. We have issued 18 different types of guidance, ranging from guidance for establishment on the proper handling of customer information to COVID-related apps. I invite everyone to check our website (https://www.privacy.gov.ph/); we have guidance on work-from-home arrangements as well.

Aside from that, we have also partnered with government agencies like the Department of Health in sandboxing several initiatives and approaches, like the use of telemedicine.

Digital data in government

Let me jump now to the second part. Some of you may have missed this statement from the President: "We must continue to protect the Filipinos in the new normal and remind the world that we are responsible stewards of data. I am committed to protecting the physical and digital lives of our law-abiding countrymen."

Let us focus on the digital data in government. Government digitization transforms the government through the following: enhancing access to public services, streamlining new operations, creating new governance models, and enhancing the citizen experience. Digitization is also a strategic mindset, as it requires a holistic view and comprehensive action that will enable everyone to exploit opportunities involving data.

We have several digitization programs already ongoing for the Department of Information and Communications Technology (DICT): the Third Telco Project, which is actually a major digitization project; the Free WiFi for all; the National Broadband Plan; and the Anti-Red Tape Act (ARTA). The DICT recently

initiated a memorandum calling for nationwide automation of government services. Various government agencies have also embarked on their digitization programs.

The Philippine Responsive Data Initiative is the digitization of all government data to improve data quality, so we can undertake data analytics. The principle of Digital First and Digitally Enabled Privacy and Security by Design is designing our services through policy development to enable service delivery. But, more importantly, it builds data resilience by introducing Privacy by Design in the design of digital operations and ensures there is an appropriate impact assessment to minimize privacy risks. Third is to digitally enable frontline services to ensure that tools needed are actually available for all the Filipinos.

Our objectives should be, first, for all government digital data to be accurate and precise, legitimate and valid, reliable and consistent, timely and relevant, and complete and comprehensive for data to be available and accessible, granular and unique, lasting, and secure and trusted.

The NPC has also involved itself in this regard. We have been very active in calling for participation in the digital data governance framework, particularly in the Association of Southeast Asian Nations (ASEAN). The ASEAN has initiated the ASEAN Digital Governance Framework, which stemmed from the realization that cross-border data flow will only increase in the coming years through the introduction of all these technologies. They see the framework to really balance consumer protection and practical business- and information-sharing needs. The initiatives for the framework include the ASEAN Classification Framework, the ASEAN Cross-Border Data Flow Management and Digital Innovation Forum, and the ASEAN Data Protection Privacy Forum, which will be chaired by the Philippines in its introduction.

In the first quarter of 2021, the Digital Ministers will be convening and, if plans do not miscarry, they will approve the ASEAN Digital Data Governance Framework, which will apply to all ASEAN member-states.

With that, it is really about the Philippines now plunging into serious data governance, data management, and data analytics. Data governance is about establishing the rights on government digital data. Who decides on it (i.e., the ultimate goal to determine a holistic way and to manage and control our data assets)? How to manage data (i.e., acquiring, 'qualitating', storing, and protecting data)? If you will ask me, data management is the logistics of data, and data governance is the strategy of data. Finally, how can we come up with actionable and useful information from all these data (i.e., data analysis)?

Data privacy is all about maximizing the beneficial use of personal data while mitigating the risk. The challenges include upgrading the digital skills and competencies of government. There might be resistance to implement the change. We need the support of Congress. We have to review and assess, and come together and launch our own digital data governance framework.

Thank you.

Reaction 2

Ronald Mendoza | Dean and Professor, Ateneo School of Government

Thank you for the opportunity to share some thoughts on the topic for today, which is Innovations for Connectivity Trust and Inclusion. My presentation is part of our ongoing monitoring and research on the COVID-19 pandemic, and it is a pleasure to be part of this PIDS forum.

I just wanted to share some emerging evidence on what seems to work well in other countries, and the idea here is to try and extract those elements that may be useful for the Philippines in terms of policymaking, building back better, and strengthening our systems for our crisis response to this pandemic, as well as to future risks.

One example is Taiwan, which is well known and recognized for its near 100-percent health insurance access. It is seen as one of the countries with a strong response to COVID-19. And probably one of the reasons for this is because even prior to COVID-19, Taiwan already had a strong and inclusive healthcare system. The Taiwanese have strong trust and inclusion in this system, and it gives their public sector a lot of flexibility in terms of the collective action response for the pandemic.

The second example is Thailand. From the emerging evidence on what works in this country, Thailand seems to be one of the countries that has done relatively well in terms of containing COVID-19 and "flattening the curve". The emerging analysis is that Thailand had a very strong and inclusive social protection system and healthcare system. They also had a very good track record of public-private partnerships working with civil society organizations (CSOs), particularly grassroots public health activists, who then were instrumental in their COVID-19 response. These partnerships with CSOs appear to be one of the other ingredients. Having an inclusive social insurance system and healthcare system, and having a long track record of public-private partnerships definitely provides the public sector a stronger platform for crisis response.

Viet Nam is the third example. It is noteworthy because Viet Nam is relatively comparable to the Philippines in levels of income and capabilities to respond to COVID-19.

Viet Nam seems to have fared well despite its being very, very proximate to the disease's epicenter, which is China.

Among the well-noted steps that Viet Nam took were early decisions in terms of response and mobility restrictions, cutting off travel ties with some of the countries at high risk, in particular, China. Then, they created a system of communications whereby the citizens

have a lot of trust in the public sector and were voluntarily sharing personal health information in a government-launched program called NCOVI. It emphasizes that Viet Nam has a system of capturing information while still protecting the rights and privacy of their citizens; that this information can better respond to the crisis and inform their policies in an evidence-based way; and that they can be much more effective.

Viet Nam also has been able to tap its citizens in the form of collective action to provide the relevant information for crisis response. In particular, it turned to very strong online messaging to trigger collective action by citizens in support of the government's response to COVID-19.

Finally, there is the example of South Korea, which is seen by many as one of the countries with a very strong test, trace, and treat system.

When you look at the background of South Korea, it had relatively weak responses to MERS-CoV and SARS.

South Korea has learned from these previous challenges and built the relevant systems to prepare it better for the next pandemic, which it knew was sure to come.

Of course, that served as the starting point for South Korea when COVID-19 broke out. It was much better prepared to respond to the present pandemic that we are experiencing now.

One of the key elements of the South Korean response is its very strong test, trace, and treat system. It has a very credible and strong mass testing system and contact-tracing system, which are also seen as a standard for many countries to learn from.

Then, it also has built into its healthcare system the capability to rapidly realign its surge capacity so that in case you have challenges like what COVID-19 posed, the healthcare system has the absorptive capacity to respond adequately.

Collective action versus populism

Since you asked about potential constraints, I will very candidly outline some of the main constraints for countries like the Philippines, which may have populist tendencies, and, of course, I am alluding now to governance. Innovation and technology is one thing. However, the political, social, and economic environment will shape to what extent these innovations and technologies will be effective and will be adequately provided and supplied.

My argument here is that you have an ideal, which is collective action by well-informed citizens, but you also have the reality for many countries with populist tendencies. I am going to juxtapose one form of management against another to emphasize the point that it is going to be a governance constraint, not a technological constraint, for many countries. I would posit that that is the case for the Philippines.

In collective action, you want an emphasis on social cohesion. In populism, you actually have very divisive rhetoric, which is the complete opposite. So, if you want to build a strong collective response, that is not what populists deliver in terms of management.

What you want in a strong collective action is expertise and evidence, the science, the medicine—the medical expertise as far as pandemic response is concerned. But under populism, what you have is an anticomplexity bias, an oversimplification bias, and, of course, the observation by many that populism thrives in an almost "post-truth world", where there is not necessarily a respect for expertise and evidence, and almost always an oversimplification of complex issues and an adherence to shortcuts. In its worst cases, there is even an active denial of evidence and medical facts.

In collective action, you want trust building for voluntary behavioral change, and effective

collective action at the individual and community levels. In populism, there tends to be a bias toward more coercive approaches. It is not necessarily voluntary. It is based on punitive approaches.

There is the risk of high degrees of misinformation, which is, again, anathema to well-informed individual behavioral changes that could help produce what should be more effective collective action. So, the conditions that populists thrive in—and maybe even contribute to—are not necessarily conducive to the type of trust building for voluntary behavioral change in effective collective action.

There is also this issue of respect for individual rights, which is probably what feeds into high levels of trust under ideal scenarios of collective action. But in populism, what you sometimes have is the use of the common good argument in trampling rights. This is unfortunate, of course, as we have seen this in many other contexts.

The Philippines' anti-drug war is one example, as well as the recent anti-oligarch rhetoric, and also some efforts to level the playing field while also eroding institutions and the rule of law. This is part of the populist style that is not necessarily respectful of individual rights and rule of law.

Collective action is based on systems-based solutions and institutional reforms to sustain more effective responses not just in the present pandemic but also building toward future responses to other types of risks and crises, including future pandemics. But populism is sometimes based on the "ends justifies the means" type of approaches and extra-legal approaches, which do not necessarily strengthen institutions. This makes the overall effect more ambiguous.

In a nutshell, these are what I see as governance constraints to more effectively generating the innovations and technologies that will be underpinned by trust in a more effective collection scenario.

An inclusive COVID-19 recovery

Let me end on a more positive note—focusing on the key elements that countries like the Philippines can build on to facilitate a more inclusive recovery from COVID-19, as well as from the economic slowdown.

The first element that we are seeing from international evidence is the use of technology. It can be for rapid testing, apps for tracking, real-time information sharing, and telemedicine. More broadly, technology can help create the platforms for inclusion in the types of information technology that we are now seeing as useful and critical in the new normal. In fact, I would propose that maybe COVID-19 will trigger new national discussions on access to the Internet as a national public good. Essentially, given the means to access the Internet and to interconnect, you will actually have a more adaptive and resilient society to these types of shocks—and certainly to the shock that we are now experiencing in the world. Students and educators, workers, medical practitioners, and most businesses (notably small businesses) that are better interconnected could help make our society and economy much more resilient.

The second bucket has to do with trust building, which you need for compliance, such as mobility restrictions, lockdowns, and quarantines. It involves the willingness to share information and the confidence to know that your privacy and your rights will actually be respected, even as the aggregate information becomes more useful for more effective business strategy, more effective policy responses, and collective action. So, you give up some degree of privacy for the common good.

On the other hand, you need to balance that with some institutional innovations to protect the rights of citizens. Of course, this contributes to a stronger environment of trust and social cohesion, which is also underpinned by an environment of

no discrimination. These are the elements of an environment that populism is not known for. This suggests that to have these types of innovations and institutions, there has to be some governance innovation and progress.

Finally, I would suggest transformation of the brick and mortar of the healthcare system and maybe even the social protection system, as well as some parts of the education system and other types of human interaction. As you are transitioning into the new normal, there could be innovations and reforms that will tend to stick even in a post-COVID-19 world. Even if we do receive the vaccine at some point and some degree of normalcy returned, many of the innovations we introduce during this period may stick—because of their effectiveness, because of their increased inclusion, and because they make us much more resilient to future shocks.

I would emphasize the issue of inclusion as my last point. Because, as far as we see, the pandemic and the global economic recession that it triggered may have a very un-equalizing effect across societies, and also within societies. It will be critical for our policy responses, as well as for our innovations and technologies, to focus on this element of inclusion, as it will be critical in facilitating a much more robust recovery and the right type of governance that will support that recovery and build resilience in the long run.

Thank you very much for the chance to share these inputs.

Reaction 3

Aiken Larisa Serzo | Consultant, Technology Law and Policy Program, University of the Philippines Law Center | Senior Associate, Disini Law Office

Thank you to PIDS for organizing this and inviting me to participate in this panel. The context behind my presentation would be my experience as a consultant for the UP Law Center, and as a technology (tech) lawyer who has been focusing on assisting tech clients, mostly start-ups, as well as traditional companies who want to implement their digital transformation initiatives.

The main thesis of this short presentation would be the regulatory landscape in the Philippines, and how it needs to transform into one that is able to support systems that will enable economic activity during public crises, such as COVID-19.

Navigating regulatory puzzles

As I said, we have been assisting companies during their digital transformation efforts. As a tech lawyer, it is a generally exciting space to work in due to the continuous developments in the legal landscape. However, that also means that I have become very familiar with the roadblocks that affect tech companies. Most of the time, it is usually a matter of navigating the regulatory puzzle in the Philippines.

Lately, however, the regulators have been very progressive. A lot of amendments have happened and are underway to support greater digitization efforts.

Just to share a short story on how regulations usually look like in the Philippines: Around 2015 or 2016, there was this one motorcycle delivery and motorcycle taxi company that wanted to get licensed in the Philippines. As you know, usually, if you want to provide delivery services and transportation services in the Philippines, you go to the Land Transportation and Franchising Regulatory Board (LTFRB). When the company went to the LTFRB, the LTFRB said they had no jurisdictions to regulate motorcycles. They said the company would have to go to the respective local government unit (LGU), which regulates tricycles. But when we went to the LGUs, they said they could only regulate three-wheeled vehicles.

In effect, what we had was a regulatory/legal vacuum, in which no law could support the operations of motorcycle taxis.

However, in the past two years, we have seen the growth of companies like *Angkas* among other delivery services, which shows you how social licensing paved the way for regulatory amendments. That is how our day-to-day work looked like.

When the lockdown hit, as with other companies, we were worried about the possible slowdown in work activities, due to the movement restrictions and the other regulations that sought to control the spread of COVID-19.

But, surprisingly, on the first day of lockdown, we received a lot of inquiries on the simplest things regarding digital transactions. Examples include the legality of notarizing an electronically signed document, the legality of electronic notarization, and the possibility of submitting reports and compliance documents to government agencies electronically. We even had questions on the legality of digitizing the operations of a company (e.g., signing documents, executing electronic contracts, and so on).

Surprisingly, there was an increase in our work as technology lawyers, which highlights how crucial systems are when there is a public crisis.

Regulatory systems during the pandemic

The COVID-19 experience of the Philippines highlights the desire of business on operating—to keep on closing contracts and deals. Specifically, they wanted to continue doing business, where the continuity of activities was crucial: execution of contracts, cross-border trading, employing workers, making sure that you can still start a business and comply with all necessary regulations, and making sure that you can operate your education or your training program in a remote way.

There is obviously a need for systems—not limited to technological infrastructure—to enable all of these, such as regulatory systems to ensure the smooth and legal operations of networks, platforms, remote transactions, and borderless transactions.

What we have seen in other countries that is comparably lacking in the Philippines is the amount of investments that private companies have poured into their networks and their general telecommunications (telco) infrastructure. The main thrust of this paper is that one of the hurdles to greater investments into this infrastructure are the restrictions in the current regulations.

I have identified the important industries that should be supported during this COVID-19 crisis. They are online platforms, logistics, retail, telcos, and education providers. Regulations should ensure that these entities can proceed with their operations.

As most of you know, these industries are highly regulated in the Philippines. Each regulation comes with its own policy considerations. If you are in one of these industries and you want to scale, especially in the time of mobility restrictions, you need to be able to engage in borderless or remote transactions. I am not just talking about country or national borders. All of the activities mentioned above are actually subject to foreign equity regulation.

Online platforms, due to an interesting way that the regulations in this space evolved, are considered mass media. Thus, they are subject to 100-percent foreign equity restrictions—meaning, only Filipinos can have or operate an online platform. This includes entities like Facebook and YouTube, among others.

Logistics and telcos are considered public utilities, and thus restricted to 40-percent foreign equity. Retail is liberalized, meaning foreigners can enter the space, but they must comply with very

high amounts of capitalization. So, in the end, we only have one or two foreign retailers formally registered in the Philippines. The rest have partnered up with local partners.

Similarly, education is subject to a 60–40 restriction, making it difficult for foreign education and training providers to legally enter the Philippines.

Thinking about restrictions and how they impair the ability of a business to scale may not be straightforward. However, we have to remember that other tech companies in the Association of Southeast Asian Nations have access to various venture capitalists and investors that want to play in the region. Technically, by having restrictions in place, we are preventing our local start-ups from participating in that space and from getting capital that would allow them to compete and scale.

The current regulatory situation

We have noticed that our tech and network infrastructures are not as competitive as those in other countries. There are certain restrictions and incoherence in our regulatory environment—either there are outright bans or there are areas with no regulations, or there are overlapping regulations.

However, interestingly, the pandemic is speeding up the country's capacity for reform. We have seen that the things that were obstacles before are not really obstacles, and that banning entire business models is not workable. For example, it is not feasible for us to ban delivery services. It is also not feasible to ban Transport Network Vehicle Service operations, and even to make it difficult for online platforms to operate. This has been emphasized during the pandemic, with the government partnering up with fintech (financial technology) and tech companies to provide services.

During this pandemic as well, the Supreme Court has approved the legality of notarizing documents remotely. Several agencies, such as the Securities and Exchange Commission, Department of Trade and Industry (DTI), and *Bangko Sentral ng Pilipinas*, have allowed the electronic submissions of documents (specifically for the DTI, the electronic submissions of files).

Rethinking regulations

This pandemic highlights the need to rethink the Philippines' existing regulatory policies, especially regulations accepting tech companies. The existing regulations have largely been shaped by the country's COVID-19 experience. There is a need to protect the country's homegrown entities.

There is a presumption that platforms and foreign investments are inherently malicious. The pandemic has been an opportune time for these entities to show their true colors. However, as we have seen, networks and tech companies have proven critical to sustain economic activities. They have not caused any direct and obvious harm to the general public. They have shown that they can deliver service through the crisis and maintain quality, even with increased constraints.

Essentially, the COVID-19 experience in the Philippines could shape the view of policy to encourage the increase in investments from both

private entities and foreign investors to strengthen our networks and the capacity of our economy to be resilient in the event that a crisis similar to COVID-19 happens.

There is no one-size-fits-all in terms of regulatory strategy. It would depend on the policy thrusts of the government. It is important to take a whole-of-government approach, instead of letting each agency do their own thing.

This becomes possible with the passing of the Philippine Innovation Act last year, which encourages a whole-of-government approach when setting policies that affect innovation.

Secondly, it is not just about amending regulations but also about ensuring consistency and predictability in the application of regulations. It is about strengthening the systems.

Also, there is recognition that the ability of a regulatory agency to adapt and change and issue guidelines would also depend on the problem that they want to solve. For static industries, they may not be used to being as agile. However, for dynamic industries like finance and banking, they have been dealing with change since the ATM technology cropped up decades ago. They are still being agile as they have been.

To conclude, we are not saying that technology and technology alone should have a free hand. We recognize that there are dangers when it comes to regulation. However, policy considerations behind regulatory hurdles must be reconsidered. As I have said and as mentioned by other speakers, the government can definitely take the crisis as an opportunity to push for greater reforms.

Session 2 Open Forum

Question | Louise Abustan, Social Housing Finance Corporation: For Professor Lee, we see a variety of innovative pedagogical frameworks in your presentation. How would High Touch High Tech factor in the direction of the Philippines' education sector, which promotes the use of blended learning?

Answer | Jun-ho Lee: The question we just heard is quite interesting. After the pandemic hit, many educators understood the effectiveness of blended learning, online learning, and distance learning. Ideally, we want to emphasize that above all those new pedagogies, we have to pay attention to the great potential of AI-assisted personalized learning. It is different from using books, from distance classrooms, and from computer-aided learning.

What I have seen is the great potential of AI in providing personalized learning experience for all. So, it is really new, even in Korea. This is why I established the Education Commission Asia to introduce new concepts, a new framework, and a new mindset to embrace this new idea.

In the United States, it has already been utilized for at least five years. I have seen many model schools where they really embrace these AI-assisted personalized learning systems. I only talked about Arizona State University. What I want to say here is that this is a game changer that can bring fundamental change to the whole education sector in the global community. The question is, who will go first? Who will be able to make large-scale transformations?

Even in the United States, and even after five years of experimenting with this new model, the total number of schools deploying AI-assisted personalized learning is not more than 5 percent. Some say about 30 percent of schools already introduced software programs, but introducing software programs is different from combining them with innovative pedagogies. Maybe only under 5 percent of schools have real changes utilizing these systems.

In Korea, it is really new. Korea has been really leading in education in the traditional model. But our leaders and educators have been really hesitant to embrace this new model. Korea has been having trouble embracing those changes. But COVID-19 has made us realize the potential here. So, the Korean government initiated a new program in education, embracing AI technologies and new pedagogy in education.

I would really like to recommend it to the Philippine government to think about this new opportunity.

This has not been done in many countries, including the Philippines. This is different from using books, from distance classrooms, and from computer-aided learning. It is really based on AI, but not really based on AI-assisted personalized learning.

Question | Reggie Salonga: This follow-up question is somewhat related to what Atty. Serzo mentioned earlier regarding the limitations for tech companies entering the Philippines and fielding through the regulations. So, what were the challenges faced in Korea—because as your stint as education minister, you initiated the digitization of books. But since then, it has been a huge leap. There is also the concern of developing or exacerbating inequities because you also have a program for the poor in Korea, one of your seminal programs there. Could this exacerbate it? How can we prevent this from happening?

Answer | Jun-ho Lee: In Korea, we have a very strong regulatory system in education. We have allowed private companies to work with teachers before the pandemic. So, even in this initiative that I worked on as a minister, we usually work with public providers. We have public think tanks and public institutions to provide new technologies. I saw a much more innovative range of business and services provided by private vendors, even by global companies. You really have to open up the door to invite them to work with Korean education innovators and pioneers.

What I suggested to the Korean government is we really need to change the regulatory framework to allow private providers to work with educators. For example, Korean schools should provide a chance to test new experiments and new solutions utilizing AI in education. As some have already noted in this seminar, we really need to change the regulatory framework.

We also need a data policy. There has been a lot of data, but not a lot to be used by the private sector. We have to make learning data available for private companies. It has not been done yet. We have a big debate about how we can make private companies utilize those learning data, whether informal or formal (i.e., there has been a lot of data created from the practice of distanced learning). This is another public policy debate about how to transfer these learning systems by embracing AI technologies.

Question | Vicente Paqueo, PIDS: For Sean McDonald, your presentation is very timely because it deals with an issue raised by Prof. Mendoza regarding divisiveness. You and Panthea Lee from the first webinar mentioned that all over the world, divisiveness is being built in media and messaging. How do you build trust in such an environment where political interest and acquisition of power increasingly dominate the determination of what is truthful and what is rationally compelling?

Answer | Sean McDonald: It is a very easy and short question to answer. Honestly, whether it is the objectivity in media, or the expertise in public health, or the financial complexity in maximizations and derivatives, there are a number of places where complexity has taken the place of transparency. A lot of these institutions—and I say this as a trained journalist who has worked in many of these fields—are coming to grips with the fact that we all come with subjectivity, that expertise varies substantially by context, and the value thereof varies as well. So, from my perspective, I think transparency and being explicit about one's own limitations as approaches to dialogue are strong entry points. But like we have said in the chats, small bits of progress are collectively done, as described by Prof. Mendoza.

Question | Charlotte Justine Sicat: I personally have a follow-up question regarding that. You talked about data trust as a tool to build legally enforceable digital governance. You mentioned that we should define harms based on impact, not procedure. What is that exactly?

Answer | Sean Mcdonald: A lot of times, we look at harms as: Is the technology inherently dangerous? Or is the algorithm obviously bad or wrong? Where our duty is not to produce perfect algorithms as

public institutions, our duty is to provide fair and clear public services. Hence, the way that we want to frame the success of technology and the harm it can pose are in the ways that people are able or unable to access those public services. It is not, "is the technology perfect?" It would be great if it was, but that is not the underlying goal. The underlying goal is to increase learning, reduce disaster costs, and improve and maximize efficiency in a range of works. So, the follow-up there is that if we keep the indicators in the outcome and impact of these interventions and adopt technology in ways that drive those indicators, I think we would be on a much stronger course, than if we focused on technology-centered indicators.

Question | Aniceto Orbeta, PIDS: How can the promise of High-Tech High-Touch education not be drowned out by the concern that it can exacerbate societal inequities further?

Answer | Jun-ho Lee: That is really the pivotal issue. After the pandemic, many realized that education and equality had been exacerbated because there is only the option of online learning. If you really have good online learning, as I keep insisting, AI learning should be strengthened by AI-assisted personalized systems, which require good networks, good devices, good platforms, and good content. So, this whole package of education and resources is required for every student. This really requires a big mega project from the government to focus on the disadvantaged students. This could be a really big challenge for all the governments globally: how to reduce the gap in online learning.

I think that the gap will be exacerbated enormously after COVID-19. There is no effective option other than offering them AI-assisted personalized learning opportunities. We have very good private companies that are able to offer good networks, and private companies that can offer good physical devices. We have global companies providing platforms with good content. We really have to think about global collaborative mega projects to help students in developing countries and poor families. We really have to prioritize this initiative focusing on the underprivileged.

I emphasize that this should become the primary agenda for the World Bank and the Asian Development Bank. We rely too much on fragmented existence; we really have to have a focus. It is time to design mega projects. There was a project called One Laptop Per Child. It was in 2005. Fifteen years ago, MIT leaders suggested that we should ensure that every child should have one laptop at least. Now, after all the development of AI technologies and networks and so forth, why are we hesitant to design this bold global project that could address very important challenges?

Question | Gilberto Llanto, PIDS: For Dr. Mendoza, collective action, as we know, has a social dilemma aspect. How do you incentivize everybody to conform to these strict rules when compliance is at the cost of earning a daily living (e.g., drivers need to ply their jeepneys, vendors have to be out there)? The social divide is out there. The rich and middle class can more easily comply with the collective action required from everybody by the government.

Answer | Ronald Mendoza: I think that while the topic today is on technology and innovations, it really speaks to institutions and their social compact. We are talking about trust, and I cannot imagine trust without equity and inclusion. Why would you trust a system that would not include you? Why would you comply when you do not know where your meal will come from tonight, or whether your income will be preserved tomorrow?

There must be a number of institutional innovations that together build a comprehensive pact of trust for each and every citizen, and each and every community. Without those institutions, what

we are left with are relatively smaller mechanisms and technologies that do not really add up to the trust that we really want to see. That is what I think is the main challenge of governance.

I very much agree with Sean—in many contexts, it is less of a technology challenge. We have oodles of technology available to us. The challenge is governance and the institutions that generate trust. So, my answer is: you need social protection; you need social safety nets; you need a healthcare system that includes every single Filipino so that if they get sick, they can use that healthcare system and expect not to be discriminated against, not to be turned away, and not to wonder every time whether they have enough money to pay. It must all be there so that you have stronger health-seeking behavior and better health results and disease control.

Then you can expect trust from the citizens. I think the problem with the situation is that it is much easier to resort to punitive and coercive approaches if you know that the entire system is full of holes, in terms of institutions. So, I think that is the challenge and the dividing line between countries with strong collective action response to COVID-19 and those that resort instead to punitive and coercive actions. Because the latter know that they are weak and divided, they resort to forceful actions, instead of voluntary collective action.

Answer | Raymund Liboro: Just like Dean Ron, I, too, learned a lot from the speakers. Let me again raise a point centered on my presentation. Everyone is talking about technology and the infrastructure, but nobody is really focusing on the data. To build trust, when you look at the trust issues now, the technology is really very much advanced. When you look at the contact-tracing apps that are being foisted now, it is really the data use that is bothering the citizens.

As much as we issued guidelines on contact-tracing developers, they have been missing this point all along: that people will not trust their technology if they feel that they are not included. No matter how advanced the technology, if the benefit to people is not clear, then they will not use the technology. It is not for the government to look at technology and to look at data use (i.e., how we are utilizing data). As I mentioned, data privacy is about maximizing the beneficial use of personal data. Many of us are missing that point. But we just have to recognize that there are risks and we have to mitigate these risks because people will not use technology and will not give their data if they think the environment cannot be trusted.

Answer | Charlotte Justine Sicat: As I said at the start of this session, the motivation is to innovate institutions. When we talk about institutions, we are talking about the new institutional economics concept—institutions are really the rules of the game, the mandates, and the regulations that provide the basis for governance, which is the play of the game.

We also want data and information to now be perceived as institutions. How to collect them, share them, store them safely, and be able to use them in times of crisis is very important. We have a rare window of opportunity right now, and everyone really has a role to play.

APPC WEBINAR 3

STRENGTHENING THE CIVIL SERVICE UNDER THE NEW NORMAL

SESSION OPENER

Alex Brillantes Jr. | Professor and former Dean, National College of Public Administration and Governance, University of the Philippines

Welcome to this very important third webinar. Our webinar today builds upon the discussions of earlier webinars that focused on public sector reform and institutional reform. Today's webinar will focus on the civil service. The civil service—or the bureaucracy—has been the source of stability in governance. Governments may come and go, but the civil service remains. It is indeed a very powerful tool to provide continuity amid changes and even disruptions in administration.

As we celebrate our 120th Civil Service Month, we find that over the past several years, we have always emphasized the need to reform civil service and governance. The civil service has always been a major institution that has been a target of public sector reform by all administrations upon assumption to office.

Today, we will focus on the reforms in the civil service and efforts to strengthen and develop its capacities, especially as an institution that has to rise to the challenges of the "new normal" largely as a consequence of the pandemic. Over the years, reforms have generally focused on organizational reform. Administrations have always emphasized the need to reorganize the bureaucracy to bring about efficiency, economy, and effectiveness. These organizational reform efforts have also been variously labeled as "rationalization", "re-engineering", "reinventing", and "right-sizing". But reforming structures is not enough. The other aspect of reform—one that is not seen but is equally important—is the imperative to change mindsets, attitudes, and behavior among the public servants themselves.

Reform interventions have to be enabled by leaders ("duty-bearers"), and by the citizens ("claim-holders"). Indeed, leadership and citizen engagement are critical enablers to bring about responsive public sector reform and develop the capacities of the civil service.

These four dimensions of reform to strengthen capacities of the civil service, i.e., reforms in institutions, mindsets, leadership, and citizen engagement, must be integrated by a robust communication plan harnessing the potentials and powers of information and communications technology, all focused on the attainment of a common vision that may be articulated by the Sustainable Development Goals, and in the case of the Philippines, the *Ambisyon Natin 2040*.

We are very fortunate today that we have a very distinguished panel of speakers, which include those from Thailand and Japan, together with our very own chairperson of the Civil Service Commission, who will share with us initiatives and innovations in public sector reform to strengthen aspects of their civil service systems that are challenged by the new normal.

Presentation 1

Thailand COVID-19 Responses: Health Sector, Governance, and Institutions

Viroj Tangcharoensathien | Senior Adviser, International Health Policy Program, Ministry of Public Health, Thailand

I was moved by PIDS President Celia Reyes's speech and the video presentation. In the second half of the video, as it is looking forward to the future, it pointed out that we need hope and consider this pandemic as an opportunity to do things better by learning from our experience. And it is the capacity of the civil service that makes a difference.

One of the indicators of the World Bank's Worldwide Governance Indicators is government implementation capacity.

Therefore, in response to the COVID-19 crisis, it has been proven in Thailand that it is the civil service, together with multisectoral coordination, that made the difference.

As of September 2020, we have 3,506 confirmed cases, 59 deaths, and 105 active COVID-19 cases in the hospital. This is the result of containment since the early onset of the pandemic, as part of the efforts to combat the first wave.

After May 25, the country did not have any local transmission cases. All new cases were from international travelers, both Thai and non-Thai citizens. The country's efforts have minimized the impact on the health system and prevented the overwhelming and destruction of services.

Thailand's responses to COVID-19

Governance mechanisms

At the beginning of the pandemic, the Center for COVID-19 Situation Administration (CCSA), chaired by the Prime Minister, was established. It is a whole-of-government approach, with multisectoral coordination and a single command system. Through the Communicable Disease Act of 2015, a legislative framework to apply all public health measures, the government delegated power to the provincial governments. Thailand's Ministry of Public Health Emergency Operating Centers (MOPH EOCs) were established at its headquarters and 77 provincial offices—all of which report and support the work of the CCSA.

On risk communication and community engagement, the Department of Disease Control, MOPH, other departments, cross-ministry departments, and the academe collaborated to provide daily updates on the epidemiology situation and COVID-19 trends from Thailand, Southeast Asia, and the world to both national and provincial EOCs. This is important in educating and empowering the public, ensuring public trust, instilling confidence, and adhering to government interventions.

Social measures

The country implemented social measures at the individual, community, and national levels. A 100-percent face mask policy was advocated to reduce the risk of aerosol transmission. Physical distancing and hand and food hygiene policies were implemented. Citizens were likewise encouraged to stay at home and refrain from social gatherings, as public venues were closed. Temples, churches, and mosques were also closed, and people were advised to practice religion at home.

Online schooling was introduced, and a postal delivery system was established for medicines for noncommunicable diseases.

Similar to other countries, Thailand declared a State of Emergency and implemented a national curfew between 10 pm and 4 am that helped prevent social gatherings during nighttime.

The country also monitored adherence to the social measures. Thailand's International Health Policy Program (IHPP) initiated a weekly online survey in April as part of its intelligence response to COVID-19. Today, it has gathered about 70,000 online responses throughout the country. Findings from these surveys are relayed to EOCs and CCSA as a guide for further actions and new policies.

At the same time, the IHPP also initiated media literacy assessments through national online surveys. They measured the capacity of citizens to distinguish true and false statements, in the context of "infodemic", and how they propagate fake news on social media. Information derived from these assessments has been critical in designing risk communication strategies.

Public health measures: Test, trace, isolation

To control and prevent local transmission, Thailand implemented public health measures centered around the following areas:

- **Test.** From 80 labs for COVID RT-PCR (reverse transcription-polymerase chain reaction) testing in April 2020, there are now 222 labs nationwide in September, in both public and private sectors. All have a gold standard of practice, based on guidelines from the Department of Medical Science. As a result, daily testing capacity increased to 10,000 tests per day in Bangkok and 10,000 tests per day in the provinces.
- **Trace.** There are more than 1,000 Surveillance and Rapid Response Teams (SRRTs)—the major contribution and payoff of the Field Epidemiology Training Program (FETP) investment since 1980. This year, the Department of Disease Control hosts the FETP training program. In addition to the SRRTs, local health staff are mobilized at subdistrict levels to trace because they know their communities best. At the local level, there are more than a million village health volunteers to help detect and respond to cases.
- **Isolation.** There are different types of quarantine: Local Quarantine and State Quarantine. These are managed by the Ministry of Interior and the Ministry of Defense, and both ministries coordinate on the standardization of the protocols (i.e., how and what services will be provided).

For example, they have standardized RT-PCR testing, where all persons in State Quarantine are subject to tests on days 7 and 14.

Local and State Quarantines are fully subsidized by the government, regardless of nationality. However, an Alternative State Quarantine, where a person chooses to spend quarantine in a hotel-based site, is exempted.

Clinical responses

National treatment guidelines for COVID-19, developed by the Department of Medical Service with experts from universities, were launched in January 2020 and updated regularly.

Although there is no definitive treatment for COVID-19 at the time, the protocols are based on international publications.

The guidelines have four categories: asymptomatic case, mild case without risk factors, mild case with risk factors, and case with pneumonia.

Between mid-April and mid-May, the country almost ran out of intensive care unit (ICU) beds and ventilators because 50 percent of the ICU beds and ventilators have been occupied by non-COVID-19 patients.

With only a margin of 20 percent for COVID-19 cases at that time, a study was conducted to develop national guidelines for rationing Critical Care Unit (CCU) and ICU resources that will be used to identify who is placed in triage (i.e., who needs or does not need these critical resources).

This became an ethical dilemma and effectiveness dilemma that needed a multistakeholder consultation to develop the guidelines.

Since May 25, Thailand does not have an upsurge of local transmission, so the national guidelines on rationing of critical ICU resources are currently not implemented. However, the country stands ready to use it for the expected upsurge in the second and third waves.

Sustaining essential health services and ensuring occupational safety

While maintaining and preventing COVID-19, the country also sustains essential health services and ensures safety using a 2-P safety policy: Professionals and Patients.

As part of the safety precautions, health facilities implemented single-entrance systems, mandatory protocols for temperature screening and physical distancing, and required face masks and face shields to be worn by all visitors and healthcare workers. Hospitals relocated all clinics for acute respiratory infections (ARIs) outside the main buildings to prevent closed spaces that are conducive environments for the spread of COVID-19. In addition, healthcare workers who conduct RT-PCR testing from all emergency and urgent cases in accident and emergency departments wear full personal protective equipment (PPE) gear.

To ensure the occupational safety of the workforce, different types of PPE are provided for health workers, laboratory personnel, public health workers conducting SRRT contact tracing, transport workers, and hospital-based medical personnel. As of September 2020, the country recorded 108 health workers out of 3,454 total national cases infected by COVID-19 (3.1% percent of the total cases) and zero mortality from COVID-19 among the health workforce.

A paper was submitted to the *Bulletin of the World Health Organization* about how Thailand protects its health workforce through occupational safety.

Health workforce: The white gown heroes

For the unsung heroes who worked untiringly during the peak of the pandemic, we mobilize surge capacity from public and private sectors as additional support.

Private sector companies that profit from testing and reimbursements have been required to help the COVID-19 response. Private sector companies and several insurance companies, as part of their corporate social responsibility, have donated 220,000 insurance policies that provided coverage for COVID-19 infection or death. Fortunately, no healthcare worker has died.

On April 7, the Cabinet designed compensation packages for the healthcare workforce. Contract workers in the MOPH facilities were given civil service positions, resulting in more than 45,000 new civil service positions added early this year. Salary adjustments were made. Service

years (during State of Emergency) were doubled for the calculation of retirement pension benefits. Interest rates for loans from Krung Thai Bank and Government Savings Bank made by health workers were reduced for one year.

Moral support to the health workforce is also provided through different means. The Department of Mental Health has launched a specific hotline for health workers seeking psychological aid. Food and meal boxes were donated by the public and private sectors to many health facilities and quarantine centers. A social recognition program for the white gown heroes will be celebrated after the peak of the pandemic.

Universal health coverage

All COVID-19 treatments are made free of charge to all Thais, both outpatient and inpatient, through three public health insurance schemes.

Additional budget was allocated to support COVID-19 responses. The National Health Security Office, which handles payments for COVID-19 testing, allocated THB 4.28 billion (USD 142.7 million) for RT-PCR testing and associated PPE for specimen collection, while the MOPH allocated THB 3.461 billion (USD 115 million) for tests.

Finally, the Local and State Quarantine, fully sponsored by the government for Thais and non-Thais, includes tests, food, and lodging for 14 days.

Other essential health services

Comparing the first quarter (January–March) and second quarter (April–June) of 2020, COVID-19 caused an impact on other health services. Outpatient rate dipped from 1.176 visits per capita to 0.754. Admission rate has slightly dipped, too.

Dental services have been most affected, dipping from 0.093 to 0.024 visits per capita. Although antenatal care (ANC) at week 12 services were not impacted as much, quality ANC has dipped down from 81-percent coverage to 74.8 percent. Child immunization rate dropped from 83 percent to 79.9 percent. TB and HIV/AIDS treatment coverage has slightly lowered from 82 percent to 64 percent.

The number of end-stage renal disease (ESRD) patients on hemodialysis increased between 2019 and 2020, while the number of ESRD patients on peritoneal dialysis slightly reduced. According to the Kidney Disease Association of Thailand, there are no interruptions to the supply of peritoneal dialysis solutions.

We plan to publish a report in international journals on how Thailand is dealing with non-COVID-19 essential health services.

Contributing factors

To conclude, governance is critical in effective risk communication. In return, effective risk communication at the early stage of the pandemic is critical to protect our health system from getting overwhelmed.

The health system's resilience is also critical as much as an early investment in infrastructure, workforce, medicines, and universal health coverage.

There is also a need for good governance and capacity to ensure multisectoral responses that engage the private sector, the civil society, and communities.

Presentation 2

Upscaling Mindsets for a High-performing Civil Service in the Tech-powered New Normal

Naomi Aoki | Associate Professor, Graduate School of Public Policy, University of Tokyo

The webinar's theme is "Strengthening Civil Service under the New Normal". In light of this theme, my talk will focus on the mindsets of civil servants who have been working very hard to battle COVID-19, and I will discuss what sorts of mindsets are necessary for civil service to remain competent and agile in the new normal.

The tech-powered new normal

First and foremost, I would like to claim that the state of society we are in today is not just a new normal—it is a new normal powered by technologies. I will refer to this state of society as the "tech-powered new normal" and define it as a condition of atypical situations that have become ordinary in the wake of the COVID-19 crisis and the resulting changes powered by extensive use of technologies.

I will give examples of tech-powered innovations that have been deployed in the battle against the pandemic and discuss four mindsets that seem to be important to this type of new normal. There are many examples that support the case where technologies have integrated with human efforts to battle COVID-19.

The previous presentation talked about how Thailand used online surveys and a media literacy platform for risk communication during the pandemic. Contact-tracing apps have also been deployed by several countries as a tool to notify users if they have come into close contact with people testing positive for COVID-19.

Another example is Taiwan's tech-powered method for regulating the number of face masks that can be purchased per person per day for the purpose of preventing panic buying and stabilizing the mask supply. The method used to enforce this regulation is called "name-based rationing system" (Yuan et al. 2020, p. 557), whereby authorized sellers or mask shops digitally scan customers' national health insurance cards and require their purchase history.

The COVID-19 crisis has also led countries to lighten regulations on telemedicine, so that people can see medical doctors when they seek drug guidance online or over the phone. In Japan, for example, telemedicine was not allowed for a first visit prior to the pandemic, but the country's Ministry of Health has now enacted temporary measures to allow telemedicine use for first-time visits. This move was necessary to prevent hospital infections and accommodate the needs of people who are vulnerable to transmissions of viruses in hospitals.

Health authorities around the world have begun using chatbots to respond to citizens' inquiries regarding the infections. Buenos Aires City in Argentina has launched a website that can assess whether the inquirer is a suspected case of

infection and the chatbot can refer the person to a medical care operator without physical contact. In the United States (US), the Centers for Disease Control and Prevention also introduced a self-checker chatbot for a similar purpose.

Besides chatbots, the University of Southern Denmark has developed a fully automatic robot capable of carrying out throat swabs for various testing to prevent infections among healthcare workers.

Moreover, technologies have been deployed to achieve social distancing in various activities such as schooling. According to the United Nations Educational, Scientific and Cultural Organization, school closures have affected 1.2 billion students around the world, and educational authorities have taken initiatives to minimize disruptions caused by school closures. In some countries, teachers have been asked to teach online. In other countries, classes have been broadcasted on radio and television. Video and YouTube lessons have also been made available on e-learning platforms.

While children went digital, so did adults. Even before the COVID-19 crisis, telework has been promoted as a means to achieve work-life balance, but now it has become a necessity. This is the case in Tokyo, where I currently am, and I suspect the situation is similar in the Philippines.

Upscaling four mindsets for a high-performing civil service

In this tech-powered new normal, civil service needs to play an important role both as a regulator of the use of technologies and as a policymaker who decides how technologies are to be used in the delivery of public services. Given this, I came up with the following four mindsets for civil servants:

Be open to open innovation

Given the fact that data on the pandemic require quick adoption of innovation in the delivery of public services, the key to high-performing and agile civil service seems to be the willingness to work with external actors. These are people who already have the capability and knowledge to innovate or those who can offer ready-to-deploy innovations. This can be achieved through open innovation, and the COVID-19 crisis has already led various organizations, including private agencies, to open up.

There are several approaches for open innovation. One is where organizations announce the types of innovation they are looking for and are willing to call for proposals and provide financing. For example, the World Food Programme is looking for innovations to help their COVID-19 emergency response in identifying, locating, and reaching those most affected by the crisis.

Another approach is to make data public. In addition to Taiwan's name-based rationing system that regulates mask purchases, authorities make available real-time data on face mask inventories in authorized stores and health centers, such that online civic and tech communities can develop software applications that indicate where masks are available for purchase.

To enable open innovation, research suggests that the mindsets of civil servants are key. I want to share a finding from Mergel (2018) about the case of an open innovation initiative in the US called Challenge.gov, where US federal government agencies use a shared online platform to post their problem statements and call for solutions from citizens through a prize contest. The author interviewed 35 federal agency managers and identified legal technological and institutional barriers that prevent people from using the platform. In addition, the author found a cultural barrier related to agency officers' mindsets and their resistance to accepting external innovations and a lack of top management support and buy-in within the agencies.

Although open innovation might not be relevant to all civil service agencies and this mindset might not be relevant to all civil

servants, the research is a good reminder that policymakers need to be open to making open innovation happen.

Be mindful of design thinking and user orientation

There are times when we see a gap between what citizens want and what the government delivers. As a result, any innovation may fail to achieve its intended effects. Such a situation might be even more widespread now because governments are under pressure to come up with solutions very quickly, and they may not have the time to think carefully about whether an innovation is really useful, whether users will actually use it, and whether it is easy to use.

Policymakers can become preoccupied with the efforts to introduce a new innovation that their attention might not extend to the dissemination of the innovation and maximization of the user experience after its introduction.

User-oriented thinking could help civil servants identify a technological solution. For example, in the early stages of the pandemic, physicians in Japan were asked to report new COVID-19 cases through fax and handwritten reports. Not only did this approach jam government offices with fax printouts, mistakes and inconsistencies were also found in the handwritten reports. Only after physicians complained did the government then introduce an online reporting system. This could have been done earlier if, at the beginning, the government had been mindful of user orientation.

Quite often, the importance of user orientation is highlighted in relation to design thinking. Design thinking, in the public sector context, is about enhancing user experiences through innovations introduced by governments. This is achieved through the participation of multiple stakeholders, including users, at the problem-solving stage. An important part of the process is exposing policies and ideas to users prior to formally releasing them. This enables policymakers to find blind spots and recognize any confusion or inconvenience users might have to go through.

In essence, design thinking is about policymakers and civil servants shifting from an agency-focused mindset to a more client-oriented mindset.

It might neither be fair nor wise to propose that civil servants engage in the design thinking method amid the crisis when the time is so pressing, but the idea of design thinking should at least inspire them to care for user experience as much as they can to avoid wasteful investments and help disseminate their innovation widely.

Attend to public trust in technologies

The third kind of mindset is to attend to the impact that automation has on public trust, particularly in innovations that are developed by government offices, along or in collaboration with others, such as developers. Technologies have been used to replace human-to-human interactions with human-machine interactions amid the pandemic. People may contact health authorities by using chatbots or use face mask apps to find where masks are available. Some use robots to perform throat swab tests instead of health workers. The COVID-19 crisis seems to be accelerating automation even more than it had been, and public services will be increasingly automated in the future, too.

In light of this, machines need to be trustworthy as the humans who deliver public services because it is important for the public to be able to trust public service, whether or not they are provided by machines, and because people will not use machines if they do not trust them.

Normally, the privacy issue is one of the things that people talk about when it comes to public trust in automation and machines. Based on my own research, however, I argue that there are other things policymakers can do to promote trust in machines. One is public communication.

The research concerns the public's initial trust in artificial intelligence (AI) chatbots about to be introduced into the public sector. Theories say that human trust in a machine depends on its performance and one's understanding of the process behind the machine, such as its algorithms and the intentions of those who invented and designed the machine. Inspired by these ideas, I hypothesized that the public's initial trust in AI chatbots would depend on the area of inquiry, since expected performance varies, and on the reasons that the government communicates to the public for using chatbots.

I performed an online experiment to test this hypothesis in Japan, and found that, indeed, the public trust depends on the area of inquiry and that communicating certain purposes enhances public trust. I found that the effects of this communication are very small, but it is not an expensive measure to take. Hence, my study concludes that it is worth doing.

Care for the digitally disadvantaged

Digital inequality arises due to unequal access to technologies, such as the internet and mobile devices, and inequalities in the digital literacy needed to benefit from the technologies.

Beaunoyer et al. (2020) argued that the COVID-19 crisis has aggravated the impacts of digital inequality on social, economic, and health inequality, stating that: "Digital inequalities are putting socially and economically disadvantaged people at more risk to the virus" (para. 1). This is because digitally disadvantaged people, who tend to be socially and economically disadvantaged, have less access to information digitally disseminated by health organizations. Poor digital literacy in times of a pandemic means poor electronic health literacy or eHealth literacy.

This inequality exacerbates economic inequality. Many people are now working from home, and they have lost access to the Internet they used to have at the office. People have also lost access to the Internet in public spaces, which are now closed due to the lockdown. Even if people do have access to the Internet at home, low-income families tend to have poor connections, in terms of speed and data usage, while wealthy people are able to have better connections and could even upgrade their digital equipment at home.

As a result, this aggravates digital inequality, in terms of access, and unequal access aggravates economic inequality. Those who have lost jobs due to the economic crisis amid the pandemic must find a job from home and online, but this is difficult because they have slow Internet connections or no Internet access at home.

I would like to draw policymakers' attention to the possible aggravating impacts of the pandemic on health and socioeconomic inequality via digital inequality. This is precisely because we are in a tech-powered new normal. To mitigate this inequality, it is important to increase physical access to connected devices and the Internet, and to provide support to increase digital literacy.

Even without doing this, the government can enact measures to mitigate health, social, and economic inequality, and the idea of blended learning in the Philippines showcases these mindsets. The government has been promoting a form of learning that mixes online distance learning and in-person delivery of printed materials to students in places that do not have Internet access in their home. I hope this is working well in the Philippines.

In conclusion, for the civil service to perform highly and remain agile, it has to be open to open innovation, be mindful of design thinking and user orientation, attend to public trust in technologies, and care for the digitally disadvantaged. The differences in mindsets could explain how governments have responded to the crisis.

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Reaction 1

Alicia dela Rosa-Bala | Chairperson, Civil Service Commission (CSC)

A pleasant morning! I thank PIDS for placing the limelight on the civil service, especially this month when we mark its 120th year, along of course, with the celebration of the Development Policy Research Month.

We could not have had a more opportune time to take a closer look at that sector of society in charge of the day-to-day business of government. And the papers presented by Dr. Viroj and Dr. Aoki validated the critical role of the civil service during times of pandemic.

Allow me to touch briefly on their presentations and relate these to what is happening today in the Philippine civil service.

Dr. Viroj shared with us the courses of action taken by Thailand to address the pandemic. We certainly can draw lessons from Thailand's experience, specifically on how and why its workforce, particularly the health workers, were able to ensure not just continuity of medical services but stability of its healthcare system. He highlighted several reasons for low COVID-19 transmission: adoption of a whole-of-government approach, strong community support and involvement in preventive measures, early and regular updating of national treatment guidelines, and implementation of definitive measures to prioritize the safety of health professionals and patients.

On the other hand, Dr. Aoki posited four mindsets that will enable civil servants to face the new normal workplace: openness to innovation, design thinking and user orientation, trust in technologies, and care for the digitally disadvantaged.

There are common themes or threads in both presentations that run parallel to the state of affairs in the Philippine civil service: (1) the need for stable governance mechanisms, (2) the significance of capacity building, and (3) the heightened use of technology.

Thailand's whole-of-government approach, characterized by multisectoral coordination but directed by one sole administrative body with a broad provincial network, was an important element in managing the pandemic.

Here in the Philippines, the pandemic provided opportunities for government agencies, together with business, academe, and civic organizations to adopt a whole-of-government approach in addressing people's needs. The same approach is being implemented in the civil service with its 1.7 million men and women spread in over 3,000 agencies nationwide, a management challenge for the Civil Service Commission (CSC).

Building physical and human capacities is crucial in facing the pandemic and surviving the workplace of the future. Exponential growth in

testing capacity enabled Thailand to arrest the spread of the virus. Design thinking and similar capacities that foster creativity and innovation spell solutions.

Capacity building has been an uphill climb for the Philippine bureaucracy, given the broad range of skills and competencies in the government workforce. Equipping each civil servant with needed and appropriate knowledge and skills to enable him/her to perform his/her tasks and responsibilities well is important.

Technology became both an input and an outcome during the pandemic. Many of the initiatives undertaken by the Thai government were facilitated by technology—public communication that kept citizens informed of preventive measures and data collection that enabled the government to draw informed policy decisions. In Dr. Aoki's paper, the speed with which information spreads in a digital environment heralds trust issues, specifically on the use of digital identity or of choosing whom to share our personal information with.

The Philippine bureaucracy has remained in the throes of harnessing technology for efficient and effective service delivery. To survive in the future workplace, individuals and organizations in the public sector will have to adapt to and adopt technology.

In the midst of these issues is the CSC, the central human resource agency of the Philippine government. Through civil service rules and human resource (HR) management programs, it ensures that the government workforce is equipped with appropriate knowledge, skills, and attitude to deliver services to the public consistent with its constitutional mandate.

The CSC also ensures that its HR programs are aligned with the goals of the *Philippine Development Plan* (PDP) under Pillar 1: Enhancing the social fabric *(Malasakit)*, which states: "There will be greater trust in public institutions and across all of society. Government will be people-centered, clean, and efficient. Administrations of justice will be swift and fair. There will be greater awareness about and respect for the diversity of our cultures" (NEDA 2017, p. 12)[1]. Subsector Outcome 5: Civil Service Strengthened states the need to improve the public's perception and trust toward civil servants who are expected to manifest professionalism and ethical behavior and probity. It should promote shared public service values, improve human resource management systems and streamline processes, and invest in human resource. It is significant to note that for the first time, the PDP has explicitly underscored the pivotal role of the civil service.

Critical civil service reforms

Allow me to present a number of initiatives implemented by the CSC to prepare the public sector workforce for the new normal.

As Dr. Aoki presented, innovation and design thinking are necessary attributes of a high-performing civil service. As a 120-year old institution, the civil service cannot afford to be caught in a time warp of tradition. Incidentally, the Philippine Civil Service, not only the CSC, is celebrating its 120th year this September with the theme "Public Sector in the Age of Digital Transformation". We had agreed on the said theme since last year to drum up interest in the Fourth Industrial Revolution. Little did we know that the theme would be very timely and would reflect the circumstances during the pandemic when people, products, events, and services were pushed to become digital. The civil service has to be relevant and dynamic, adaptive to the changing human resource landscape. This is the reason for CSC's Program to Institutionalize Meritocracy and Excellence in Human Resource Management or PRIME-HRM, which aims to raise the maturity level of four critical HR systems in all

[1] National Economic and Development Authority. *Philippine Development Plan 2017-2022.* https://www.neda.gov.ph/wp-content/uploads/2018/01/Abridged-PDP-2017-2022_Updated-as-of-01052018.pdf (accessed on September 18, 2020).

government agencies—Recruitment, Selection and Placement System; Performance Management System; Learning and Development System; and Rewards and Recognition System. Envisioned to serve as a stable governance mechanism, PRIME-HRM drives agencies to aim for higher HR system maturity levels and meet global HR standards. PRIME-HRM examines an agency's capability to carry out its core HR systems and enables it to transition from Transactional to Process-Defined to Integrated and finally to Strategic HR. Strengthening these four systems will help address many ills besetting the bureaucracy.

Promoting meritocracy and equal opportunity principle in recruitment, selection, and placement (RSP)

CSC ensures that agencies adhere to the core principle of equal opportunity in recruitment and merit-based selection and placement as enshrined in the Civil Service Law and rules. The governance framework on RSP serves as basis for talent planning, sourcing, and selection and placement in government.

The CSC has also put a premium on competency-based recruitment. The development of competency-based HR is linked closely with concerns on the professionalization of the civil service. While the CSC provides security of tenure to competent civil servants, it also has to insulate the civil service from patronage so that employees can focus on the work at hand and not worry about having to be under the good graces of superiors. The CSC emphasizes that security of tenure or continued stay in government service is performance-based.

RSP in the time of COVID-19

As appointment processing is documents-based, the imposition of community quarantines made it difficult for agencies to proceed with recruiting employees. Thus, CSC through Memorandum Circular 14, came up with Interim Guidelines on Appointments and Other Human Resource Actions that directed agencies to simplify, streamline, and shorten the recruitment process. Online application, online profiling, and video-based assessment now form part of the recruitment scenario.

A number of policies on appointment processing were relaxed. CSC allowed the use of electronic signatures of appointing authorities.

Posting of vacant positions may now be done through the agency website or other job search engines. Related to this, CSC has been holding job fairs since 2018 as part of recruitment initiatives. Last week, the Commission, in partnership with Jobstreet, conducted a five-day online job fair as part of Civil Service anniversary activities. The CSC has also started the e-Appointments Processing project that targets paperless transactions in attesting/processing appointments issued by government agencies.

Engaging employees through a functioning performance management system

Performance management is an indicator of good governance. It is a barometer not solely of a civil servant's performance but also of an organization's standing.

The Strategic Performance Management System (SPMS) aims to empower employees by making one appreciate how one's individual performance is linked to the attainment of organization goals. Studies show that employees tend to perform better if they feel responsible for something—even if it be a small part of the overall organizational picture. This situation illustrates the importance of aligning individual performance

with the organization's vision, mission, and strategic goals. We hope that through reforms in this system, our state employees will take their performance appraisals more seriously.

Performance management in the time of COVID-19

The pandemic presented performance management challenges given the new work arrangements during the quarantine period. Work targets and outputs had to be re-calibrated, affecting performance appraisal systems. Restrictions on mobility and face-to-face interactions resulted in revisions of work plans.

Rationalizing and improving training and development

People cannot do today's jobs with yesterday's skills. The increasingly complex demands of the citizenry and governance should be matched with concomitant changes in learning and development. The CSC continually strengthens its capability to build a workforce that is competent and armed with the necessary skills and handles. For this role, the Commission has a dedicated facility—the Civil Service Institute or CSI.

The CSI carries out the Commission's learning and development (L&D) agenda, anchored on purposive studies on the employee development needs of agencies. CSI's L&D programs cover training program development and actual conduct of training on a wide range of topics—from administrative to technical to managerial, from soft skills training to sessions on specialized courses. It brokers competency development solutions by creating strategic partnerships and continuing engagement with thought leaders, learning process experts, and talent managers across the bureaucracy. These training interventions are also offered by CSC regional offices.

L&D in the time of COVID-19

The past months saw shifts in needed work competencies and capacities. Alternative work arrangements, including remote working, have made digital literacy a required skill set for the new normal. Adversity quotient has surfaced as an essential attribute. Leadership, self-regulation, agility, empathy, communication, and collaboration skills are also important competencies to ensure continued productivity during these challenging times. Unfortunately, because of the pandemic, traditional learning and development activities are not feasible.

CSC has begun its transition to e-learning even before the pandemic. Not only is it cost-effective; it permits wider reach and offers flexibility for in-demand learning.

Promoting excellence and efficiency through rewards and incentives

Excellence acknowledged is excellence nurtured. Most visible of the Commission's strategies in this area is the annual search for public officials and employees, where it recognizes those who have made exceptional contributions and those who have demonstrated high ethical standards. Government agencies are encouraged to level up their rewards and incentives schemes as a good people management practice.

The honor awards program in the time of COVID-19

In keeping up with the times, the Search for Outstanding Government Workers are now being conducted via digital technology. Where before, nomination folders were submitted, scanned copies of nomination documents are now transmitted. Screening through review of soft copies of nomination folders have been done at the regional

level through our CSC regional offices and will now progress to deliberations at the national level also through online platforms.

Other worker-friendly initiatives

The disruption caused by the pandemic called for courses of action that would balance safety and productivity. CSC has prepared the bureaucracy for such eventualities. Implemented this year is the Occupational Health and Safety Standard, a first for the bureaucracy, drawn up by the Commission together with the Health and Labor and Employment Departments through Joint Circular 1 issued in March 2020. In support of the Mental Health Act, CSC crafted the guidelines for the establishment of mental health programs in the public sector in consultation with medical experts and other stakeholders. CSC has encouraged government agencies to have mental health programs, a timely intervention given the psychological impact of the pandemic in everyday life. CSC also mobilized government and nongovernment organizations offering counseling and psychological services that state employees may tap through online consultation.

The Guidelines on the Alternative Work Arrangements (AWAs), contained in CSC Memorandum Circulars 7 and 10, both issued during the community quarantine, had the most impact among government workers as they allowed five AWAs: work from home, skeleton workforce, four-day workweek, flexiwork or work shifting, or a combination of the four work arrangements. The public sector experience in these AWAs are now being examined or studied by the Commission as inputs for future work policies. We are also preparing civil service guidelines on work arrangements as areas transition from general community quarantine (GCQ) to modified GCQ. Memorandum Circular 10 also permitted medical and allied staff to be reassigned or detailed to other government hospitals or temporary health facilities in support of the Bayanihan to Heal as One Act. The same holds true for licensed professionals willing to be transferred or detailed to healthcare facilities.

Other important regulations issued by the CSC to address employee safety and protection during the pandemic include Memorandum Circular 8 that outlined procedures on the use of leave privileges for absences due to quarantine and/or treatment of COVID-19 and Memorandum Circular 9 that gave a 60-day extension in filing the 2019 Statement of Assets, Liabilities, and Net Worth (SALN). Also on SALN, Memorandum Circular 13 allowed online oathtaking between the administering officer and declarant and online filing of the SALN, subject to certain conditions.

Philippine talent management strategy

To address the future-proofing of the Philippine civil service, the CSC, in partnership with various organizations, is institutionalizing the Philippine Talent Management Strategy (PTMS). The program will be the framework to strengthen the civil service by addressing future needs and challenges at the global, regional, and national levels. The PTMS supports the effective management of public sector talent facilitated by people-centered, technology-enabled, clean, efficient, effective, and green governance.

The PTMS has a three-point strategy, starting with harnessing strategic talents by capacitating a future-ready workforce, led by future-ready leaders toward a more capable and smart organization, anchored on shared public service values.

The civil service must use available resources and existing data and information to improve service delivery. The future state of the civil service should have:

1. *Future-ready leaders and workforce*
    - **Future-ready leaders who are visionary, people–centric, connected,**

collaborative, and culturally intelligent, analytic, creative and innovative, and tech-savvy.

A future-ready civil service is one that is steered by leaders who are visionary and goal-oriented. These leaders shall be able to develop and improve the competencies, capabilities, and capacities of their workforce toward being future-ready and improve organizational performance.

- **Future-ready workforce that is involved and engaged, socially responsible, performance-oriented, assertive, analytic, creative and innovative, and tech-savvy.**

  We need a workforce that is engaged, aligned with the vision of the organization, and driven by shared values of the organization such that it is able to exert exceptional effort in the delivery of excellent public service. A future-ready workforce is also one that is socially responsible—concerned with how the services it renders affect and benefit society. It is able to harness technology to simplify, streamline, and improve service delivery.

2. *Smart organizations that are engaged, performance-oriented, assertive and innovative, capacitated, and tech-savvy*

   The civil service can best deliver public service excellence if it does not work in silos but works as one in an integrated manner. This requires a civil service that is inclusive, efficient, and green. It takes care not only of the people it serves but also of the people who serve to ensure sustained excellence in the delivery of public service.

3. *Shared public service values*

   Organizations of the future advocate the adoption of shared values as these provide the anchor for individual and organizational transformation. The CSC has led the way in this aspect by espousing Patriotism, Integrity, Excellence, and Spirituality. These values are embedded in the organization's culture, manifested in their work ethic. CSC has recast Public Service Values Program into Public Service Values in Times of Adversities. The new model looks at the unfolding environment and provides state employees the anchor to handle situations that challenge their service values so as not to lose sight of the basic tenet of their stay in government, which is, "Public Service is a Public Trust" (Article XI, Section 1, 1987 Philippine Constitution).

Conclusion

To strengthen the civil service under the new normal, there is a need to focus on human resource management and organizational development. Key to strengthening the civil service is organizational development founded on the review of systems and structures. Second, engaging and capacitating human resources will determine the organization's course. Third, advocating shared public service values will provide the anchor on which all decisions shall be based. As the Philippine civil service continuously evolves and anticipates imminent changes, it is moving forward, not just to a new but to a "better" normal.

Critical civil service reforms will enable the Philippine government to be agile and innovative and move in sync with the rest of the world.

Maraming salamat at mabuhay ang serbisyo publiko!

Reaction 2

Eduardo Banzon | Principal Health Specialist, Asian Development Bank

I would like to focus my response on more specific recommendations, which I have picked up from the presentations of Dr. Viroj and Dr. Naomi, as well as from the reaction of Chairperson Alice. I would also like to reflect on the objectives of this session.

The need for experts and not just generalists

One of the things we are seeing with COVID-19, as observed in the Philippines and in other countries, is the tendency for civil servants to become generalists to maintain a sense of business in government, even if one comes in as an expert or a specialist. This had affected the effectiveness of the COVID19 response.

With how the civil service is designed, as one goes up the ranks and gets into more senior positions, they are essentially expected to become a generalist to look into lots of things. Although there are specialist civil service tracks (e.g., in the academe, where one could become a researcher or specialist), admittedly, they are not enough. This is what we observe in the Department of Health, PhilHealth, government departments, and other countries as well—the lack of specialist skills.

In the county's response to the COVID-19 pandemic, the government needs expertise and skills in digital and analytical tools.

Unfortunately, this expertise does not seem to be prevalent. Under the new normal and with the realization that COVID-19 might not be the last pandemic or disaster we face, there is a need for civil service in the Philippines to be savvy in bringing in experts. Would the Philippines really start changing the way it pays experts, including their bonuses?

An alternative would be to have stronger links with academe. Other countries immediately seconded academics from universities to their respective governments at the onset of the pandemic. We are not seeing that in the Philippines. I am formerly with the University of the Philippines, and I tell my former colleagues that they should tightly embrace the DOH, work with them and support them, because, in a sense, they could provide the necessary expertise that is lacking.

Creating strong relationships with the academe and having secondment policies are things we could look into post-COVID-19 or as we continue to respond to the crisis.

What expertise are we looking for?

Whether we talk about the Taal volcano eruption, COVID-19 pandemic, or climate change, we are now living in a world where natural disasters, potential new pandemics, and other risks may frequently arise. The expertise in risk assessment,

risk mitigation, and risk management have become critical. Although our country has the Philippine Disaster Risk Reduction and Management Act, the fact that responses have been so variable with a lot of our local governments and even the national agencies facing problems, it is evident that the risk management expertise is not fully there. And this is an expertise that is going to be needed for quite some time. We need to find ways to bring experts, their inputs, assessments, and insights into the government.

Information technology (IT) expertise, an essential for data gathering and interoperability of information systems, is likewise needed by the Philippines as much as other countries struggling to handle problems with different information systems. For example, in the health sector, where information systems do not talk to each other, many countries find it difficult to enable links between different health information systems. Frankly, all parts of the bureaucracy need this expertise.

How do we bring them in, acknowledging the fact that it can be expensive and quite difficult to retain IT experts in government? Should we pay them more?

In a number of countries, governments pay IT experts even more than ministers, in recognition of the market demand for them. This is the same with data scientists and data analysts. These experts have become necessary in handling COVID-19.

Regarding communications skills, when I was working for the government, I could remember undertaking communications training, but it was quite old-school. Now, communication is much more than just talking on the radio or TV, and we also need skills for effective communication over social media.

Besides expertise on risk management, IT, data analytics, and communications within government, we are also seeing the need for logistics and supply chain expertise to aid disaster response. The Office of Civil Defense, as an example, has employed such expertise, but this should be present in other departments as well.

We can either pay experts properly to bring them in or instead get our generalists trained. If the civil service could not afford or find it difficult to recruit and retain these experts, then they might need to ensure that people who are in the civil service get to understand the expertise they need. This is so that they know how to deal with experts when the need to bring them in arises or when they need to engage with them for a longer term.

What needs to be done

Focus on health and safety of civil servants

Just as how Thailand ensures the health and safety of their civil servants, the Philippines needs to build civil servants' confidence by making them feel that they are being taken care of, that their health will be the priority, and that they will not just be sent off fighting COVID-19 while putting themselves in inappropriate levels of risk. We could look at different countries and the policies they have adapted and figure out how we could provide for our civil servants.

The Civil Service Commission still conducts annual physical exams based on rules and protocols as old as I am. This is a sign of the inability to update and conduct physical exam rules based on current evidence, and it makes one wonder about other occupational health and safety policies the Commission has for the civil service. This pandemic is an opportunity to address and make our policies more updated and responsive because this might not be the last pandemic or disaster we will be facing.

In particular, we also need to direct attention to the mental health of our civil servants—something not covered in many of the health and safety guidelines we have right now.

Latvia, for example, has conducted employee surveys that assessed the well-being of public servants, including causes of anxiety, their expectations of the government and their management. Meanwhile, the Netherlands created

an online toolbox for public servants that could be accessed while working from home to help maintain work-life balance.

In the Philippines, there is still a lot of work to be done to address mental health, which is an under-responded part of the health and safety policies for civil servants.

Flexibility in deploying civil servants

According to insights presented in the recently held Asia-Pacific Action Alliance on Human Resources for Health webinars, co-organized by the World Health Organization, Asian Development Bank, and International Health Policy Program Thailand, some countries were able to deploy their civil servants and health workers to COVID-19 hotspots. Singapore, Pakistan, Sri Lanka, Iran, and China have the flexibility to move their human resources to aid in disaster response.

For the Philippines to be as flexible, it should provide incentives because we cannot just force our people to move. We need to figure out how we can pull people out and deploy them to support areas that need immediate response and help.

Remote working as default

Due to the pandemic, remote working has become acceptable in a number of countries. In Italy, for example, teleworking is now the default, and workers do not need authorization from employers to work from their homes. COVID-19 has changed the ways we work, and this is something the Philippines should consider even post-COVID-19.

The academe in the Philippines could conduct studies on performance between remote working and working in an office and determine what we gain or lose if we shift to remote working. Depending on the results, we could also shift to a civil service that has elements of remote working after COVID-19 ends.

Maximize leave flexibility

Countries have started maximizing leave flexibility; wherein they recognize that working from home meant new challenges and demands, such as employees helping their children attend school online. I hope our civil service explores and changes how it designs its leaves, whether that means creating new legislation or not.

For example, Germany has increased special leave provisions for certain groups from 3 to 20 days, while France made special leave provisions for staff who need to take care of children at home.

We should also consider paid sick leave for COVID-19 testing and isolation. Workers in the public and private sectors, who are paid per day or per week, may find it difficult to be tested or undergo quarantine due to loss of income. We should explore paid sick leave for the government's casual and contractual employees who work under a "no work, no pay" scheme.

Paid sick leaves will contribute to the effectiveness of testing, contact tracing, and isolation that help control the spread of COVID-19.

Invest in and leverage digital capabilities

For remote working to be effective, we need to go digital, although it is not as easy as just saying "we want to go digital." Countries that are doing great digital work are countries that have invested in it.

Estonia, where everything is electronic, is everyone's favorite example of a country successful in telehealth or digital health.

Having just over a million people, their government invested in the digitization of their public services, and in the digital infrastructures to ensure connectivity. They also made sure that all citizens could access telehealth services by creating guidelines and policies and simplifying payment schemes.

As we shift to digital, we also need to have those guidelines and policies and those payment mechanisms in place.

We need to invest in digital infrastructures and improving our digital capabilities. Although everybody recommends this, it will not harm to keep repeating the point that we need to invest in digital transformation.

In addition, as recommended by Dr. Naomi Aoki, we need to promote digital literacy and equity equality, wherein one's socioeconomic class does not affect one's access to the digital world.

Routine use of online communications

Despite the civil service's shift to remote working, some work still requires printed memos to be signed for things to move. Although it might be easy to say that we should shift to online communication and digital documents, the challenge for civil servants to ensure accountability in a paperless world remains.

Video conferencing, instant messaging services, and other internet tools enable fast sharing of information and generate opportunities to stay in touch with teammates and colleagues across the civil service. Canada has dedicated webpages and resources for civil servants to provide them with information and resources on working remotely.

Keep learning new skills

Most public servants are now using new technologies and ways of working to carry out their jobs. This means they also need to have more skills. Online learning tools and coaching can help upskill the workforce, including their digital skills. New leadership skills are key to maintaining productivity in transformed work environments and supporting workers to manage the transition to the new normal.

Australia has provided reskilling opportunities for public servants to help them carry out crisis-related work. Belgium expanded its online training offer, adapted in-person training for online access, and fast-tracked certain training programs.

Session 3 Open Forum

Question | Vicente Paqueo, PIDS: What lessons can we learn about such preconditions from countries like Thailand, Taiwan, and South Korea that effectively dealt with the COVID-19 pandemic and other kinds of crises that the Philippines has had to face?

Answer | Viroj Tangcharoensathien: In terms of devolution and decentralization, the Philippines has a more complex challenge than Thailand because of its huge number of local governments. The country also has the Department of Health as well as many other partner agencies that make effective risk communication more complex. And so, communication between the national government and local government, in a holistic, comprehensive, effective way, becomes the underlying challenge because it could create bottlenecks on the country's rapid response and testing.

Question | Vicente Paqueo, PIDS: The key to the whole-of-government approach is coordination. From your results, your total cases are almost equivalent to our daily number of cases. How are you able to deal with turf issues and silo thinking that are very common in bureaucracies?

Answer | Viroj Tangcharoensathien: Turf issues and silo thinking are a common phenomenon in Thailand, too. But the fear of infection and mortality due to COVID-19 has disrupted this way of thinking. The government, its agencies, and citizens worked closely together and collaborated.

Question | Aniceto Orbeta, PIDS: It is clear that increasing dependence on technology also means increasing disparities in our societies. What are some of the measures to reaching socioeconomically disadvantaged people with technology as we move toward a more tech-based new normal?

Answer | Naomi Aoki: This is about how public servants can address the problem of the digital divide. In Japan, some people were against online schooling because they were concerned that online schooling would not be fair to students who are digitally disadvantaged. This is based on a traditional mindset of public service—that it ought to be fair and equal for everyone, which is understandable. However, in this time of crisis, this mindset of "let's not do it because it is unfair" could be shifted to the mindset of "let's do it, but let's not forget to address digital inequality." There is an idea of blended learning in the Philippines, where teachers hold online classes, but at the same time, there is in-person delivery of printed materials for students in villages who do not have access to the internet. This is an open-minded way to address digital inequality. In Japan, there have been some initiatives to lend tablet devices and mobile wi-fi

routers to students who do not have them, which could be one way to reach socioeconomically (and hence, digitally) disadvantaged people with technology.

Question | Bryan Joseph Suniga: How did Thailand's Ministry of Public Health help combat fake news, disinformation, and misinformation about COVID-19?

Answer | Viroj Tangcharoensathien: We developed a weekly online survey, where we introduced two false statements and two true statements and asked respondents whether they can distinguish which is true or false. We further asked if they would share the false statements. From this survey, we crafted a Media Literacy Index, which is derived from the geometric mean of the two indexes: the capacity to distinguish between true and false statements and the capacity to share false statements on social networking sites. After compiling the responses, we found the overall index to be at 60 percent, which means more people do not share false information about COVID-19.

Thailand also has new centers under the Digital Economy and Society Ministry responsible for taking legal actions against those who deliberately disseminate fake news.

Question | Kenneth Siruelo: Public trust and technology are foundational elements for a successful government, especially in this time of the pandemic. With the current state of information technology in the Philippines, especially in the rural areas, how should the country adapt to this new normal of relying more on IT in the delivery of public services? As for public trust, it should be re-cultivated from top to bottom of the bureaucracy. The Civil Service Commission can only do so much, and it has been doing its best all the time to improve the attitude toward the work and image of public servants. How can we slowly change the negative view of public servants?

Answer | Alicia dela Rosa-Bala: First, the Department of Information and Communications Technology (DICT) has been working to continuously improve IT infrastructure toward better delivery of public services. Because we are now more into technology-driven service delivery, we need systems that will address the concerns and emerging needs of agencies, while making sure that we properly communicate pertinent information to the public without breaching data security. We have to ensure that we are able to address challenges on security and confidentiality while bearing in mind such regulations as the Data Privacy Act. The National Privacy Commission and the Presidential Communications Operations Office are addressing these challenges.

To cite a specific example, people file complaints with our Contact Center ng Bayan but would not disclose their names or the organizations they belong to. This situation shows that people trust a government agency, in this case the CSC, to do something about their concerns that also involve a government agency. Such trust will have to be protected and nurtured. Even if one does not provide his/her name, let us know the circumstances, the agency involved, and the persons involved, and CSC will be able to address his/her concern.

Question | Warren de Guzman, ABS-CBN: Given the advances in remote testing and distance education, how can the CSC accommodate more remote testing to facilitate more government hiring? We understand the CSC has stopped all testing this year, making it difficult for job seekers to fulfill requirements for vacant government posts.

Answer | Alicia dela Rosa-Bala: There are requests from the different agencies and local executives for CSC to conduct the Civil Service Examination, but first, we want the number of applicants to be commensurate to the number of people who will actually take the exam. In

far-flung areas, conducting an exam has become difficult due to accessibility issues for examinees and test administrators from the Commission and the Department of Education. Due to the Inter-Agency Task Force (IATF) guidelines prohibiting mass convergence of people, we had to cancel all scheduled examinations. Conducting one test would mean gathering about 500 examinees in a testing venue, thus the risk of exposure to COVID-19.

Our team from the examinations office is now benchmarking with the Professional Regulation Commission and other ASEAN countries on shifting the examinations online. Hopefully, before the year ends, CSC will be able to come up with alternative ways of administering the Civil Service Examinations, either online or in person. The conduct of the exam gathers 300,000 to 400,000 examinees nationwide; we need test protocols that comply with IATF's guidelines.

Question | Ma Veronica Hitosis: How is the CSC taking advantage of remote working in attracting the most talented or experts (as Dr. Banzon puts it) to join the bureaucracy?

Answer | Eduardo Banzon: Right now, secondment and remote working could be described as essentially ad hoc because they are not done in an organized manner even though there are rules. I was seconded in 2000 from UP to the government in an ad hoc manner. To fix this, we need to write down the rules and incentivize secondment.

For six years, I have been working for the Asian Development Bank and being seconded is part of its program to make us better. If I ask for a secondment, it will be given to me, and it will not be resisted upon. In the Philippine civil service, I could imagine it will be resisted by a lot of officers. We need to write down the rules and organize secondment. Now is the time to do it because of COVID-19.

On remote working, we have an excellent real-time experiment on how it is happening right now. I mentioned earlier to academics and universities to study this. If remote working is good enough, then you have the empirical evidence to make it a formal policy. Because COVID-19 forced us to work remotely, maybe we could get anthropologists to document it. If it shows that it works, perhaps we can make it a policy. If it does not work, then we go back to what it was before. Once we have the evidence, it is easy to change.

I do not know to what extent the Commission could revise or update its guidelines. What COVID-19 has given us is an opportunity to change a lot of the old guidelines. To the academics, do your research now. I would really love to see a paper about the advantages and disadvantages of the cost and benefit of remote working.

Answer | Alicia dela Rosa-Bala: There were two studies conducted pertaining to alternative work arrangements that would include work from home. One was done by the Development Academy of the Philippines and another by the Center of Organization Research and Development. We also deployed a quick assessment mechanism, and we are now finalizing data gathered from over 4,000 respondents on the different work alternatives allowed by the government agencies during the pandemic. Hopefully, we will be able to bring out learnings that would help the Commission determine which alternative work arrangements will be institutionalized.

We need to have empirical basis or evidence. We have two institutions that have done studies, and our team is finalizing the data generated from the quick assessment we deployed on the public service sector.

On attracting experts to join the bureaucracy, I want to share with you that the Career Executive Service Board has already adopted a secondment policy for those in the third level.

Through secondment, we are able to deploy experts to government agencies that would benefit from their expertise. We are also working on placement program with the private sector. We are

discussing arrangements with the Management Association of the Philippines that will allow government managers to undergo "apprenticeship" to strengthen skills and competencies in such areas as policy and program development.

Under the interim guidelines on alternative work arrangements, we also allowed the deployment of people from one site to another to address gaps in human resources, especially in the health sector. We will assess if this policy has helped augment the limited human resources in the frontline service.

Speaking of compensation packages and incentives, one of the functions of the Commission is position classification and compensation based on Executive Order 292, series of 1987. However, this function was never assumed by the CSC because of another law that took it out from the CSC and transferred it to the Department of Budget and Management. Although we are limited by this rule, we continue to advocate better position classification and appropriate compensation, especially if there are proposed bills on said concerns.

Question | Ro-Ann Bacal, NEDA: Chairperson Bala, we need to be more proactive at the regional level. There are only less than 200 regional agencies/GOCCs/SUCs. Should not there be regular checking of institutional efficiency and effectiveness in the delivery of services so that interventions become tailor-fit and training becomes unique to the institution?

Answer | Alicia dela Rosa-Bala: I fully support your suggestion. In fact, two years ago, we started encouraging "customized in-house training programs" to address the requirements of a particular agency. There are certain competencies that are relevant across the bureaucracy and, along with customized in-house training programs, we ensure that the developmental needs of personnel of a particular agency would be addressed toward efficient and effective service.

APPC WEBINAR 4

SMART SYSTEMS FOR AGILE GOVERNANCE UNDER THE NEW NORMAL

SESSION OPENER

Sheila Siar | Director/Department Manager, Research Information, PIDS

This is the last of our four-part webinar series for the Sixth Annual Public Policy Conference, the main and culminating activity of the Development Policy Research Month. Our first webinar touched on broad prescriptions on how to reconfigure or reshape our response to the pandemic to achieve better results and thrive in the new normal. Then, in our second webinar, we talked about institutional reforms. We looked at the policy and regulatory environment, particularly the needed changes and improvements in our formal and informal rules and regulations to accelerate transformations. In our third webinar, we tackled another essential aspect of governance innovation—reforming the human resource or, more specifically, the civil service, which is inarguably the most important asset of the government.

Having looked at the policy, the regulatory environment, and the human resource component in our previous webinars, our focus for this webinar is on technology, which we call smart systems or smart solutions. This morning, we will hear from our resource speakers some practical applications of new technologies in socioeconomic data analytics, disaster risk reduction and management, and financial services. Through this webinar, we hope to draw insights on how developing countries like the Philippines can adopt and sustain the implementation of smart systems in governance to achieve resilience and agility in these turbulent times.

For this session, we have three presentations. We will proceed with the open forum after the presentations and entertain the audience's comments and questions.

Presentation 1

Estimating Socioeconomic Indicators in the Philippines Using Machine Learning and Open Geospatial Information

Stephanie Sy | Chief Executive Officer, Thinking Machines

My presentation will go narrow and deep into the usability of machine learning for estimating socioeconomic indicators. It is a scientifically grounded presentation, and I hope to demystify how machine learning and open-source geospatial datasets are useful in development study and policy.

Thinking Machines is a private sector firm that builds artificial intelligence (AI) and data platforms for large corporations. We work with many private equity groups and telcos, among others, but we try to reserve a quarter of our time to work on civic initiatives. Our social impact mission is to empower evidence-based policy and action by (1) filling critical data gaps, (2) making data open and useful, and (3) innovating with purpose.

We do these in our day-to-day operations by building open-source libraries that are shared freely with the public. Open source is the big global push in the technology sector to make software open. We are strongly involved in the open-data initiatives in the Philippines. We work very closely with the OpenStreetMap team that produces point-of-interest data that are freely available for any use (e.g., Department of Health [DOH] datasets, transit datasets with Waze). In terms of innovating with purpose, we work with the Asian Development Bank, the World Bank, the Department of Budget and Management, DOH, and the League of Cities on various initiatives to promote data-driven policy decisions.

Can machine learning support development studies with cheap and fast data inference methods?

In a series of studies, we combined cost-efficient machine learning with freely accessible geospatial information as a fast, low-cost, and scalable means of providing poverty estimates. Specifically, we examine the extent to which geospatial data—remote-sensed data, digital activity, and crowd-sourced information—can be used to estimate socioeconomic well-being in the Philippines.

We look into the viability of using free and openly available satellite images taken from Google Earth Engine, Facebook marketing data, and OpenStreetMap data to estimate poverty indicators derived from the 2017 National Demographic and Health Survey (NDHS) (PSA and ICF 2018).

Every four to five years, the Philippine Statistics Authority (PSA) runs a very granular survey on a per household level. They interview nationally representative samples of households to capture key demographic and health indicators across the Philippines. The most recent NDHS was done in 2017, with 27,496 households successfully interviewed.

What we are trying to do is to see if we can use unconventional datasets—satellite imagery, social media data, and other geospatial datasets—

and feed those into machine learning models. Then, we validate if we can accurately estimate some of the NDHS's socioeconomic factors, such as education level, electricity access, and wealth index.

We took several approaches to the problem. First, we used a deep learning approach, which trained an AI model to read satellite imagery and infer wealth from that. Second, we modified our approach to see if we could train a cheaper, faster AI model without using satellite imagery—only Facebook data and open-source geospatial data. Our goal is to support surveyors and decisionmakers by using technology to infer useful data for areas where surveys are not feasible.

I want to emphasize that these methods will never replace the NDHS or ground-truth surveys. It is because if you think about how many models are trained, you have to show AI models many examples for them to learn from, then it will take its learnings and predict. But how do you know it is predicting correctly? You need ground truth or validated results to check AI models' predictions against. Machine learning models and ground-truth surveys, hence, must be complementary; they should never be treated as replacements for each other.

First approach: satellite imagery

There have been many interesting pieces of research coming out on using AI and machine learning for development studies, as noted in big machine learning conferences like the ICML, NeurIPS, and KDD. About four years ago, an explosion of research in using deep learning on satellite imagery to predict wealth factors started. The Stanford Sustainability and AI Lab wrote one of the pioneering studies on this (i.e., estimated asset-based wealth for five sub-Saharan African countries). Our first approach is to replicate this work in the Philippines.

The core intuition of this approach is that if you were able to train an AI model to look at satellite imagery, you should be able to infer wealth. The snapshot of the Bonifacio Global City (Image 1) provides an example where most people would infer that the left side is wealthier than the right (e.g., houses and roads look bigger, more spacing, more greenery). If you ask a human being to look at every square kilometer of the Philippines and generate a wealth score across the country, it will be expensive and time-consuming. Hence, the question is: can you train machine learning to do something very similar?

Image 1. Bonifacio Global City

Source: Thinking Machines Data Science Inc.

Ideally, you would have many satellite images that you would label. Labeled data will be used to train machine learning model (i.e., bigger houses mean wealthier). You then have poverty predictions, wealth index, education, access to water, electricity, and child mortality coming out at the end of that. The problem is we do not have enough labeled training data that are labeled directly on satellite imagery, which are needed to implement an end-to-end deep learning model. If that labeled satellite data do not exist in the Philippines, how do you overcome this data gap?

As a proxy for economic development, the Stanford Sustainability and AI Lab used nighttime lights data. Images 2 and 3 present Metro Manila in daytime and nighttime, respectively. Intuitively, you can see the main commercial areas of Metro Manila at night, as well as the suburbs, byways, and highways.

Figure 1 shows that for each of the 1,200+ sampled locations or "clusters" in the 2017 NDHS, there was a positive correlation between nightlight luminosity and average household wealth index (p-0.75, r-0.49).

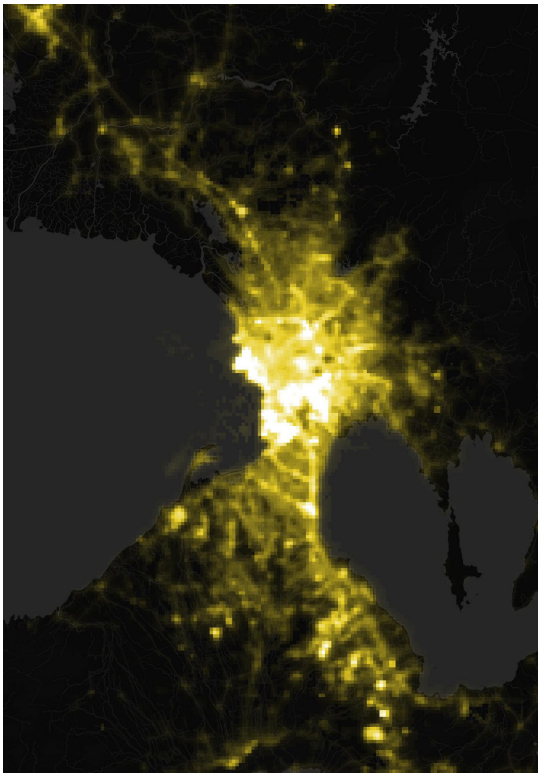
In essence, we asked the machine learning model to do the following:

- **Step 1. Predict nighttime light intensity as a proxy task.** We mapped the daytime satellite images to the corresponding nighttime light intensity

Image 2. Metro Manila (daytime)

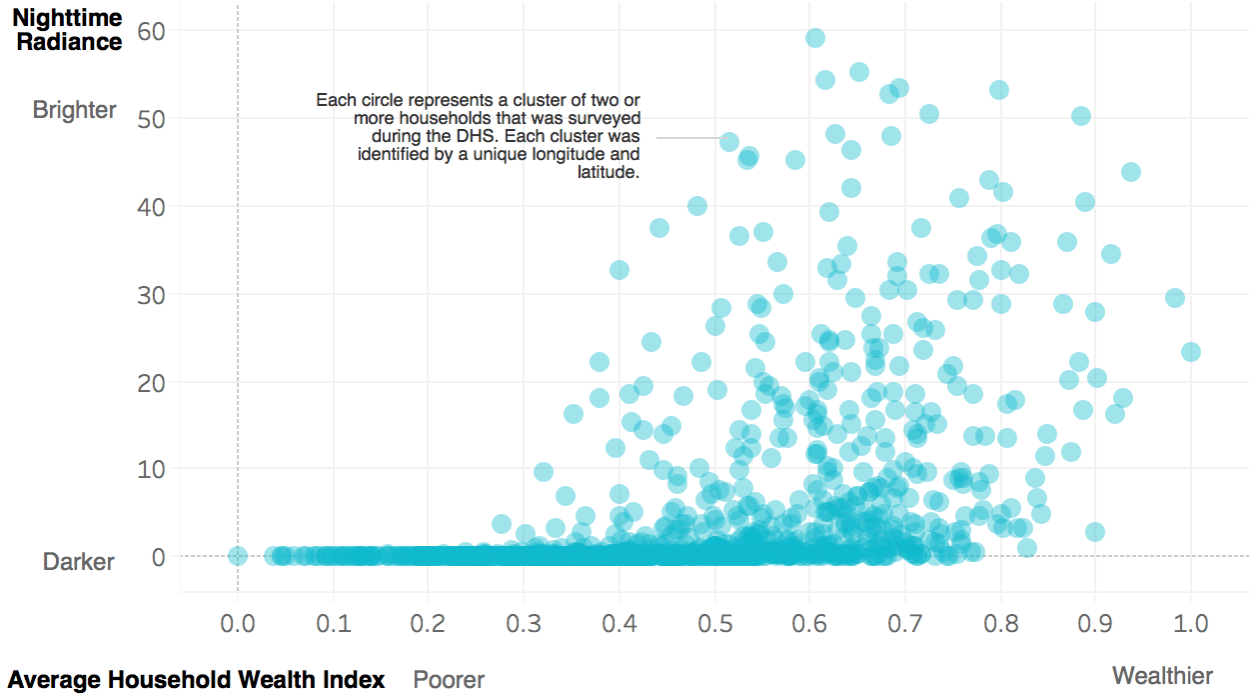
Source: Thinking Machines Data Science Inc.

Image 3. Metro Manila (nighttime)



Source: Thinking Machines Data Science Inc.

Figure 1. Positive correlation between nightlight luminosity and average household wealth index



Source: Thinking Machines Data Science Inc.

levels given by the pixel brightness values. We used a Convolutional Neural Network pretrained on the image net dataset. By mapping daytime satellite images to nighttime lights, we can extract patterns that come in the form of low-dimensional feature embeddings that are indicative of wealth. Patterns that are associated with brighter lights include things such as bigger building sizes and more structured road networks. Meanwhile, the patterns that correspond to dimness consist of rural areas, forests, plains, and small dispersed houses.

Instead of training the AI model to look at bigger building sizes, we train it to think that brighter areas are more indicative of wealth. For every new daytime satellite imagery that we show the model, the model will be able to recognize the patterns that are indicative of wealth.

- **Step 2. Compute the average feature embeddings per cluster to estimate wealth.** We used these feature embeddings as an input to a secondary model to come up with socioeconomic indicators. In model replication, we used the Ridge Regression Model. We also removed images containing no human settlements using the High-Resolution Settlement Layer (HRSL) dataset by Tiecke et al. (2017).

How accurate are our wealth predictions? Figure 2 compares the actual versus estimated or predicted average household wealth index for each of the 1,200+ clusters surveyed in the 2017 NDHS. The model was able to explain 62.5 percent of the variance, which is in line with the Stanford study that generated an r^2 of 0.5 to 0.7 in sub-Saharan nations.

It is notable that this machine learning model does quite well in the middle ranges—but does a poorer job for the extreme wealth and extreme poverty ranges. This is potentially because of the less training data in these extreme situations. For machine learning models, the more examples of something you feed it, the better it will be able to recognize the patterns that follow that.

Second approach: unconventional digital datasets

Expanding the first approach, we then decided to use unconventional datasets—Facebook marketing data, OpenStreetMap data, and CheckMySchool data—to infer wealth. Because satellite imagery is very expensive to buy and process large datasets, our challenge was to use unconventional datasets from open-source libraries to build faster and cheaper models that are at least as accurate as the satellite imagery model.

Figure 2. Actual versus estimated/predicted wealth index (r^2=0.625)

Source: Thinking Machines Data Science Inc.

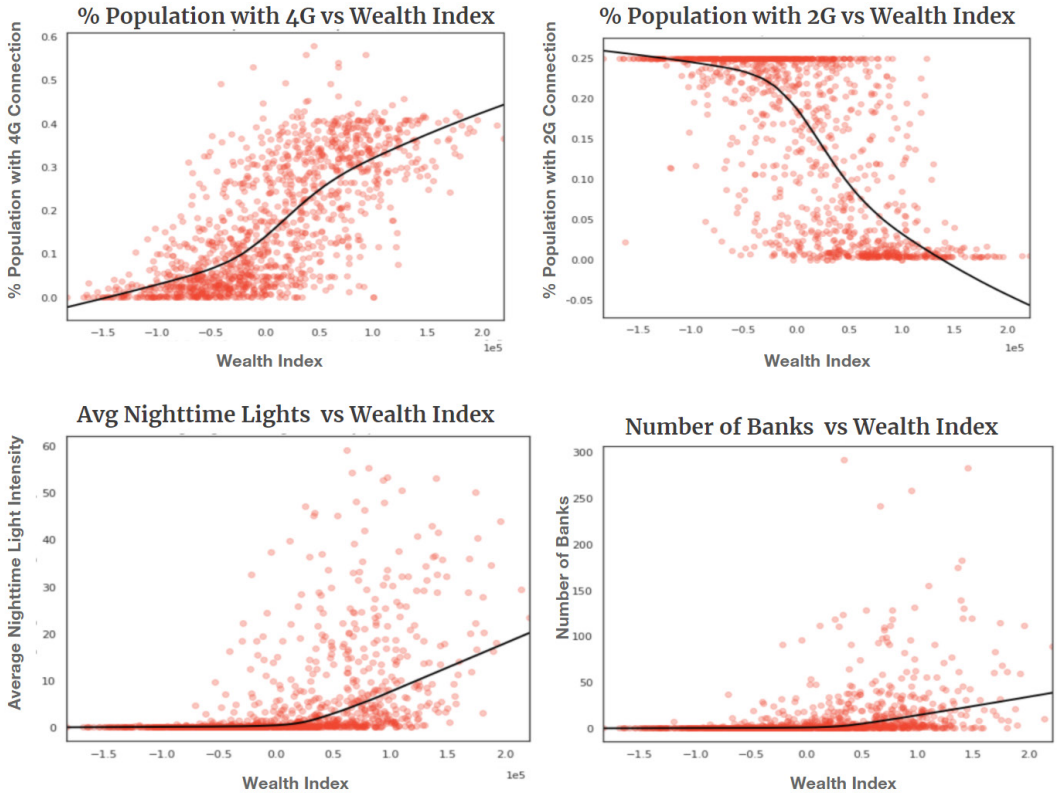
One dataset that you can pull from Facebook is the percentage of the population in a small area that has 4G, 3G, and 2G access. This piece of information correlates well with NDHS survey data (see Figure 3).

In this model, we took the different public datasets and fed them into five classic machine models (i.e., Random Forest Regression, Lasso Regression, Support Vector Regression, Ridge Regression, and Light Gradient Boosting Machine Regression) that have more interoperability than deep learning models. Of these models, the Random Forest Regression performed the best with an r^2 of 0.66, which was validated by the Five-Fold Nested Cross-Validation Approach. This is exciting for us because it aligns well with the results of predictive models that have been done around the world (but not yet in the Philippines).

The reconstructed provincial-level map of this dataset does better in identifying where there is relatively less wealth in a region.

However, one problem with this model is that it does not generalize well with other socioeconomic indicators (i.e., educational attainment, water access). We note that these results are consistent with the conclusions reached by Head et al. (2017), which states that high performance on satellite imagery trained models cannot be expected when

Figure 3. 4G and 2G correlates well with NDHS data



Source: Thinking Machines Data Science Inc.

there is no clear relationship between development indicators and nighttime lights.

When we looked at the feature importance, we saw that nighttime light is still the most important feature in determining whether an area is wealthy or not.

Interestingly, coming behind nighttime lights are the percentage of population using 4G, percentage of population using 3G, the number of schools in the area, and the percentage of population using 2G. These results were further validated by SHAP.

With this, an area of further research we would like to go into is figuring out whether telcos are particularly good at identifying areas becoming wealthier or there is a causative relationship (i.e., does 4G access cause growth in wealth).

Can we use unconventional data sources to infer socioeconomic indicators?

Our work over the last two years has shown that we can use unconventional data sources to infer socioeconomic indicators in ways that support ground truth studies:

- Our first study replicates existing global methods and validates its usefulness in the Philippine context (e.g., gives policymakers and researchers a benchmark to use).
- Our second method improves on the first, as it is highly explainable and interpretable compared to the first set of models. (Generating nationwide wealth estimates costs approximately USD 1,000 per run of cloud compute using the first set of computationally intensive models. Our second model runs in five minutes with a per run cost of approximately USD 20. This is a cost level that enables iteration and experimentation.)

We would like to continue to participate in deeper collaboration with industry, academe, and government to apply machine learning and big data methods to support and augment ground-truth studies, in support of a stronger Philippines.

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Presentation 2

Smart Systems for Climate Change Governance and Disaster Resiliency

Alfredo Mahar Francisco Lagmay | Academician, National Academy of Science and Technology | Professor, National Institute of Geological Sciences, University of the Philippines

My presentation will center on a current project by the University of the Philippines Resilience Institute (UPRI). This project on smart systems for climate change is being done in the capital city of the Philippines—Manila City. Approved in early 2020, this project involves several experts in the field, following a special provision in the 2018 General Appropriations Act:

> "The UPRI, together with other state universities and colleges, shall support the Climate Change Commission in training local government units (LGUs) to formulate complete Local Climate Change Action Plans (LCCAP) and Comprehensive Land Use and Development Plans (CLUDP). The UPRI shall empower LGUs with science-based information and technologies for development planning, such as Climate Vulnerability and Disaster Risk Assessment (CVDRA) and multi-scenario, probabilistic hazard maps."

Particularly in Manila, this project involves climate and disaster risk assessment, land use planning, institutional analysis, and emergency management using the Internet of Things (IoT). In its second phase, we plan to do the Local Disaster Risk Reduction and Management Plan (LDRRMP) and the LCCAP, lead capacity-building activities (i.e., emergency simulation and table-top exercises), and develop risk communication protocols. Many of these activities are derived from the experience of various experts from UP, as well as from the experience of Project NOAH (2012–2017).

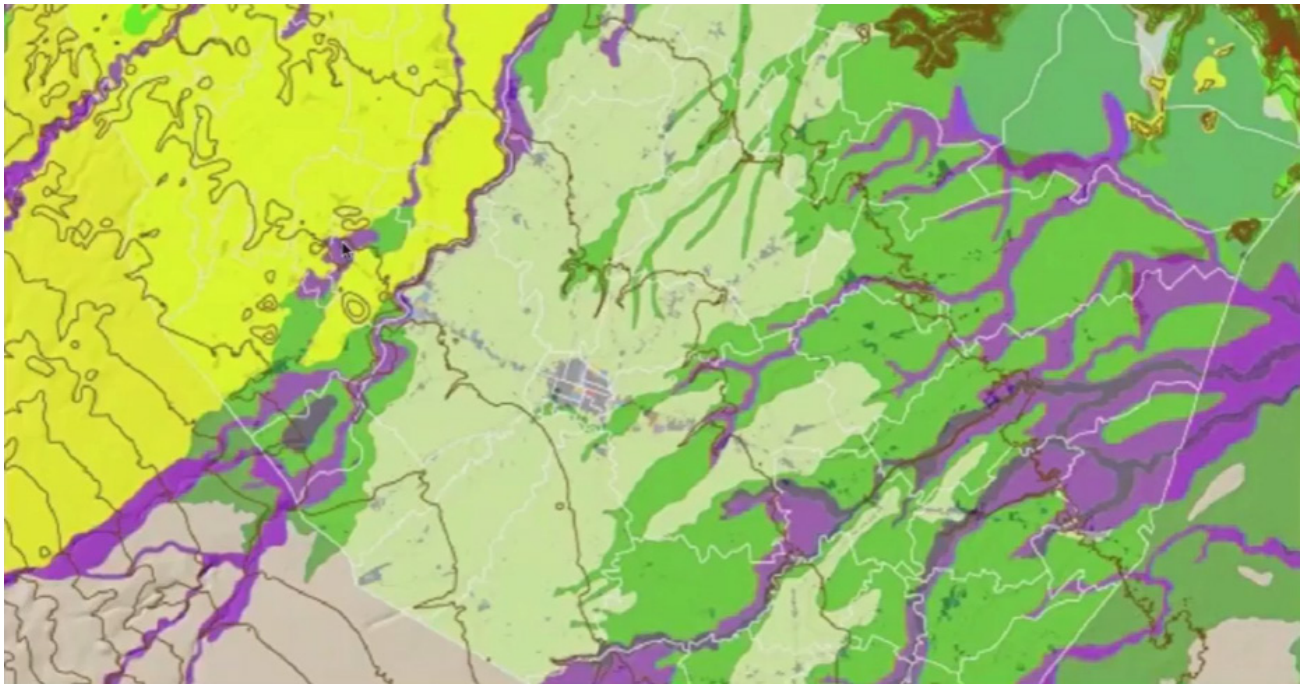
The work is also based on the experience of various experts—not just scientists and engineers but also social scientists and artists. The experience that we have is actual experience in doing the following:

- LCCAP: Taysan, Batangas; Science City of Muñoz, Nueva Ecija, and Naga City, Cebu (ongoing)
- CLUDP: Taysan and Padre Garcia in Batangas; Science City of Muñoz, Nueva Ecija; Makati; Mabalacat, Arayat. Magalang, Santa Rita, and Iriga City in Pampanga; Naga City, Cebu (ongoing); and Cagayan de Oro
- CVDRA: Majayjay, Laguna; Dumangas, Zaragga, and Passi City in Iloilo; Tuguegarao City and Iguig in Cagayan; 30 poor municipalities in Samar and Leyte; and Naga City, Cebu (ongoing)
- LDRRMP/LCCAP: 51 LGUs in Cebu and Tinambak, Camarines Sur

In our project, we follow certain basic principles to help LGUs:

- Science-based with climate change projections
- Participatory
- Capacity building
- Transdisciplinary (deep pool of experts composed of about 200 fellows from different fields of expertise)

Image 1. Flood and landslide hazards based on anecdotal accounts and expert opinion



Source: UP NOAH Center

- Sustainability (platform that is available for use by the City of Manila)
- Advanced technologies (low-cost)

Historical worst case

In helping Manila, it is important to go beyond the historical worst-case scenario. It is because we are dealing with climate change, and many of the projections have not yet happened. If we only rely on historical records, we would be missing very important information from science that will help us prepare for and adapt to those future scenarios.

On top of that, we have noticed that whenever there is a disaster, the survivors always said it was the first time they have seen such event (e.g., flood, landslides in their area). These survivors' accounts are a reflection of their surprise or nonanticipation of an event. If we are not able to anticipate future events worse than the historical record, then we will fail to plan.

Climate change scenarios

Climate change projections say there will be more powerful typhoons and more intense rains, which can cause floods. There is a need for us to depict these hazards into maps based on what climate change scientists are saying. Without doing so, we cannot prepare.

Image 1 shows a hazard map of landslide and flood depicting the historical record: yellow represents low susceptibility to landslides; green represents moderate susceptibility to floods; violet represents high susceptibility to floods; and apple green represents low susceptibility to floods. If

we maintain this kind of hazard maps in planning the CVDRA, CLUDP, and others, then, we are missing the scenarios that are bigger than what the people remember.

For instance, if the people in a community were asked whether it is safe to put up an evacuation center in their area, naturally, they would say yes. Yet, the moment we try to make scenarios of bigger floods, it may show that bigger floods may affect the area where the planned evacuation center is to be sited. If we put them on the said evacuation center, relying only on the accounts of people, then come the time the projections become true, people will die. Survivors will say that they were put there and that it was the first time they have experienced such flood. Most disasters that happened based on people's accounts are a result of not anticipating bigger events (i.e., anticipatory planning).

Communities' ownership

We must bring the information down to the community level. It is extremely important that stakeholders understand and do the science. When they participate, they have ownership, which makes them believe that what they are doing is the way to do it.

The belief in some kind of action is very important. It is because if you just rely on discipline and blame them [communities], discipline is something that you do without belief. You have to make the people embrace the science and make it part of their culture, so that when they are asked to do responsive action, they do it because they know it, they believe it, and they want it.

Transdisciplinary

All planning should be done across all sectors: agriculture, coastal, water, health, forestry, biodiversity, environment, energy, education, tourism, infrastructure, settlement, and mining, among others. It is important because complex disasters happen, and this happens when a certain type of hazard is compounded by another type of hazard. This goes to show that the expertise needed to help an LGU plan is wide. For instance, to do a good job, I will need to rely on many other experts to complete a plan.

Low-cost technologies

In our work in Iloilo, we created an online analytics platform and repository for LCCAP and other development plans of the community. This platform can be expanded further (i.e., the Department of Information and Communications Technology has an account in this server). Hazard maps are reflected in this server, which is called the ReBUILD program funded by the New Zealand Aid, the United Nations, and the Climate Change Commission.

Under ReBUILD, we can see different hazards (i.e., 5-year, 25-year, or 100-year rain-return hazards). We are also looking at the representative concentration pathway for 2049 and 2079, as suggested by the Intergovernmental Panel on Climate Change. These scenarios need to be inputted into the planning process.

The exposure elements (i.e., population, critical infrastructure) can also be found in ReBUILD. The vulnerability criteria are likewise inputted into the system in both visual and table forms. For example, if you select the type of hazard, you will be able to create the exposure elements and vulnerability information for every barangay. The stakeholders and the LGUs are the ones that put in that information. When the demographic data are selected or filled up, there is an automatic response in terms of the assessment of risks (i.e., in terms of scores). There is room for improvement in the system, but it is now up and running.

In Manila, we will be doing the IoT. It is powerful because it gives us sets of data that screen in near-real-time (cost determines whether we can do real-time data screening). It allows us to capitalize on this kind of system for better information, which can be used for better science-based decisions or policies.

Through Project NOAH, we put up many sensors with the support of the Department of Science and Technology-Advanced Science and Technology Institute.

These low-cost technologies have this kind of topology or gateways (i.e., IoT), which can be put in many parts of the City of Manila. It can be street flood sensors, rain gauges, tide gauges, pollution meters, river water level sensors, and seismometers. This system will be put up in Manila's operation centers.

Hopefully, the other LGUs surrounding Manila will follow suit because we can also monitor the different catchment areas of Metro Manila that can pollute Manila Bay.

If we can already stop pollution in the upper watersheds through IoT, we stand a better chance to clean up Manila Bay.

Inspiring a future generation of scientists

IoT also encourages education and people's participation. If they are able to hear an earthquake, such as the Leyte earthquake in 2018 that was detected in Metro Manila, it can inspire future generations of disaster scientists or seismologists, which we badly need. In the Philippines, we have many disaster problems, which require more scientists.

Through IoT, we can look at waves propagating from one end to another. An example is the September 2020 Mindanao earthquake that was observed by the sensors in the United States. We hope to deploy the same number of sensors in the Philippines, so people can get more engaged and get more timely information.

We hope that whatever we create in the plans in Manila can be done in other LGUs, so we can prepare and anticipate well, and be able to stand against the threats of the different types of hazards that plague the Philippines.

Presentation 3

Balancing Innovation-Risks Tradeoffs: Reaping the Benefits while Managing Risks

Laura Ignacio | Director, Center for Monetary and Financial Policy, Bangko Sentral ng Pilipinas

I would like to thank everyone who is watching this webinar and supporting this annual recognition of the importance of policy research in development planning and decisionmaking. This year, PIDS came up with an interesting and relevant topic, combining technological innovations and governance—or smart governance, which refers to the use of innovations and technology to improve the delivery of public services. For the *Bangko Sentral ng Pilipinas* (BSP), this refers to fintech or innovations in financial technology.

Balancing innovation with regulation

In general, fintech refers to technology-enabled innovations in financial services and payments. It has transformed and continues to transform the financial sector, as well as financial products and services and payment systems. The increased digitalization has enabled consumers and businesses to transfer value instantaneously, which provides convenience at a lower cost. However, there are risks.

An important role of the financial sector is to provide efficient ways for households and businesses to make and receive payments. A well-functioning payment system facilitates economic activities and supports long-term economic growth. Central banks are responsible for maintaining the safety and integrity of the payment system.

One of the mandates of the BSP is to provide a safe, efficient, and inclusive payment and settlement system. As the authority with oversight over the payment and settlement system in the Philippines, the BSP has the responsibility to monitor developments in this area. We have to ensure that the payment infrastructure is safe, while it is efficient and fast. We have to identify potential risks and evaluate whether new regulations are necessary.

Overview of the BSP's payment system

The BSP operates the Philippines Payment and Settlement System called the PhilPaSS, which was first implemented in 2002. It is a real-time, gross settlement system that manages large-value transactions.

In 2015, the BSP launched the National Retail Payment System or the NRPS framework, which was envisioned to create a safe, reliable, affordable, interoperable, and efficient retail payment system in the country. Under the NRPS, the BSP encourages the use of electronic payments or modern financial technologies to enhance the speed, convenience, and affordability of financial transactions.

The NRPS became operational through the formation of two automated clearing houses:

PESONet and InstaPay. PESONet is being promoted as a viable alternative to checks and recurring bulk payments, while InstaPay is a substitute for coins and cash.

In turn, PESONet and InstaPay facilitated another two important initiatives of the NRPS: EGov Pay Facility via PESONet and the National Quick Response Code Standard (QR Ph) via InstaPay. The EGov Pay Facility digitized government collections and disbursements, which resulted in more efficient government collection, better audit, enhanced transparency, and—eventually—curbed revenue leaks. Meanwhile, the adoption of QR Ph has transformed the fragmented QR-driven payment services into interoperable payment solutions. It eliminated the need for merchants and customers to maintain several accounts, as well as for merchants to display numerous QRs. As of August 2020, PESONet has 60 participating institutions, while InstaPay has 47.

Growing preference for digital transactions

Data show that there is growing preference for digital transactions. More clients of payment service providers have been leveraging on the benefits of PESONet and InstaPay, as these are seen as safer and more convenient ways to make payments and fund transfers.

Comparing the combined PESONet and InstaPay transactions for the first and second quarters of 2020, there is a notable increase in volume and value by 122 percent and 59 percent, respectively. This increase is partly attributed to the financial assistance extended by the Social Security System to micro, small, and medium enterprises via PESONet in May 2020. There was also the Department of Social Welfare and Development's Social Amelioration Program 2, where disbursements to around 1 million beneficiaries were transferred by the Land Bank of the Philippines through PESONet.

Parallel to this, the volume and value of automated teller machine (ATM) withdrawals dropped by 30 percent and 25 percent, respectively, for the first 45 days under the enhanced community quarantine (ECQ)—compared to the same period before the ECQ. A similar trend was seen in check payments, where the volume and value declined by 70 percent and 60 percent, respectively. The lowest volume and value of ATM withdrawals and check payments to date were observed in April 2020, when the ECQ was in effect for a full month.

The increase in PESONet and InstaPay transactions was further supported by the waiving of PESONet and InstaPay transfer fees of major payment service providers since the beginning of the community quarantine. Some financial institutions have extended the suspension of fees until September 2020, while others have prolonged the waiver until the end of December 2020.

Prior to this, the BSP extended a temporary waiver of fees for fund transfer transactions made through PhilPaSS from April 1 until the end of 2020. With this relief measure, financial institutions were strongly encouraged by the BSP to extend similar relief to users of digital fund transfer services and ATMs.

There is also an increase in EGov Pay transactions, which reflects the increasing public awareness of the digital facility. The facility is being recognized as a safe and efficient means for taxes, licenses, permits, and other obligations to the government. Since its launch in November 2019, there has been a marked increase in both transaction volume (688%) and value (799%). The number of government billers enrolled in this facility expanded from only two when it started to 277 government billers by the end of June 2020. The top billers are the Bureau of Internal Revenue, Philippine National Police, Environmental Management Bureau, and Overseas Workers Welfare Administration.

The demand and supply of QR-enabled payment services have likewise been showing an

increasing trend. Person-to-person transactions showed a sharp growth of 1,214-percent increase in volume and 1,374-percent increase in value.

Digitization and financial inclusion

The use of electronic payments is greatly encouraged with the zero fees on PESONet and InstaPay, as well as with the digitization of payments (e.g., social benefits, wages, and transportation). The increase in digitization and the public's acceptance and greater usage of these electronic platforms also promote financial inclusion, which is a major advocacy of the BSP.

In parallel to this, the BSP carries out other initiatives:

- In 2018, the BSP introduced the basic deposit account or BDA. It is a no-frill bank account with an opening amount of PHP 100 or less, no maintaining balance, no dormancy charges, and simple requirements (e.g., official identification). As of the end of 2019, there were 120 banks offering BDAs and 4 million BDA depositors amounting to PHP 3.5 billion deposits.
- There is an expansive network of low-cost touchpoints, with the BSP allowing more cash agents, as well as e-money agents. This way, banks are allowed to serve clients through retail outlets as cash agents, which can accept and disburse cash on behalf of the bank.
- We have branch-like units that can provide a wide range of products and services depending on the market needs of a specific area or locality. These arrangements allow consumers to access financial services, such as remittance transfers, even without having a bank account.
- Finally, the BSP takes an active role in pushing for the implementation of the Philippine National ID System or PhilSys in collaboration with the Philippine Statistics Authority and other agencies. This is to establish a verifiable digital identity for Filipinos, which will also enable them to open bank accounts and use financial services more efficiently.

Striking the right balance

Notwithstanding all the benefits that may arise from the increase in digitization, the BSP is also mindful of the potential risks, such as disruptions in financial services (i.e., operational risks like system capacity constraints and/or the unavailability of critical staff affected by quarantines or illnesses), fraud and cyberattacks (e.g., phishing, malicious websites), and fund diversion to money laundering and terrorism financing.

Given these risks, monetary and financial regulators need to have a balanced approach to risk and growth by keeping pace with the latest developments in financial markets and promoting innovations and healthy competitions, while addressing consumer protection issues and managing financial stability risks. The BSP has established a regulatory environment where risks are effectively managed without stifling innovations.

Our approach is three-fold:

- Risk-based, proportionate, and fair regulations;
- Active multistakeholder collaboration (with the industry, users, and consumers); and
- Consumer protection through communication campaigns, financial literacy programs, and cybersecurity awareness programs.

These principles are implemented through a flexible "test-and-learn approach" or regulatory sandbox. By successfully managing risks, we can leverage financial innovations to harness the potential benefits for inclusive economic growth.

Another critical consideration that should be addressed is the poor condition of Internet connectivity, particularly in rural areas. The condition may worsen with the pandemic, especially when the reliance of people on online transactions takes up higher bandwidth, which slows down the Internet. This causes increased public frustration and potential loss of trust in digital payment facilities.

Adoption of RegTech solutions

The BSP is carrying out major organizational reforms and initiatives toward a more proactive supervisory and regulatory stance. We are exploring RegTech (regulatory technology) and SupTech (supervisory technology) solutions to enhance the timeliness and quality of our risk-based decisionmaking. This includes the use of artificial intelligence (AI), machine learning, cloud computing, and application programming interface (API) systems.

In September 2019 in Singapore, the BSP won awards in two categories: (1) data management initiative with the development of a prototype API-based prudential reporting system and (2) AI for the development of a prototype chatbot (i.e., Automated Complaint-Handling Portal). This chatbot named Bob (BSP Online Buddy) was recently implemented to provide the public with a more accessible and efficient means of engaging the BSP on financial consumer concerns. It can efficiently handle queries from consumers sent through the webchat in the BSP's website, SMS, or Facebook Messenger. By using AI and natural language processing, Bob can respond to queries or concerns in English, *Tagalog*, or *Taglish*.

To complement the use of API-based reporting, the BSP also created a Financial Institution Portal for those financial institutions that cannot immediately migrate to newer technology.

This portal provides a single electronic platform upon which financial institutions can submit reports, receive feedback, and exchange correspondences with the BSP on matters related to report submissions.

It also offers a more secure process of submission through a web facility, where financial institutions can upload their reports instead of sending them via email. It likewise enhances transparency as both the BSP and the financial institutions will see identical documents in the portal.

Increasing reliance on digital platforms in the new normal

Our experience during the pandemic shows the critical role of digital platforms in financial transactions and the economy, in general. There is no arguing that the new normal ushers the reliance of both the people and the economy on digital platforms.

We expect an increased preference for doing banking and making payments online, as consumers realize the convenience and safety of digital banking. As economic transactions shift to online platforms, there will be greater demand for online payments, savings, investments, and other financial services.

We also expect an increase in the demand for financial products or insurance products and claims, following the increasing number of infections and fatalities caused by the pandemic.

Given these developments, we need to strengthen infrastructure for and regulation of online financial services, as well as promote financial inclusion by leveraging on financial technology.

Key takeaways

- The pandemic and the subsequent restrictions have accelerated the adoption and usage of technological innovations in the payments system.
- Innovations have provided benefits to consumers and businesses but also presented risks that have to be managed.
- The BSP remains vigilant against potential risks to allow consumers and businesses to reap the benefits of innovations.

With a balanced approach to financial innovation, the BSP tries to create an enabling environment for new technologies and digital transformation. Moreover, the regulations must continue to adjust to these developments, so as not to compromise consumer protection standards and to ensure that the welfare of consumers is safeguarded.

Session 4 Open Forum

Question | Nickson Cabote, BSP: As the world continues to be preoccupied with the current crisis, how do we keep the focus of policymakers and authorities on the ongoing environmental challenges that are left unchecked and could become the next source of global vulnerabilities and economic crises?

Answer | Mahar Lagmay: Of course, there is a problem, especially if we are occupied with the current pandemic. Even without the pandemic, we always tend to forget the things that we need to do. The answer to that question is better education and better awareness, so we know what to push for, so authorities and officials will move and do the things that are required of them in the service of the Filipino people.

There are so many things that need to be pushed for; the problem is the tendency of Filipinos to be silent. We always have to be vigilant, and we need to have the basic knowledge of what we need to be vigilant about. The Philippines is very big, and it is important that the people become aware of the things that we need our mayors and other officials to do. If there is something that needs to be corrected, we need to discuss it in a civilized way, so it will be brought to the limelight and people can act. In the end, it is science that needs to be followed; it needs to be logical.

It is not just about the pandemic—it is the general tendency of people to forget and be complacent. We need to be vigilant, and to be vigilant, we need to be aware of what needs to happen. In this case, in response to the question, we have a lot of laws that need to be implemented and followed.

Question | Romulo Emmanuel Miral, Congressional Policy and Budget Research Department: The National Land Use Act has been pending in Congress for decades now. How is this affecting the preparation of local land use plans and disaster risk management plans?

Answer | Mahar Lagmay: LGUs have been making their land use plans and DRRM plans, as well as doing climate change assessments. We are waiting for the bill to be acted upon. But, so far, we have been creating the plans for the LGUs that need our help. Those plans contain the vision of communities. It is a tedious process of engagement, but it is necessary if we are to get the consensus of what the people want in terms of managing their land.

Question | Aniceto Orbeta, PIDS: For Dr. Lagmay, what are the major challenges that you have experienced in setting up information systems with LGUs and how have you dealt with these?

Answer | Mahar Lagmay: We found it quite easy to set up the information system. It is because the LGUs were very cooperative, making the process quicker and easier. The challenge is to convince the LGUs that they need the system. But once they expressed their interest and willingness, the

process became easier, especially now that the system has already been created. It is just a matter of replicating it in other LGUs. Once you have done and coded these digital systems—and they are already up and running—it is just a matter of adding more data and applying it to other areas.

Question | Aniceto Orbeta, PIDS: For Dr. Lagmay, what data are generated by the systems and how are these being used to inform program design and policymaking? Are there data ownership issues? Can the data be shared with other analysts?

Answer | Mahar Lagmay: First, I would like to clarify the differences between data, information, and knowledge. Data is the one that you measure and collect from interviews, surveys, and others. It is used to generate information. Once the information is used for beneficial purposes, it becomes knowledge. For instance, in the information system, the demographic data came from the LGUs. There were also scientific data sources provided by agencies, as well as scientific outputs from the UPRI team. These data are processed either automatically or being reviewed by scientists and engineers. The output of this is information, which is useful for the planning process. If it is beneficial for the future of the community, then it is good knowledge output.

At UPRI, we believe in open data; it is one of the basic principles relevant to build trust in communicating risks. Science also needs to be trusted because methodologies need to be reproducible. If people do not have access to data, then there would be no checks and balances. We believe there must be trust in order for the authorities to be able to communicate well.

Open data is important if we talk about a whole-of-society approach, wherein the multidisciplinary work requires collaboration with scientists, engineers, social scientists, artists, musicians, mathematicians, statisticians, anthropologists, and psychologists. We need to engage them—as well as stakeholders like national government agencies, nongovernment organizations, and international nongovernment organizations—to have a transdisciplinary approach in solving disaster-related problems. We need access to open data, which opens many opportunities, including education and awareness, which are effective building blocks for the country's effective and efficient disaster risk reduction and climate change efforts. These are all based on certain fundamentals that include science being reproducible.

Question | Maria Carmela Romerosa: For Dir. Ignacio, given the high demand for e-payment systems and the risks involved, what are the measures being undertaken by BSP to assist the consumers/clients, particularly those in the less urbanized or rural areas?

Answer | Laura Ignacio: For financial inclusion, the BSP has the basic deposit account. You can easily open a basic deposit account, as it has no minimum amount and only has simple requirements for identification documents. Because of the risks, there are also several communication or public information campaigns advising the public against phishing scams and to be very careful with their personal financial information.

BSP has also issued Circular 808 that has comprehensive information on technology risk management to enable financial service delivery in a safe and sound manner. There is also Circular 982 on information security management. We are also working on the legislative bill on consumer protection. With these in place, we could have more guidelines or measures for consumer protection.

Question | May Angelica Saludez, Philippine Commission on Women: Digitizing government transactions is a good step to achieve development. However, I am afraid that the rural population, especially the most vulnerable groups, such as women, the elderly, etc., will be left behind if

gender-responsive policies and enabling mechanisms will not work. For BSP, DBM, policymakers, and other related institutions, can we then recommend that the 5-percent gender and development (GAD) budget of all government agencies be given as a 'real budget' for the provision of capacity development and digital infrastructure for the next three years?

Answer | Laura Ignacio: I agree that the high digitization and use of, say, smartphones for financial transactions, heightens the differences, not with regard to gender but, in particular, between those who have access to technologies and those who do not. There is a divide.

The information on gender or socioeconomic indicators cannot be recorded from transactions. Transactions only record value and volume. But there is a survey done by the Better than Cash Alliance, reporting that "the Philippines is a global leader when it comes to women's economic participation and addressing the gender gap in the use of digital financial services. While globally, women are 2- to 12-percentage points behind men in account ownership, Filipino women are 9-percentage points ahead" of men in account ownership. "Filipino women are also ahead of men by 4-percentage points in the uptake of digital payments" (Source: *The State of Digital Payments in the Philippines* by Better Than Cash Alliance).

Question | Aniceto Orbeta, PIDS: Is there information on which socioeconomic sectors of our society are able to use online payments (PESONet and InstaPay)?

Answer | Laura Ignacio: As far as I know, the data on PESONet and InstaPay only show the value and volume. The transactions do not capture socioeconomic information or gender. These socioeconomic indicators are captured by surveys, similar to the study done by the Better than Cash Alliance.

Quezon | Janelle Rabe: What are the initiatives of the BSP to support LGUs in integrating the e-payment system and financial technology in their operations? Are there template codes and capacity-building programs that may be cascaded to LGUs for ease of adoption?

Answer | Laura Ignacio: We have the EGov Pay to serve as a payment solution for streamlining the digitization of government collections and disbursements. It is supposed to help curb government revenue leaks with efficient collection means and enhanced transparency. It could benefit most LGUs as well. But I do not think there is any template code or capacity-building programs initiated by the BSP for the LGUs.

Question | Angelo Alfonso Tesoro, III: In terms of alternative ways of payment and handling financial inclusivity through digital currency (i.e., cryptocurrency), do we have existing guidelines/documents here in the Philippines that were formulated to mitigate the use of this currency on cybersecurity threats?

Answer | Laura Ignacio: In 2014, the BSP issued an advisory to the public to inform them of the features, benefits, and risks of handling virtual currencies. Again, in 2017, the BSP issued another circular on the use of virtual currencies for payments and remittances in the Philippines. With that circular, virtual currency exchanges are registered under the BSP. If they are registered with the BSP, they are also required to put in place adequate safeguards to address the risks associated with money laundering, terrorism financing, technology risk management systems, and consumer protection mechanisms.

There is another advisory on the use of virtual currency dated December 29, 2017, which advised the public about fraudulent practices that invite consumers to invest in bitcoins or initial coin offerings. These circulars can be accessed via the BSP website.

Question | Anonymous: What are your views on institutionalizing or requiring e-payments in the public sector?

Answer | Laura Ignacio: When you require e-payments in the public sector, the only constraint there is the infrastructure. If you have the infrastructure in place, then you can very well require everyone to use e-payment. The concern there is for merchants and consumers who have no access; for them, it would be difficult. I think instead of institutionalizing, "encouraging" is a better word. We can encourage everyone to use electronic payment, and then, little by little, the government and other institutions can help with the infrastructure. Once these are in place, it would be easier to ask everyone to use e-payment.

Question | Nickson Cabote, BSP: For Ms. Sy, how helpful are the study results for policymaking, given that the substantial portion of the actual survey data remains unexplained by the model, and considering the need for accuracy in socioeconomic policy, as it involves the lives and livelihoods of people?

Answer | Stephanie Sy: I do not recommend that you use this model in a scenario where you need 100-percent accuracy. These models are very helpful when it comes to augmenting and giving rough estimates of where the wealth situation is moving or where 4G connectivity is higher. But you should not use it for high-pressure, high-risk situations. Please remember that there usually is a gap between when a new method comes out and when it is ready for use, just like the journey from science to policy (i.e., the science to policy spectrum: between when something is raw and worth curating on, and when something is ready to go into production, ready for daily use).

I do want to say, though, that our results are very much in line with—and improving at the same level as—the global studies on machine learning. When it comes to our ability to publish, we have had our papers accepted at workshops in the International Conference on Machine Learning in Europe, which is one of the top machine learning conferences in the world.

Now, should you start using it tomorrow for policymaking, I would say not. I would say use the 4G datasets and the nighttime light datasets because we can see how useful they are in inferring wealth. For instance, do you have any idea what percentage of your constituency has Internet access? This information is not available from the telcos, and I would bet that this is not available to 90 percent of LGUs. What this study showed is that you can get these data from Facebook, and they are correlated well with wealth, so you can use these data (i.e., % of population with 4G) to indicate which areas in your municipalities could be doing better or worse. These are all indicators and parts of a larger system.

Question | Nickson Cabote, BSP: How does the model correct intertemporal external validity issues, which are typically the main challenge for machine learning when analyzing socioeconomic data? How often do we change the information feed on the training data to keep the results valid?

Answer | Stephanie Sy: The model that we built does geospatial inferences, not yet temporal inferences, exactly for the reasons you pointed out. Our ground-truth study is the 2017 NDHS dataset, and because we did not start doing this work until 2018, there is already a little misalignment with the ground-truth dataset, the 2018 satellite imagery data, and the OpenStreetMap data in late 2018 to early 2019.

Ideally, what should happen is, when the 2022 NDHS survey comes out, we capture a temporally connected slice of data across all the different indicators that we identified now that we know where to focus our energy on. Then, we share that snapshot as an open dataset. From there,

we can start doing more intertemporal analysis, models, and studies. But for now, our hard stop is that we cannot do it because we do not have better ground-truth data.

Question | Nickson Cabote, BSP: Does the model account for heterogeneity in Philippine regions and provinces, noting that growth and wealth vary across entities in the dataset?

Answer | Stephanie Sy: We are limited by our data source. We are very much reliant on the NDHS—the PSA's dataset—for our ground-truth indicators to have a representative sample and representative cluster in the Philippines. What I would urge people to look into is being able to capture geospatial datasets using OpenStreetMap data to see the density of road networks; using Facebook marketing data to see the density of 4G, 3G, and 2G access across the country; and using nighttime lights datasets. Once you have these datasets, you still cannot measure these things directly, but then you will have a stronger sense of the relationship between infrastructure development (e.g., roads) and wealth.

Comment | Aniceto Orbeta, PIDS: Another source of ground truth is the series of *Listahanan* data, which—as of its last version (2015)—has 15 million households.

Question | Aniceto Orbeta, PIDS: Given your existing models, at which level of granularity are you confident in predicting level of development? This can be very important in targeting assistance, especially during emergencies, as poorer households have less capability of responding well.

Answer | Stephanie Sy: The level of granularity of these models is 4.2 x 4.2 km. Why? This is a hard limit driven by the NDHS clusters because we train the data on NDHS clusters, which are two or more NDHS households that are within the same region. We tried to compute for the smallest possible size of a cluster that would still have two households. With the 27,000 households surveyed in the 2017 NDHS, our smallest possible granularity is 4.2 x 4.2 km.

"Confident" depends on what you are using it for. At an r-squared of 0.66, I would not use this for anything that requires 100-percent accuracy, like direct household targeting. But I would be confident in using this for an LGU dashboard or a nationwide mapping that improves on the current provincial-level statistics.

Question | Yvelen Moraña: What app/system could be used to map out areas with poor internet connection that will not affect the quality of data? Any offline app/system or gadget recommendation?

Answer | Stephanie Sy: On the mapping question, I would want to ask a little more detail on what you are trying to map. It is definitely a problem that we do not have a great connectivity, which is why we not only use connectivity data from Facebook but also the nighttime lights data. The nighttime lights dataset works even in places where there is limited telco connectivity. It allows you to view via satellite imagery the presence of road networks and get from crowdsourced datasets the presence of points of interest (e.g., schools, government facilities). These are all data sources that are related closely to wealth but do not require cellular connectivity.

Question | Jose Ramon Albert, PIDS: Although there are NDHS system welfare indicators, the official welfare indicator in the Philippines is per capita income using the Family Income and Expenditure Survey. Asian Development Bank (ADB) and PSA have developed small areas of

poverty maps, making use of satellite imagery, such as luminosity, together with census data to generate estimates of poverty in small areas. I wonder if your work in Thinking Machines has been validated with the recent ADB-PSA work.

Answer | Stephanie Sy: I believe that it is part of the process of science to further replicate and validate this work. I have not read the study yet, so I would love to see how we can use it: one, if it aligns with what we got and, two, if we can use some of those methods or they can use some of ours. Having added granularity in using nighttime lights, I think that is exciting. I think there should be a lot of people doing similar research because these methods have been out there as open science for the last four years already.

Question | Guiseppe Ng: Is the nighttime satellite imagery used as your ground truth?

Answer | Stephanie Sy: No, we used the 2017 NDHS as ground truth.

Question | Masli Awingan Quilaman: Any update on the development of the communication risk protocols? Transparency and communications were two of the several major culprits identified in the Naga, Cebu landslide incident in September 2018. The same is now evolving in the case of the dolomite sand quarrying 74 kilometers from the Alcoy town in Cebu.

Answer | Mahar Lagmay: There have been two papers that came out on the interpretation of that landslide. I wrote one of them together with some coauthors, and we emphasized the importance of understanding the nature of landslides. We also emphasized the need to properly map out the hazard because when we looked at the disaster risk plan of the LGU, which was approved by the concerned agencies, we found that it did not reflect those areas where there were many deaths as a high-hazard area; they were of a low-hazard area.

This highlights the importance of science and our understanding of the nature of landslides. The landslide in Cebu in 2018 was very extreme relative to the height of collapse and its runout. It fell from a height of about 200 meters, with runout or length of about 1.2 kilometers. This means it had a ratio of 1/6. Normally, when we think of landslides, we only think of a cliff that falls on its base. But this one fell and slid, generating an avalanching material, which traveled 1.2 kilometers long. Science is extremely important for good decisionmaking.

With respect to the dolomite, it is a problem because mining happens a lot in Cebu, as well as in the surrounding areas of Manila. It is a deep problem. My only comment is that going natural is always the best.

Question | Edmer Ubal: For Dr. Ignacio, what are your thoughts on cryptocurrencies, especially bitcoin? Do you see the Philippine government supporting it?

Answer | Laura Ignacio: Our governor is very open to technological developments and innovations in finance. The BSP has recently created a technical working group to look into the Central Bank digital currencies. It is a group composed of different departments, from legal, payments, monetary policy, financial supervision, financial inclusion, and technological innovation. They are looking into the various aspects of digital currencies. We will know the recommendations in the coming months.

CLOSING PROGRAM

Key Takeaways and Closing Remarks

Marife Ballesteros | PIDS Vice President

I would like to conclude with a few thoughts on the key lessons from the four-part webinar series and how these fit into the overall DPRM theme of "Innovating Governance for Building Resilience under the New Normal".

First, the opening message from Socioeconomic Planning Acting Secretary Karl Chua was clear to us. The ability of the government to innovate and be creative is key to building resilience. He emphasized that the government should set the example and provide the direction and impetus for innovation to prosper and meet the demands of the new normal.

A key message that has been emphasized throughout the four-part webinar series is the importance of building trust. Trust is an important element of governance innovation. Without trust, the implementation of reforms to address the challenges brought about by risks and uncertainties will lead to inequalities and punitive actions. We learned from Thailand's governance responses to COVID-19 that trust can be built through transparency and continuous information updates that are based on informed, evidence-based health situations, treatment guidelines, and policy decisions. Community engagement can be established through online education and periodic citizen surveys to ensure adherence to government interventions and to enable the public to distinguish true statements from false news.

Mr. Sean McDonald from the Center of International Governance Innovation also mentioned the importance of building trust in technologies. There are commercial and criminal abuses of technologies that are designed to mislead users into sharing data. There are governments accused of deploying technologies to target political opponents. These situations can cause significant damage to the public's trust. In the worst of cases, the people who are afraid of or resistant to public institutions and governance reforms are likely to remain.

Data privacy rights and the integrity of digital innovation infrastructure should be protected. How can this be done? From global experience and from BSP's own implementation of fintech, technology innovation needs to be supported

by standards and regulations based on informed experimentation. Public institutions should navigate through the politicization of science because this has tremendous public costs.

The APPC has also underscored the importance of the whole-of-government or whole-of-society approach. The bureaucracy should develop the mindset of thinking horizontally rather than vertically. Mr. James Brumby of the World Bank spoke about how the pandemic has made us realize that the dependence on the center of government can be disastrous in the face of complexities and limited resources. We need coordinated action within government and with civil society for the state to use its resources effectively.

It is important to note that a key ingredient to collaboration and coordinated approach is trust. High-trust societies are socially cohesive societies.

Innovation in public governance also requires shift to "tech-powered new normal" (a term used by Dr. Aoki). When we talk of new normal, it is not about the current pandemic but the extensive use of technologies to build resilience. The traditional mindset, especially in countries with significant digital divide, is that it is not fair, since technology tends to widen inequalities in societies. However, we just need to do it! We have experienced the benefits of fintech.

We learned from Dr. Ju-Ho Lee of Korea Development Institute that AI has improved the quality of education even among the marginal and vulnerable groups in countries that implemented the technology. What should we do? Aside from improving the digital infrastructure, we can address the digital divide by being mindful of design thinking and user orientation. The deployment of technology can be tested to ensure that it works and solves the intended problem. Programs to upgrade the skills of civil servants and to care for the digitally challenged can also be put in place.

Another key lesson from the conference is that innovating governance and institutional reforms must be based on informed decisions. Poor government performance has often been associated with problems of data and information scarcity. However, the "tech-powered new normal" has reduced the cost of information gathering and can break down asymmetries in information as presented by Stephanie Sy of Thinking Machines and Dr. Mahar Lagmay of UP. More and more, we will be relying on nontraditional sources of data (GIS, nighttime lights, crowdsourced, Big Data). The possibilities of data capture, improved data accuracy, machine learning, and model building are immense. As noted by speakers in this fourth webinar, public trust in data is also critical for science. This means transparency of data sources and replicability of results to test the validity of assumptions and models.

I hope that we can apply the learnings from this conference and our experiences to innovate and respond to the issues, guided by our common objective to improve public sector governance in the country.

On behalf of PIDS, I would like to thank all the APPC speakers and panelists. We are grateful for your presence and for the interesting and useful presentations. We also thank the webinar moderators for professionally handling the discussions.

To our fellow civil servants in government, the business sector, academe, civil society, and the international community—thank you for being with us, for joining us, and for your active participation.

I wish to also thank our own staff for making this event possible. To the PIDS Scientific Team composed of our research fellows, Dr. Tabuga, Dr. Sicat, Dr. Domingo, and Dr. Ulep, thank you for taking the lead in identifying the conference theme and in framing the topics for the webinars.

Thank you to the PIDS Research Information Department led by Dr. Sheila Siar and her team members, Rowena Taliping, Neille Gwen de la Cruz, Gizelle Manuel, Rica Thea Ladaga, and Jachin Jane Aberilla, for the excellent management of all our events and knowledge dissemination activities for the DPRM.

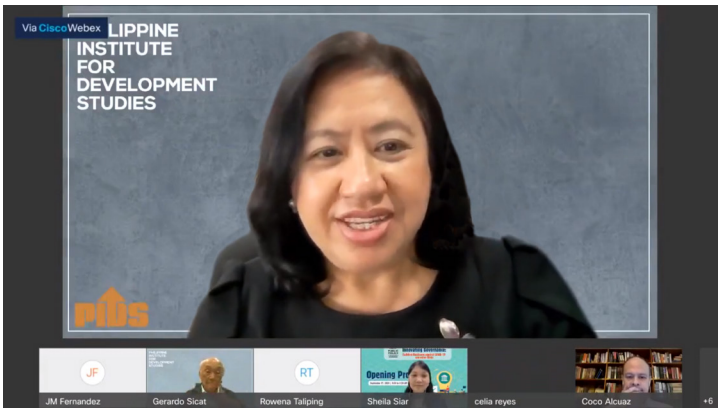
Thank you to our Research Services Department, ICT Services Division, and Administrative and Finance Department for their technical and administrative support and for ensuring that our conference platforms run smoothly.

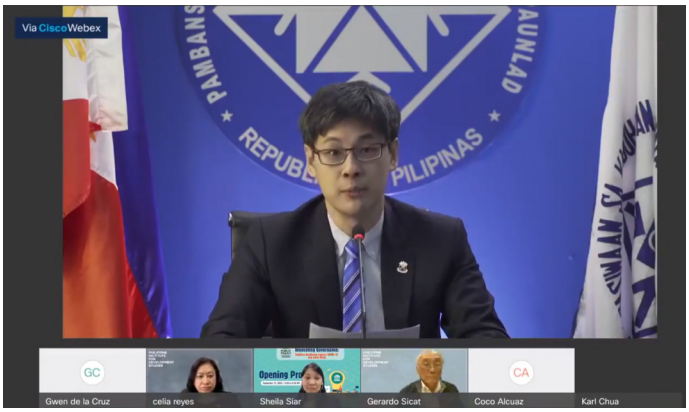
To the APPC secretariat handled by Jocelyn Almeda, Ronina Asis, and Gino Chan, thank you for your efficient assistance in coordinating with the conference speakers and panelists.

Maraming salamat. I wish everyone a blessed day. We hope to see you again in future APPC events.

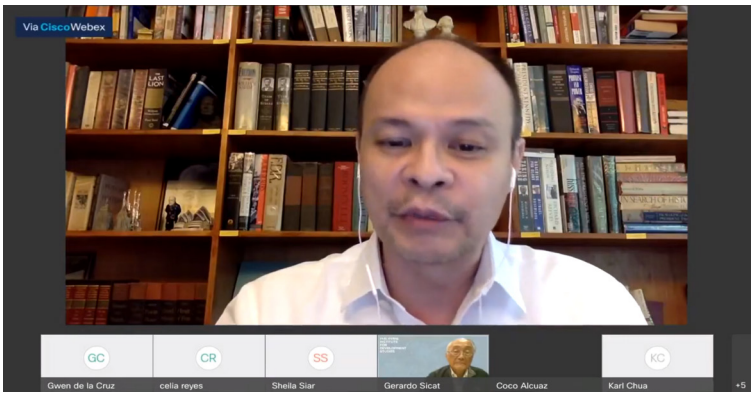
WEBINAR PHOTOS

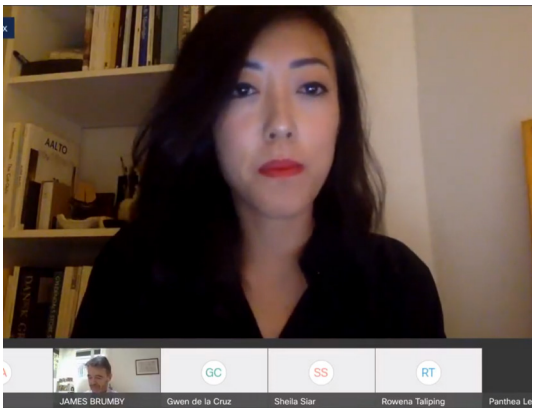
OPENING PROGRAM





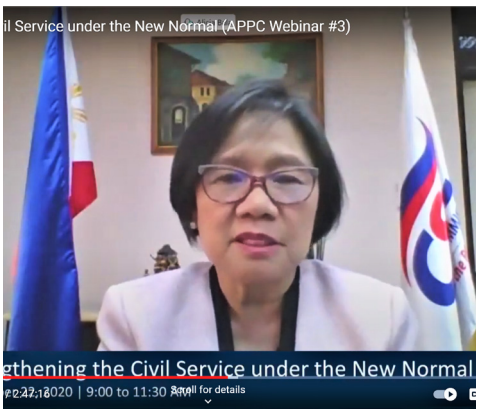
WEBINAR 1: INNOVATION IN PUBLIC SECTOR GOVERNANCE FOR RESILIENCE UNDER A NEW NORMAL: THEORY AND PRACTICE



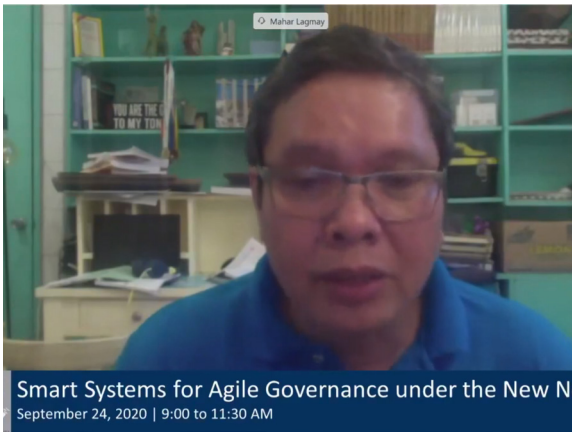


WEBINAR 2: INSTITUTIONAL INNOVATIONS AND REFORMS UNDER THE NEW NORMAL

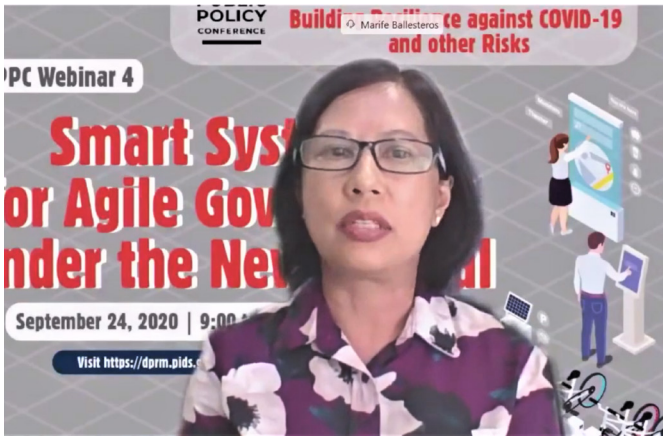
WEBINAR 3: STRENGTHENING THE CIVIL SERVICE UNDER THE NEW NORMAL



WEBINAR 4: SMART SYSTEMS FOR AGILE GOVERNANCE UNDER THE NEW NORMAL



CLOSING PROGRAM



Profiles

Speakers/Panelists/Authors

Naomi Aoki is an associate professor at the Graduate School of Public Policy, University of Tokyo. Before joining the School, she served as an assistant professor in the Lee Kuan Yew School of Public Policy at the National University of Singapore. She specializes in public administration and public management, both interdisciplinary and international perspectives. Her publications have appeared in the *Government Information Quarterly, the American Review of Public Administration, the International Journal of Public Sector Management, Risk Analysis, Cities, Public Management Review, and Public Administration and Development,* among other journals.

Marife Ballesteros is the vice president of the Philippine Institute for Development Studies. Her area of research is development economics, with specialization in housing policy, land policy, and rural and urban development. She has been involved in several evaluation studies of government regulatory policies and poverty programs. She has also worked on several projects with the World Bank, Asian Development Bank, Japan International Cooperation Agency, and Australian Agency for International Development.

Eduardo Banzon is a principal health specialist at the Sustainable Development and Climate Change Department of the Asian Development Bank (ADB). He champions universal health coverage (UHC) and has long provided technical support on UHC to countries in Asia and the Pacific. Before joining ADB, he was a regional adviser for health financing for the Eastern Mediterranean region and a health economist in Bangladesh for the World Health Organization. He also served as president and chief executive officer of the Philippine Health Insurance Corporation, World Bank senior health specialist in the East Asia and Pacific region, and faculty member of the University of the Philippines (UP) College of Medicine and Ateneo Graduate School of Business.

Jim Brumby is a senior adviser at the World Bank Group. Before relocating to Singapore in 2019, he was the director of the Governance Global Practice of the World Bank in Washington, DC, leading global response on COVID-19 while working across the financial management and public sector families focused on bolstering public investment management and strengthening institutions. He has worked on public management and economic reforms at state, national, and international levels for several decades at the Treasuries of Victoria and New Zealand, Organisation for Economic Co-operation and Development (OECD), International Monetary Fund, and the World Bank. He obtained his Master in Public Administration from Harvard University.

Karl Kendrick Chua is acting socioeconomic planning secretary and director-general of the National Economic and Development Authority (NEDA). His top three priorities upon being appointed amid the COVID-19 crisis include fast-tracking the National Identification System, economic recovery plan, and the Build, Build, Build program. As undersecretary of the Department of Finance's Strategy, Economics, and Results Group, he helped the government implement its 10-point socioeconomic agenda by ensuring equitable and sustainable financing through the Comprehensive Tax Reform Program. Before joining the government, he was the World Bank's senior country economist for the Philippines. He completed his MA and PhD in Economics at the UP School of Economics.

Alicia dela Rosa-Bala is the chairperson of the Civil Service Commission, the central human resource institution of the Philippine government. She was the undersecretary for Policy and Plans of the Department of Social Welfare and Development (DSWD), which she served for 39 years. She also served as the deputy secretary-general for the ASEAN Socio-Cultural Community Department in Jakarta, Indonesia, from 2012 to 2015. She was DSWD's First Best Manager Awardee in 2004, an Outstanding Career Executive Service Officer in 2012, and one of the 2018 *Ulirang Ina* Awardees. She received her Master in Social Work from the UP Institute of Social Work and Community Development and her BS in Social Work from Centro Escolar University (cum laude).

Laura Ignacio is the director of the Center for Monetary and Financial Policy of the *Bangko Sentral ng Pilipinas* (BSP). Before joining BSP, she was a research consultant at the World Bank and an assistant professor at the Department of Economics of UP Los Baños. She obtained her BS in Statistics from UP and her PhD in Economics from the George Washington University in Washington, D.C.

Alfredo Mahar Francisco Lagmay is an academician of the National Academy of Science and Technology and a professor at the UP National Institute of Geological Sciences. He is the executive director of the UP Resilience Institute and the director of the UP Nationwide Operational Assessment of Hazards Center. A leading international scientific expert on natural hazards, he holds a PhD in Earth Sciences from the University of Cambridge.

Ju-Ho Lee is a professor at the Korea Development Institute-School of Public Policy and Management and a commissioner of the International Commission on Financing the Global Educational Opportunity (The Education Commission). He served as minister of Education, Science, and Technology of the Republic of South Korea. Before joining the ministry as a vice minister, he was senior secretary to the President for Education, Science, and Culture and a member of the National Assembly. He has written several articles and authored several publications. He received his bachelor's and master's degrees from Seoul National University and his PhD in Economics from Cornell University.

Panthea Lee is the executive director of Reboot. Her work focuses on driving collaborations among communities, activists, and institutions to advance social justice. She is a pioneer in leading multistakeholder processes to tackle complex social challenges, with experience in over 30 countries. Her contributions to equity-centered design have been recognized by Fast Company and Core77. Her work has been featured by *Al Jazeera, The Atlantic, New York Times, MIT Innovations, and Stanford Social Innovation Review*. She advises the OECD Network on Innovation Citizen Participation and Greenpeace and serves on the boards of Development Gateway and People Powered: The Global Hub for Participatory Democracy.

Raymund Liboro is a seasoned information and communications technology (ICT) convergence and public administration professional. As the country's first Privacy Commissioner, he fast-tracked data protection policy development in the country with the issuance of the Data Privacy Act's Implementing Rules and important policy circulars within the first year of the National Privacy Commission's establishment. In October 2018, he put the country on the world stage by earning the Philippines a voting seat on the exclusive five-member executive committee of the International Conference of Data Protection and Privacy Commissioners.

Maria Teresa Magno-Garcia is the director of the Department of Information and Communications Technology's National Planning and Corporate Management Bureau. She has led and assisted in the development and implementation of various ICT plans, policies, and programs that contributed to major ICT developments in the country. She obtained her Master in Public Management from the Lee Kuan Yew School of Public Policy, NUS, and her Diploma Certificate in Urban and Regional Planning from UP.

Sean McDonald is the cofounder of Digital Public, the chief executive officer of FrontlineSMS, and a senior fellow at the Center for International Governance Innovation. He holds a JD/MA from American University, with specialization in international law and alternative dispute resolution.

Ronald Mendoza is dean and professor at the Ateneo School of Government. From 2011 to 2015, he was an associate professor at the Asian Institute of Management (AIM) and the executive director of the AIM Rizalino S. Navarro Policy Center for Competitiveness. He was a senior economist with the United Nations in New York. His research background includes work with the United Nations Children Fund, United Nations Development Programme, Federal Reserve Bank of Boston, Economist Intelligence Unit, and several Manila-based nongovernment organizations. He obtained his Master in Public Administration and International Development from the John F. Kennedy School of Government, Harvard University, and his MA and PhD in Economics from Fordham University.

Celia Reyes is the president of the Philippine Institute for Development Studies (PIDS). She specializes in econometrics and has conducted and published numerous research and policy papers on poverty assessments and social protection programs evaluations. She is also the network leader of the Community-Based Monitoring System. She was president of the Philippine Economic Society in 2011 and has been an adviser to various national government technical working groups on poverty monitoring and indicator systems in the country since the early 1990s. She holds an MA in Economics from the University of the Philippines and a PhD in Economics from the University of Pennsylvania.

Aiken Larisa Serzo is a consultant at the Technology Law and Policy Program of the UP Law Center. She is a lawyer at the Disini Law Office, where she leads the firm's fintech practice and legal education and policy initiatives for Philippine startups. She received her Juris Doctor degree from the UP College of Law. Her work as a lawyer focuses on fintech, tech arrangements, data protection, and emerging media. She regularly leads regulatory, transactional, and corporate investment projects. She was cited as a Next Generation Lawyer for Technology, Media, and Telecommunications from 2017 to 2019 in the Legal 500.

Gerardo Sicat is a professor emeritus at the UP School of Economics. He wrote many studies that contributed to the analysis and public understanding of economic development issues and enriched the teaching of economics by writing a widely used textbook. He served the government at the highest economic councils from 1970 to 1981 in a cabinet position. When the NEDA was created in 1973, he was appointed to head it as director-general and minister of economic planning. He founded and helped build the PIDS and the Philippine Center for Economic Development. He also spent 13 years working on international economic development issues at the World Bank. He received his PhD in Economics from the Massachusetts Institute of Technology.

Stephanie Sy is the chief executive officer of Thinking Machines, a leading data science technology startup with offices in Manila and Singapore. Her company has published original research in artificial intelligence at top industry conferences such as the International Conference on Machine Learning. As part of the UNICEF Innovation Fund, Thinking Machines works on building open-source artificial intelligence models to help address poverty and development issues.

Viroj Tangcharoensathien is a senior adviser to the International Health Policy Program (IHPP), Ministry of Public Health in Thailand. Trained in medicine at Mahidol University, he served for 10 years in rural hospitals. He received the Best Rural Doctor Award in 1986. His PhD thesis at the London School of Hygiene and Tropical Medicine (LSHTM) won the Woodruff Medal in 1991. He received the Edwin Chadwick Medal in 2011 from LSHTM, the Sam Adjei Distinguished Public Service Award in 2018, and WHO Director General's Health Leaders Award in 2019. He has published 250 articles in international peer-reviewed journals.

Session Moderators

Coco Alcuaz is the executive director of the Makati Business Club (MBC). Prior to joining MBC, he was bureau chief at *Bloomberg News*, business news head and anchor at *ABS-CBN News Channel*, and contributor at *Rappler*.

Alex Brillantes Jr. is a professor and former dean of the UP National College of Public Administration and Governance and president of the Asian Association for Public Administration. He was executive director of the Local Government Academy of the Department of the Interior and Local Government and commissioner of the Commission on Higher Education. He served as a consultant for international agencies and wrote several books. He was a visiting professor, researcher, and lecturer in several universities in Japan, Indonesia, Thailand, Korea, China, Australia, Taiwan, France, and United States. He obtained his AB and Master in Public Administration from the UP and his MA and PhD from the University of Hawaii.

Sheila Siar is the director for research information of PIDS. Before joining the Institute, she worked at several international organizations, including the International Institute of Rural Reconstruction, International Rice Research Institute, and International Center for Living Aquatic Resources Management (now called WorldFish Center). She has a PhD in Development Studies from the University of Auckland in New Zealand and a Master of Arts in Public Administration from the International Christian University in Tokyo, Japan.

Charlotte Justine Sicat is an assistant professor at the UP Virata School of Business, currently on secondment as a PIDS research fellow. She has a PhD in Business Administration and master's degrees in Management and Economics from UP Diliman. She is also a PhD Economics candidate. Her academic and professional experience has focused on the various aspects of the public sector and policy.

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The coronavirus disease 2019 (COVID-19) pandemic is by far the most challenging public health crisis the world has faced in a century. The Philippines has never been an alien to the impacts of this pandemic. This crisis has exposed serious governance issues, spanning from coordination failures to challenges in human resource capacity, which demand an immediate response from the Philippine government. To this end, the Philippine Institute for Development Studies has dedicated the Sixth Annual Public Policy Conference (APPC) to analyze the socioeconomic issues surrounding the COVID-19 pandemic. Under the theme, "Bouncing Back Together: Innovating Governance for the New Normal", this year's APPC covered topics relevant to the strengthening of governance systems and structures and adoption of forward-looking strategies that can empower the country in recovering from the blows of this crisis.

This publication gathers the presentations and discussions during the four-part APPC webinar series. It provides government leaders, policymakers, the academe, and the public a trustworthy reference in making informed decisions amid the uncertainty the COVID-19 pandemic brings.

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