

**PROCEEDINGS OF THE
FIFTH ANNUAL PUBLIC POLICY CONFERENCE**

SEPTEMBER 19, 2019 | SOFITEL PHILIPPINE PLAZA MANILA, PHILIPPINES

**NAVIGATING THE NEW
GLOBALIZATION**



Local Actions for Global Challenges

Navigating the New Globalization: Local Actions for Global Challenges

**Proceedings of the
Fifth Annual Public Policy Conference 2019**

Navigating the New Globalization: Local Actions for Global Challenges

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Fifth Annual Public Policy Conference 2019**



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

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Philippine Institute for Development Studies

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ISSN 2546-1761
RP 07-20-1000

Editorial and production team: Sheila V. Siar (editor and overall coordinator), Gizelle Manuel (assistant copyeditor and layout artist), Jocelyn Almeda (editorial assistant and liaison), and Rejinel Valencia (editorial assistant)

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Foreword

We are witnessing a new era of globalization. Under this, new technologies and innovations have emerged, allowing more and more countries to participate in borderless and digital economic ventures.

However, alongside these benefits are significant challenges, such as global trade restructuring, worsening inequality, underprovision of global public goods, erosion of trust and social cohesion, and proliferation of disinformation. Our failure to manage these challenges may only weaken our country's ability to sustain our growth.

To better prepare us for these challenges, the Philippine Institute for Development Studies has continued its tradition of bringing together researchers, academics, government officials, and the public in this year's Annual Public Policy Conference (APPC). The event espoused the theme, "Navigating the New Globalization: Local Actions for Global Challenges", highlighting its role as a platform for unpacking the issues and discussing policy recommendations as we traverse this new phase of globalization.

These conference proceedings provide a collection of evidence-based policy studies and papers presented during the APPC. They cover relevant issues, such as technology and inequality, the country's exercise of its sovereign rights in the West Philippine Sea, trade wars, financial technology, global public goods, fake news, and other features of the New Globalization. These studies are rich with analytical insights as well as courses of action that we should consider to ensure that the New Globalization will work for our benefit.

We hope that the recommendations raised in these proceedings may stimulate further discussion on this matter. The PIDS aspires to remain a reliable partner for change amid our changing times.

CELIA M. REYES
President

Preface

A new wave of globalization is shaping today's landscape. While it brings with it infinite opportunities for growth, it is also disrupting our economies and ways of life, paving the way for a period of volatility, uncertainty, complexity, and ambiguity (VUCA). The good news is that the window for action remains wide open.

As such, we thank the Philippine Institute for Development Studies (PIDS) for providing us with a venue where we can collaborate and share our insights about the New Globalization. We are glad that PIDS has dedicated its Annual Public Policy Conference (APPC) to the critical analysis of this phenomenon. The conference's multidisciplinary nature recognizes the reality that the New Globalization is multifaceted and that no single field can address the issues it presents.

We also commend PIDS for formulating its own VUCA, namely, vision, unity, consultation, and adaptability. Our studies are our humble attempt to contribute to the promotion of this VUCA, showcasing our best efforts to identify necessary pathways and policies. They also point to policies our leaders must embrace to reap the fruits of this New Globalization.

We invite other policymakers and leaders to join us in refining the recommendations we have highlighted in our studies. We hope our findings will be material in building a new economic agenda responsive to the needs of this period. We look forward to working with them with an ambition that we can transform these proposals into reality.

AUTHORS

Acknowledgment

The Philippine Institute for Development Studies (PIDS) would like to acknowledge the following individuals and institutions whose hard work, dedication, and generosity made the APPC 2019 possible:

The 2019 Development Policy Research Month (DPRM) Interagency Steering Committee consisting of the National Economic and Development Authority (NEDA), Philippine Information Agency, Civil Service Commission, Presidential Management Staff, *Bangko Sentral ng Pilipinas* (BSP), and Department of the Interior and Local Government (DILG), which serve as permanent members; and the Department of Budget and Management, Department of Foreign Affairs - Office of the Undersecretary for International Economic Relations (DFA-OUIER), Department of Health, Department of Labor and Employment, Department of Trade and Industry - Bureau of International Trade Relations (DTI-BITR), Philippine Competition Commission (PCC), House of Representatives – Congressional Policy and Budget Research Department, and Senate Economic Planning Office, which serve as additional members;

The conference sponsors, namely, BSP, DFA-OUIER, DILG, NEDA, PCC, DTI, and Asian Development Bank;

The Presidential Communications Operations Office particularly Radio TV Malacañang (RTVM) for the television and online coverage;

All the conference speakers and guests, some of whom traveled long distances to participate;

And the 2019 APPC Organizing and Scientific Committee composed of Dr. Celia Reyes, Dr. Marife Ballesteros, Dr. Roehlano Briones, Dr. Connie Dacuycuy, Dr. Ralph Michael Abrigo, Dr. Francis Mark Quimba, and the Research Information Department headed by Dr. Sheila Siar, as well as the Administrative and Finance Department headed by Dir. Andrea Agcaoili and all the support staff.

List of Acronyms

4IR	–	Fourth Industrial Revolution
ADB	–	Asian Development Bank
AI	–	artificial intelligence
APEC	–	Asia-Pacific Economic Cooperation
APPC	–	Annual Public Policy Conference
ASEAN	–	Association of Southeast Asian Nations
BARMM	–	Bangsamoro Autonomous Region of Muslim Mindanao
BOI	–	Board of Investments
BSP	–	<i>Bangko Sentral ng Pilipinas</i>
CARS	–	Comprehensive Automotive Resurgence Strategy
CCC	–	Climate Change Commission
CEPI	–	Coalition for Epidemic Preparedness Innovations
CGH	–	common goods for health
CHED	–	Commission on Higher Education
CNOOC	–	China National Offshore Oil Corporation
CNY	–	Chinese yuan
COMELEC	–	Commission on Elections
CPI	–	consumer price index
CSIS	–	Center for Strategic and International Studies
DepEd	–	Department of Education
DFA	–	Department of Foreign Affairs
DICT	–	Department of Information and Communications Technology
DLT	–	distributed ledger technology
DOH	–	Department of Health
DOLE	–	Department of Labor and Employment
DOST	–	Department of Science and Technology
DTI	–	Department of Trade and Industry
ECS	–	extended continental shelf
EEZ	–	exclusive economic zone
EGMP	–	e-Government Masterplan
EIU	–	Economist Intelligence Unit
EMEs	–	emerging market economies
EU	–	European Union
FAO	–	Food and Agriculture Organization
FDI	–	foreign direct investment
FIES	–	Family Income and Expenditure Survey
FIRe	–	Fourth Industrial Revolution
FOWAHRD	–	Future of Work and Human Resources Development

FTA	–	free trade agreement
G7	–	Group of Seven
GDP	–	gross domestic product
GDPR	–	General Data Protection Regulation
GPGs	–	global public goods
GSP	–	Generalized System of Preferences
IC	–	intermediate components
ICT	–	information and communications technology
IoT	–	Internet of Things
IPCC	–	Intergovernmental Panel on Climate Change
LFS	–	Labor Force Survey
LGUs	–	local government units
LMI	–	labor market information
MOU	–	memorandum of understanding
MRIOT	–	Multiregional Input–Output Table
MSMEs	–	micro, small, and medium enterprises
NCCAP	–	National Climate Change Action Plan
NCD	–	noncommunicable disease
NDC	–	nationally determined contribution
NFSCC	–	National Strategic Framework on Climate Change
NRPS	–	National Retail Payment System
P3	–	<i>Pondo para sa Pagbabago at Pag-asenso</i>
PCC	–	Philippine Competition Commission
PDP	–	<i>Philippine Development Plan</i>
PhilHealth	–	Philippine Health Insurance Corporation
PIDS	–	Philippine Institute for Development Studies
PR	–	public relations
PRC	–	People’s Republic of China
PSA	–	Philippine Statistics Authority
QR	–	quick response
R&D	–	research and development
RA	–	Republic Act
RI	–	remote intelligence
RPA	–	robotic process automation
RPGs	–	regional public goods
SALN	–	Statements of Assets and Liabilities and Net Worth
SC	–	Social Credit
SCP	–	sustainable consumption and production
SMEs	–	small and medium enterprises
TESDA	–	Technical Education and Skills Development Authority

TOR	–	terms of reference
UHC	–	Universal Health Care
UK	–	United Kingdom
UN	–	United Nations
UNCLOS	–	United Nations Convention on the Law of the Sea
UNEP	–	United Nations Environment Programme
UNFCCC	–	United Nations Framework Convention on Climate Change
UP	–	University of the Philippines
US	–	United States
USD	–	United States Dollar
VOA	–	Voice of America
VUCA	–	volatility, uncertainty, complexity, and ambiguity
WCPFC	–	West and Central Pacific Fisheries Commission
WHO	–	World Health Organization
WTO	–	World Trade Organization

About the Conference

Recent events have exposed the increasing influence of the Fourth Industrial Revolution (FIRe) on global welfare. FIRe has fostered a more complex system and the convergence of technologies, blurring the lines between physical, digital, and biological systems. More recently, technological developments have coincided with global economic and political changes, paving the way for a new global architecture dubbed by experts as Globalization 4.0 or “New Globalization” as the Institute has termed it.

This New Globalization presents a complex set of challenges and is characterized by increased volatility, uncertainty, complexity, and ambiguity, given the complex, interrelated challenges it brings. These challenges include trade wars, environmental degradation, cross-border public health threats, worsening poverty and inequality, erosion of social cohesion and trust, and proliferation of disinformation. These challenges, if not managed well, can undermine the ability of the Philippines to sustain its rapid economic growth and attain its long-term development vision of a *Matatag, Maginhawa at Panatag na Buhay Para sa Labat (AmBisyon Natin 2040)* as well as its targets under the Sustainable Development Goals.

Recognizing the urgency of understanding this emerging brand of globalization, the Philippine Institute for Development Studies (PIDS) dedicated its fifth Annual Public Policy Conference (APPC), the main and culminating activity of the Development Policy Research Month (DPRM), to an examination of the issues and opportunities the Philippines is facing with the New Globalization and the local actions necessary to effectively navigate the troubled seas of the New Globalization.

The event convened experts and policy analysts from various fields. Presentations in the morning plenary session set the tone of the conference by providing general insights and analyses of the impacts of digitization and geopolitical issues. For the afternoon plenary session, key government officials discussed how various stakeholders can work together to mitigate the risks and take advantage of the opportunities presented by the New Globalization.

The conference adopted the format of previous APPCs by having breakout sessions to discuss specific issues. Four simultaneous sessions were held in the afternoon on the challenges of the New Globalization, namely, issues from global trade restructuring, worsening inequality, underprovision of global public goods, and weakening of social cohesion and trust.

The APPC serves as the main and culminating activity of the DRPM held every September pursuant to Malacañang Proclamation 247. The DPRM is an annual nationwide celebration that aims to promote awareness and appreciation of the importance of policy research in crafting relevant and evidence-based policies and programs. Started in 2015, the APPC aims to convene experts and researchers in the social sciences to inform policymakers about critical issues that must be addressed in the immediate term. It is envisioned to serve as a platform to further bridge research and policymaking, and enhance evidence-informed planning and policy formulation in the Philippines.

OPENING SESSION

Opening Remarks

Celia Reyes | President, Philippine Institute for Development Studies

Good morning everyone.

Socioeconomic Planning Secretary Ernesto Pernia, officials of the National Economic and Development Authority and its regional offices, heads of attached agencies, our international and local speakers, colleagues from government, private sector, academe, civil society, and media. Let me also recognize former Prime Minister Cesar Virata, DBM Usec Laura Pascua, DBM Asec Clarito Alejandro Magsino, DFA Asec Eduardo Menez, DFA Asec Grace Cruz-Fabella, DFA Asec Jesusa Susana-Paez, PCC Chairman Arsenio Balisacan, SEPO Director General Ronald Golding, TECO Director Wenchung Chang, PIDS Board of Trustee Atty. Raphael Lotilla, Viet Nam embassy Second Secretary Nguyen Anh Dung, and Australian embassy representative Madeleine Valte De Jesus. Of course, we have our representatives from international organizations such as WHO. From JETRO, we have Takashi Ishihara; from UNDP, Irino Velasco; and from the US embassy, Josefina Cervantes. We would like to welcome everybody to the fifth Annual Public Policy Conference or the APPC.

As development practitioners, the month of September is an opportune time for all of us to highlight the importance of formulating policies and programs that are evidence-based as well as promote awareness of the importance

of policy research in development planning and policymaking by celebrating the Development Policy Research Month or the DPRM.

The DPRM is an annual celebration led by state think tank Philippine Institute for Development Studies or PIDS pursuant to Presidential Decree 247. Every year, in consultation with our partners in the DPRM steering committee, we decide on a theme, which could either be a burning issue of the day or an emerging issue that would be important in the coming years. So far, we have featured food security, climate change, health and education, jobs, regional integration, international migration, resilience, decentralization, and last year, we focused on the Fourth Industrial Revolution.

The chosen theme is discussed in the various activities organized by PIDS during the DPRM, which include, among others, press conferences and media appearances. Today, we are conducting the main and culminating activity of the DPRM, the Annual Public Policy Conference or APPC, which is now on its fifth year.

Through the APPC, we will examine closely the theme of the DPRM by gathering renowned international and local experts and policy analysts from various fields, as well as representatives from the government, academe, private sector, and

civil society to share their insights on the issues, opportunities, and policy options surrounding the theme.

This year, we focus on the topic, “Navigating the New Globalization: Local Actions for Global Challenges”. What is this so-called “New Globalization” or “Globalization 4.0” as the World Economic Forum calls it, and why should we give it attention?

Globally, we are entering a new era of globalization. The past decades saw drastic changes in the way countries do trade—from the use of steamships and railways in the 19th century, to more convenient means such as cars, ships, and jet engines after the second world war and the introduction of free trade in the 90s. With the development of new technologies along the way, world trade has significantly accelerated with more countries participating in borderless and digital economic ventures.

In recent years, not only are we seeing the spread of advanced technologies that are driving innovation in many parts of the world. We are also witnessing major challenges, such as global trade restructuring, trade wars, worsening inequality, underprovision of global public goods, erosion of trust and social cohesion, and proliferation of disinformation. These are among the features of the fourth wave of globalization that we are already experiencing. I would like to liken this New Globalization to a troubled sea that is full of volatility, uncertainty, complexity, and ambiguity or VUCA and, thus, quite challenging to navigate.

All this begs the question: How does the New Globalization affect the Philippines? How should it navigate the troubled seas of the New Globalization?

If we do not manage the challenges of the New Globalization well, it will have detrimental impacts on the Philippines by weakening the country’s ability to sustain its rapid economic growth as well as attain its long-term development vision indicated in *AmBisyon Natin 2040* of a *Matatag, Maginhawa, at Panatag na Buhay Para sa*

Labat. It will also hamper us in achieving our targets and commitments under the Sustainable Development Goals. This is why we emphasize the need to understand this New Globalization and how to navigate it.

World Economic Forum Founder and Executive Chairman Klaus Schwab said that Globalization 4.0 or the New Globalization, as we coined it at PIDS, “has only just begun, but we are already vastly underprepared for it”. This is why we gathered you here today to help us explore *local actions* needed to address the challenges as well as harness whatever opportunities that come along with the New Globalization. These will be discussed later in the various sessions of the conference.

To counter the challenges of the New Globalization, we formulated our own VUCA, namely, Vision, Unity, Consultation, and Adaptability.

- **Vision** means having a shared vision of prosperity, inclusivity, resilience, and social cohesion. We need to move in one direction to reach our common goal.
- **Unity** means creating a sense of cooperation among the government, academe, civil society, and the private sector to be able to overcome the challenges of the New Globalization.
- **Consultation** means engaging the public to participate in informed policy debates so that everyone can be heard.
- **Adaptability** means we have to be resilient in managing the changes that come with the New Globalization and that includes being open to new paradigms, business models, and regulatory frameworks.

I hope I have stirred your interest and have posed questions in your minds which you are free to share later.

Before I end, let me take this opportunity to thank everyone who made this possible. To our speakers, thank you for allowing us to provide a venue where you can share your insights. To our

guests and participants, thank you for coming. I know the weather is not so good but we really appreciate your presence today. To my PIDS family, thank you for all your efforts in ensuring that we give our guests an insightful and fruitful conference. In particular, I would like to thank the APPC scientific committee led by Dr. Marife Ballesteros, our vice president, and our research fellows who are in charge this year, Dr. Roehl Briones, Dr. Mike Abrigo, Dr. Francis Quimba, and Dr. Connie Dacuycuy. They have been working very hard to come up with a very good scientific program. I would also like to acknowledge the excellent preparations done by our Research Information Department headed by Dr. Sheila Siar and also the logistical and admin support provided by the team of Director Rhea Agcaoili and the support given by the team of Director Renee Ajayi.

Of course, organizing this conference would not have been possible without our sponsors. We have *Bangko Sentral ng Pilipinas*, Department of Foreign Affairs, Department of the Interior and Local Government, National Economic and Development Authority, Philippine Competition Commission, Department of Trade and Industry, and the Asian Development Bank. Thank you all for supporting this year's APPC and we look forward to your support next year.

Let me also thank our DPRM Steering Committee members: the Civil Service Commission, Philippine Information Agency, Presidential Management Staff, Department of Health, Department of Labor and Employment, Department of Budget and Management, Climate Change Commission, Senate Economic Planning Office, and Congressional Policy and Budget Research Department for your continued support to the DPRM.

Let me end this speech by emphasizing that navigating the troubled seas of the New Globalization will not be possible without everyone's participation. Today, let us make a conscious effort to share our knowledge, insights, and perspectives, from which we can draw inputs and lessons that can be used in crafting relevant, timely, and feasible interventions so that we can face and overcome the challenges and take advantage of the opportunities of the New Globalization. May this conference inspire us all to act locally but think globally.

But before we start with the discussion of our panelists, we would like to show you our video for this year's APPC.

Thank you very much.

Keynote Message

Ernesto Pernia | Secretary of Socioeconomic Planning

PIDS President Dr. Celia M. Reyes, for the impressive opening remarks as well as the video; former Prime Minister Cesar Virata; former Central Bank Governor Jaime Laya; distinguished guests and speakers; fellow workers in government; friends from the media; ladies and gentlemen, good morning.

I can only scratch the surface of the fifth Annual Public Policy Conference, the subject of which is of much gravitas and challenges are formidable, characterized by VUCA (volatility, uncertainty, complexity, and ambiguity).

I will start with a light-hearted parable of the stag hunt. A group of individuals go out to hunt a stag. They need cooperation to be able to catch this speedy, agile stag. However, like in any good story, the naughty devil dangles a temptation: each individual can renege, leave the group, and catch the less rewarding rabbit on their own. What do you think they will do, cooperate and hunt the great stag or take the easy way out by catching the feeble rabbit?

This is a parable of *social cooperation*, originating from the philosopher Jean-Jacques Rousseau. Its ending tells us that the more there is *uncertainty*—the more there is ambiguity—the more there is *distrust*—the more that the individuals will go off on their own and hunt the easy rabbit.

My dear colleagues, the lesson of this story tells us the importance of beliefs in a society. Our mere beliefs and expectations can turn things around and enable us to get the highest reward. As Professor Kaushik Basu, former World Bank Chief Economist and Professor of Economics of Cornell University, wrote in his recent book, *The Republic of Beliefs*:

“In truth, the most important ingredients of a republic, including its power and might, reside in nothing more than **the beliefs and expectations of ordinary people** going about their daily lives and quotidian chores. It is in this sense that we are all citizens of the republic of belief.”

Thus, to make any reform work, people must first believe in this society, in the administration. This administration is instituting a number of critical and broad-based reforms. We have the new Philippine Innovation Act, the Innovative Startup Act, and the *Balik Scientist Act* to partly deal with the Fourth Industrial Revolution. We have the Ease of Doing Business Act and the Philippine Identification System Act, the latter aiming to give a National ID to each Filipino, to ease transactions and obtain faster delivery of social services. For human capital development,

we have the Universal Health Care Law, Free Tuition for Tertiary Education, although some of us have mixed feelings about that, and the Executive Order to Attain Zero Unmet Need for Family Planning.

All of these will be nothing but ink on paper if the whole citizenry suddenly lose their belief in our society's potential. Imagine making the monumental Bangsamoro Organic Law work if the Bangsamoro citizens themselves distrust the law.

What we need is a whole-of-society approach to meet the objectives of the *Philippine Development Plan* (PDP) 2017–2022, and eventually our *AmBisyon Natin 2040* of a prosperous and predominantly middle-class Philippines where no one is poor. But it is only through cultivating a high-trust society that this whole-of-society approach could work. It is only through cultivating trust that we will make people believe in each other—enough to cooperate and achieve our goals. In an environment of great uncertainty, ambiguity, volatility, and so on, where the next turn of events astounds and bewilders us, we need to reach out and build trust.

Fortunately, we have recognized the importance of cultivating trust in our crafting of the PDP 2017–2022, which aims to “to lay down the foundation for inclusive growth, a resilient and **high-trust society**, and a globally competitive knowledge economy”.

Underpinning, and resulting from a high-trust society is *Malasakit*—strengthening the social fabric (or, in a word, solidarity)—the first pillar of *AmBisyon Natin 2040*. Solidarity is needed between and among the citizenry for our country to achieve the objectives of the PDP 2017–2022 and the goal of *AmBisyon Natin 2040*.

Trust and solidarity grease the wheels to make collaboration happen so that we can get the highest reward. I thank all of you for trusting us enough to turn up in this conference today. I ask the sharp and searching minds in this gathering to collaborate and think of solutions on how to navigate this era of New Globalization. Trust us enough to share your ideas as we do not have the answers ourselves. We are currently doing our Midterm Update of the PDP 2017–2022 so, President Celia, we would appreciate receiving a copy of the participants' resolutions today to be incorporated in the updated PDP.

The spadework for change still needs to be continued relentlessly. Let us stop ourselves being satisfied by catching the mediocre rabbit, the easy prey. Together, let us aim for the stag.

Thank you, and a pleasant and productive day to all of us.

MORNING PLENARY

**UNDERSTANDING THE
NEW GLOBALIZATION**

SESSION OPENER

Coco Alcuaz | Executive Director, Makati Business Club

Our opening session is intended to understand the underlying causes of the New Globalization and get an informed view of its possible duration, directions, and institutions that could eventually emerge and shape the governance of future international relations, geopolitics, and trade, investment, and finance. This session seeks to identify strategic ideas that the Philippines can develop as win-win solutions to global tensions toward increasing resilience of international institutions. As a member of the Association of Southeast Asian Nations and the United Nations, the country can espouse these ideas with other countries who have vital interests in a rule-based international order.

Prominent speakers and panelists of global stature are invited to discuss questions along the following lines:

- What are the key changes in global economic linkages (i.e., value chains, trade, investments, and financial flows) during this era of global transition?
- What were the fundamental changes in economic well-being over the past decade, and what are its implications for public policy?
- How have domestic politics, governance, and public discourse been reshaped by recent trends in economic restructuring and technological change?
- What are the likely future trajectories for the architecture of global cooperation in the face of economic, social, and political change?

Presentation 1

The Globotics Upheaval: Globalization, Robotics, and the Future of Work

Richard Edwin Baldwin | Professor of International Economics, Graduate Institute, Geneva

SUMMARY: “Globotics”, a wordplay of “globalization” and “robotics”, emphasizes that digital technology is launching globalization in a new direction alongside robotics. The digital technology is accelerating in a way that will be very disruptive to service-sector jobs. This means that while its impact used to be limited to jobs in the manufacturing sector, software robots and telemigrants are now competing with office and professional workers. Today’s artificial intelligence as employed in computers is more advanced than before. Improved programming has given computers a whole set of cognitive capacities that they did not have before, such as reading, writing, seeing, and pattern recognition. Computers can now also automate certain human tasks. Given the adoption of globots equipped with wide range of capabilities, governments need to shift their focus to equipping their people with skills and talents not present in globots. These skills include managing and developing people, applying expertise, and interfacing with stakeholders.

I would like to start by saying that “the future is unknowable, but also inevitable” because it reminds us that this talk and this book (i.e., *The Globotics Upheaval*) are about the future. None of us can be sure of what the future is going to be. But the future is inevitable. So, we—as social scientists—have an obligation to think about the future.

The worst way to think about the future, however, is to pretend that it is going to continue being like it is today—especially when we live in a world where digital technology is changing many things very rapidly.

Globotics

“Globotics,” as a term, joins together the words “globalization” and “robotics”. I invented it to emphasize the fact that digital technology

is launching globalization in a new direction at the same time as it is launching robotics in a new direction. In particular, when I talk about globalization, I am talking about “telemigration”, which is another word I invented. Think of it as “remote intelligence” (RI), which means humans sitting in one nation and working remotely in another. When I talk about robotics, I am talking about white-collar robots (i.e., artificial intelligence [AI]) to distinguish them from the robots you read about all the time on your newsfeed and on TV (i.e., mechanical things that often work in factories).

I argue that digital technology is accelerating both RI and AI in a way that will be very disruptive to service-sector jobs in the advanced economies.

Telemigration is characterized by “people sitting in one nation and working in offices in another”. In Manila, telemigration is relatively

common, where Filipinos are sitting in the Philippines but working in offices in service-sector jobs in other countries.

At the low end of white-collar robots, there is a lot of Robotic Process Automation (RPA), which is changing the way of work in advanced economies in a very quick way. RPA essentially uses existing software, say an email server or a database, to automate a process, which, up to now, is being done by a human. For example, if you are working for a building department of a phone company, what this RPA does is to open emails from customers, read the emails using machine-learning tools to figure out what the customers want, and then do what they want, whether that is to open an account or change a subscription. These things—RPA—do these tasks a hundred times faster than humans and, at least, if they understand the email, with more accuracy. Also, there will be a record of everything that was done, so there is no possibility of untraceable fat-finger mistakes, where somebody made a change just by mistake and did not record that change.

There are also white-collar robots at the high-end. One of them is called Amelia, which is an AI platform that is automating a much higher-end kind of service task. There is also Watson from IBM. The idea is that many big companies have these AI platforms.

After I spoke in Davos, a guy came up to me and said that he is doing auditing through AI. His team has humans collecting information (billing, records) and people in India (this is “RI”) processing it. Their output is then fed through an AI process to look for inconsistencies in billing, shipment, or other details. In the end, a real accountant takes over, but one part of the accounting service job is being taken over by a high-end, white-collar robot.

Is this time different?

By now, you might be thinking that this is just old wine in a new bottle—that there is nothing new

in automation and international freelancing. But I would argue that this time is different. When I was doing the research for this book, I found some points of what I thought was mis-thinking or incomplete thinking about what was going on and constructed an intellectual infrastructure to help me understand why this time is really different.

Globotics will affect service and professional jobs—not just factory jobs.

Globalization and automation, for the last 25 years, have been primarily a concern of the manufacturing sector or, at least, the goods-producing sector. People who work in factories know all about competing with robots at home or abroad. But this time, software robots and telemigrants are competing with office and professional workers.

Office and professional workers are different. Eighty to 90 percent of the workforce in most Group of Seven (G7) countries is, in fact, in the service sector—not in the manufacturing sector. The good news is that they are more flexible and easier to re-employ than manufacturing workers. To a certain extent, service-sector workers have a more flexible skillset, and service jobs across the sector draw relatively similar skills. Moreover, many service-sector workers in rich countries are already in services where there is a possibility of getting other types of employment.

The experience of journalists in London provides a classic example. If you go back 10 to 15 years, most of the journalists in London worked for newspapers. They had career prospects and nice pension funds, as well as benefits. They had long-term contracts. Now, many of those people have been laid off by their own newspapers, but they have not become unemployed. They started to work in different ways; they became freelancers, editors, bloggers/vloggers. They are not really employed, but they have a different job. Instead of being openly unemployed, many of them have had to accept lower wages and a more precarious existence because they do not have long-term contracts anymore.

Another reason why office and professional workers are different from manufacturing workers is that they are not prepared. Technology has protected service-sector workers from (1) automation because computers could not think and (2) globalization because many services were not traded due to technological reasons.

In the US, most people are working in service-sector jobs. Of the 327 million population, 9 million work in production, while 6 million work in construction and extraction. Apart from these, everyone else in the workforce is essentially in the service sector.

Digitech is ICT.

The ICT applied to manufacturing is mostly physical plus bits of “T” and “C”, while the digitech applied to services is mostly “T” and “C” plus bits of physical. In other words, there is a lot of information and communications in services, but in manufacturing, while critical, they are not the main thing.

Today’s AI is different.

In 2019, computers can read, write, see, speak, understand speech, create visual outputs, and recognize subtle patterns. In 2015, they could not. So, what has changed? It is the programming that is different.

Around 2016, machine learning changed the way computers are programmed to do things. Machine learning takes a large structured data set (i.e., with clear questions and outcomes), and uses it to estimate a very large statistical model. This model is then used to make guesses with the computer—like whether a particular photo is of a particular person. This very large nonlinear statistical model is guessing the answer to well-defined questions. In the end, it is a piece of computer software but not a logical one where you can know exactly why it made the guesses that it made.

This new way of programming computers—and the data and processing speeds that have come along to allow us to do it so well—has given computers since 2016 a whole set of cognitive

capacities that they did not have before (i.e., reading, writing, seeing, recognizing patterns). Consequently, computers can now automate certain human tasks—almost all of them service tasks—that they could not before. Automation is now touching a whole range of service-sector tasks that were previously in the exclusive domain of humans.

Globotics is advancing at the explosive pace of digitech.

Past transformations were much slower. If you are judging future globalization based on what happened in the past, you probably are thinking that it is going slower than it actually will. For example, there was more progress in processing speeds between 2015 and 2017 (i.e., between the release of iPhone 6s and of iPhone 10) than between 1969 and 2015 (i.e., between the launch of Apollo 11 and the release of iPhone 6s).

Globalization is coming faster than most believe.

It is predictable but not expected. It happens so regularly that it has a common name: *digital disruption*. People know things are changing; they know things are coming. They just do not know it would come this fast, so they are disrupted.

To plot this in a simple graph, I am asserting that our gut instincts about progress are based on increments. If we want to know what the “increment AI progress” is in the next three to five years, we inevitably look at the increments of the last three to five years—and assume they are likely the same. If we assume equal increments, what you will get is linear progress.

But that is not how digital technology works. Digitech progresses in a lazy S-curve. There is a constant growth rate that leads to exponential growth and will, eventually, reach a stage of diminishing returns. But if you think about the contrast between how humans instinctively think about progress and actual progress driven by digitech, we will see that our “gut” at first overestimates the impact. For example, when the Americans landed on the moon,

newspapers started talking about colonizing Mars almost immediately, as if it were a viable thing in the near future.

By the same token, our gut then underestimates the impact of digitech-driven progress because it accelerates at a speed beyond what we are expecting. I call the point where these two lines meet the “holy cow” moment, where it is predictable but unexpected (i.e., Amara’s Law). This is where digital disruption happens.

Coming in ways few expect

These globotics changes are coming in ways few expect, or so I would assume. Many people are expecting future globalization to arrive in ways that are like how past globalizations arrived.

Think tasks, not occupations; many jobs will go but few occupations will.

When globalization and automation came in the past, they often eliminated entire occupations in factories, sometimes eliminating entire ranges of jobs in textiles, tires, and others. This time, it will be tasks. The mis-thinking on this comes from science fiction, which projects AI as baby humans that are soon going to grow up.

For instance, let us say that a tractor is the AI. A tractor is not like a baby farmer that will soon grow up. Tractors do certain tasks very well and their proliferation means we need fewer farmers to grow the same amount of food. While they certainly changed the farming profession, tractors are not going to replace farmers fully. In the same way, AI is advancing, but what it is doing is changing the *nature* of many jobs—not fully replacing them.

It will not look like Janesville: no mass unemployment, Rust-Belt style.

Janesville is a book that documented what happened in a small Wisconsin town when a General Motors plant shut down and caused a lot of misery.

This is not the way globotics will be coming. Globotics will come in a way closer to “iPhone

infiltration”. If you look back at iPhones, say 10 years ago, their role was really very limited. When Steve Jobs launched it, it was just these three things: a good music player, a mediocre phone with a very short battery life, and a web browser that was not useful because of access to WiFi issues. But now, these smartphones have completely changed the way we deal with the world (e.g., companies, employers, children, families, cities/maps). It has revolutionized the way we work.

But nobody decided to let that happen; it just happened. It was the consequence or the outcome of millions or billions of seemingly small and unconnected decisions that we all made in a disaggregated way. After just 10 years, you look back and think how could we have ever gotten along without them? This is how RI and AI, driven by digitech, will come into our work lives and change the future of work.

Job displacement is the business model.

Digitech is driving job displacement, while human ingenuity is driving job creation. This means that mismatched speed is the problem. If you look at digitech, job displacement will grow very rapidly until it smooths out, while job replacement will be linear. It gives insights into the world of work and the debate on the future of automation:

- Pessimists assume we will remain at a place where job displacement exceeds job creation.
- Optimists assume we jump immediately where human ingenuity and entrepreneurship have created all the jobs that we need.

I am first a pessimist because in the short run, job displacement may well outstrip job replacement, and we may have a problem.

Future globalization: Telemigration

Wage gaps make telemigration profitable, while digitech makes it possible. When you think about it, globalization is all about arbitraging price differences. In the early days, say the 19th century,

it was arbitrated on the price of goods because some things were cheaper to make in one country than in another.

In the second phase of globalization, when knowledge could move across borders more effectively, we saw factories unbundling and advanced-economy companies taking their firm-specific technology, moving it abroad, and combining it with low-cost labor, which changed the way globalization worked.

What I am referring to here is the enormous wage differences in the service sector across the world. For example, a professor in the Philippines teaching economics will typically earn one-tenth or one-twentieth of what a professor based in Switzerland, teaching the same class and using the same textbook, will earn. This opens an arbitrage possibility that, up until now, is blocked by technological means: it is difficult to get the professorial services out of the Philippines and into Switzerland, which makes sense to consumers in Switzerland and producers in the Philippines.

Digitech is changing this by making remote workers less remote in a variety of ways:

1. Domestic telecommuting. In rich countries, companies and people are rearranging the way they work to make it easier to slot in remote workers. For example, companies are changing their structures into matrices, organizing things around projects, and using cloud-based collaborative software. Once companies have found ways to slot remote workers in, they will soon figure out that they could get some of those remote workers for one-tenth or one-twentieth the price by sourcing them overseas. In essence, the spread of domestic telecommuting will lead the way for international telecommuting.
2. Having foreign-based remote workers will not be quite as good as having domestic workers in your office, but it will be cheaper. I assert that there will be more telemigration, which will bring service-sector workers in the G7 countries into direct wage competition with talented low-cost foreigners sitting abroad.

3. Online freelancing platforms (e.g., Upwork, Amazon, Fiverr, Witmart). These are like the containership of telemigration. They are how talented foreigners abroad will be able to come work in offices, at least at the retail level.
4. Advanced telecoms. We have all seen advances in telepresence systems, augmented reality, and holograms. Telecoms allows remote workers to be less remote by making it easier for people in different places to work together as if they are actually in the same place.
5. Machine translation is no longer Star Trek (e.g., Google Translate, Skype Translator, YouTube auto-translate captions, and Microsoft Translator).

If we put all of these together, we will have a global “talent tsunami” in the service sector. In some sense, the 1990s were about hundreds of millions of low-cost workers joining the manufacturing workforce globally, which changed a lot of things in the industry sector. In the 2020s, it will be hundreds of millions of low-cost service workers joining the service workforce.

Future of work: The long-run

New jobs will appear, just as they did before. We cannot know the names of future jobs, but we can understand what they will be like. For example, when people left the farms and went into industry, they did not know what jobs were waiting for them, but they had ideas of what they will be doing in those jobs (or the kind of skills they will need to work in a factory).

Using a process of elimination, here are my assertions:

1. Globots will do what they can because they are cheap. Software robots and telemigrants have marginal costs that are very low. This means that if a task can be done by RI or AI, it will be done by them.
2. We will do what globots cannot. When we get re-employed, we will be using skills and talents that RI and AI do not have.

What can't globots do?

Based on a study by the McKinsey Global Institute which classified all US professions into seven different activities, they found that 81 percent of “predicted physical activities” can be automated, as well as 69 percent of data processing activities and 64 percent of data collection activities. However, they also found that tasks such as managing and developing people, applying expertise, and interfacing with stakeholders are the ones least automatable by AI.

Why can't AI do human tasks? Machine learning is the jet engine, but big data is the jet fuel. This means that many of the tasks that humans perform do not involve clear questions and outcomes; therefore, you cannot capture a large data set. Consequently, you cannot train AI or machine learning to do it.

What can't RI do? Simply, telemigrants cannot be in the room. This is important because some aspects of our jobs require us to be in the

same room, either face-to-face with other people or with the aid of a machine.

Managing the transition

Hence, the long-run future of work means: (1) more human, local jobs and (2) richer, more generous society. The point is, we must manage the transition. We need to get past from the pessimistic view to the optimistic view.

In a nutshell, digitech is launching automation and globalization at the same time because of the big breakthroughs that happened in 2016. They are affecting white-collar and professional jobs faster than most think and in ways few expect. This is why I call it the globotics upheaval.

I think our governments need to adjust to the fact that these changes are happening very rapidly, and that many people will have to change jobs from service-sector jobs to sheltered service-sector jobs (i.e., jobs that are sheltered from both RI and AI).

Presentation 2

Competing in the New Era of Globalization

Calum Cameron | Account Manager and Digital Innovation Consultant, Proud Engineers

SUMMARY: Around the same time that Amazon started, Estonia emerged from a 50-year Soviet occupation. Prior to this, it was a relatively wealthy nation. It came out as one of the poorest countries in Europe, with government institutions and infrastructure destroyed. This forced Estonia to go digital. Against this backdrop, governments can learn a lot from the experience of Estonia in digitization. First, they should embrace the challenges that come with digitization. Estonia was the first-ever government in Europe to sit down with ride-sharing companies to work out how to legalize their services outside the standard taxi regulations. Second, digital data do not need to be centralized as it will only make the system more vulnerable to cyberattacks. Third, there should be enabling policies for digitization to thrive, as well as easing of doing business. It takes an engineering mindset to build what is now working in Estonia, not just the platforms but also the legislations, policies, organizations, and institutions. As such, governments must learn to rely on what is built and designed by engineers, not by politicians.

The challenge of competing for citizens and businesses

As public servants, how do we compete in the new era of globalization for our citizens and our businesses? We are already consuming information and services provided from all over the world in real time. Our businesses are already providing information and services to societies and influencers beyond our area of control.

How can we compete for them? How can we create an environment to enable our citizens and our businesses to take advantage of the opportunities that the New Globalization and the digital economy provide? Likewise, how can we compete for them? Because governments are now competing. Although, they always were competing, it is now easier for governments to project their

services across the world, to their own as well as foreign citizens, and to foreign businesses. So how do we keep our citizens engaged with us? Lastly, how do we plan for this exponentially different future? If we do not know what is coming, how can we prepare for that?

This sounds challenging and scary. Luckily, we have gotten a good idea how to do it. For almost 30 years now, Estonia, the Nordics, the United Arab Emirates, Singapore, and China are all developing on this basis. So we have a playbook. We actually know how to build a digital society. It is just a matter of executing it in the local context.

What we need is a platform for the government to be able to engage in the digital economy themselves (i.e., global real-time economy). As I said, our citizens and our businesses are already there. It is the government that is not keeping up

at the moment. What governments need is a space and the time to be able to experiment continuously (i.e., experiment on regulations, new services).

If we do not know what is coming, it is the duty of the government to be agile and to strike rapidly, so whatever opportunities or challenges do turn up, they already have the infrastructure to test new ideas and spin forward.

Thinking as start-ups and digitizing cores

To do this, two things are important: (1) we need to think like start-ups and (2) we need to be able to digitalize our cores. Our cores are where our data flow between our key information repositories, enabling us to automate decisionmaking and service delivery. It is also where we have a universal unique identity that allows us to connect the data, and for businesses and citizens to take ownership and assert their rights within that digital world.

A good example is to look at start-ups. In the early 1990s, there was an online bookstore that came out of Seattle called Amazon. What Amazon did that was different from everyone around them was they heavily invested early on in digitalizing their core (e.g., logistics, warehouse, online stores). They were able to automate the end-to-end processes of buying and delivering books—or anything else that they sold online. It gave them the agility to experiment with new services. As they found what worked, all they did was commercialize them with new business models. They did not need to change their cores; they just plugged them in as new business models on top of those cores. For instance, Amazon Marketplace, which started as an experiment, is now about 50 percent of Amazon's retail sales and 20 percent of its global revenue comes from third-party resellers or competitors. Likewise, Amazon web services control about a third of the global cloud services market. And it would even be fair to say that they invented the global cloud services market. So these are examples of how experiments could work.

What if governments could think the same way? Experiment the same way?

Alibaba, Tencent, Google—they do think this way. They are taking their models into health care, insurance, and financial services because for them these are not terrible and terrifying ICT projects. There are just new business models that they can test quickly. Because they have a digital core, it means they can experiment very aggressively with small bits; when they find something that works, they just invest in it on a massive scale. The playbook in building a digital society is very similar in spirit to the playbook in building a start-up.

The beginning of the digital economy in Estonia

Around the same time that Amazon started, there was a new start-up government in the north of Europe. Estonia was just re-emerging from a 50-year Soviet occupation. Prior to the occupation, it was a relatively wealthy nation (wealthier than Finland and on par with Sweden and Denmark). However, they came out of the occupation as one of the poorest countries in Europe, with government institutions and infrastructure destroyed. They had nothing other than a sense of pride and some very smart people. So, they went digital.

It sounds obvious now, but, back then, in the early days of the Web, it was very difficult. However, they did not have a lot of choices, as they could not afford the kinds of government that they wanted to emulate (i.e., Sweden, Denmark, Germany). Gambling on digitizing was the only thing they could do. They digitized all their records. They then connected data repositories, so information could flow easily between them. On top of that, they automated decisionmaking and service delivery. They also made national identity mandatory, so everybody can participate in this digital space if they choose to do so.

Embracing challenges

Now, 99 percent of Estonia's public services are online. The economy is 2 percent more productive because people can digitally authenticate themselves and sign documents with the legal equivalent of a handwritten signature. It means we do not have queuing. We do not need to pass documents backwards and forwards. We can sign documents with just a single click.

It also means Estonia is able to embrace new challenges (e.g., on regulation). For example, there has been a major challenge to existing structures in Europe and elsewhere by ride-sharing companies, such as Uber. Estonia was the first-ever government in Europe that was able to sit down with ride-sharing companies to work out how to legalize their services outside the standard taxi regulations. What they did was to digitally connect every driver to the Tax and Customs Board. They were able to spin very quickly because they have a digital core; they did not have to worry too much about how difficult the implementation would be. They just worked on what is going to work at the cultural, legal, and political levels. Singapore is heading down the same line. Actually, they are about to launch their national digital identity. They expect that to be mass deployed in about three to four years. They are about 20 years behind Estonia on that but they understood that this is the way they should go.

In Estonia's digital core, you will see data flowing between public and private registries over Estonia's secure and national interoperability platform called X-ROAD. You have a national digital identity that controls access to data and services on the platform. What this does not show are the national policies and interagency collaborations and institutions that make it work. There are about 600 private and public institutions connected through X-ROAD to share data and to automate decisions and service delivery.

Data decentralization

The important message here is that the data do not need to be centralized. In fact, in Northern Europe social models, you are not allowed to centralize data; you cannot have one person or institution controlling it all. But what it does give them is a lot more agility because of the autonomy and innovation down at the local level where people have control of their own services. Strangely, it makes the system more secure and robust.

In Estonia, we withstood the first national cyberattack that ran for almost a month, but which did not have a lasting impact. It was because the 600 institutions are using different data structures, so if you want to compromise the service, you have to come up with at least 600 different attacks, which you need to run together in real time. So, there is this amazing security gain in distributing the data in this way.

The bizarre thing about Estonia's digital society is that most Estonians do not think about it all. They are not really aware of what they have. Estonia's approach is pragmatic: if there is something that needs to be done, just do it. Don't make it hard or difficult. Why should tax return be hard? In Estonia, my tax return is just one click. Literally, I just go to the government portal, normally, I get an email or prompt on my online bank. Click the link, log in, the return just pops up in front of me and if I'm happy with what's on there, I just click submit and then I digitally sign it. If the government owes you money, within a few hours, it will be in your bank account already. If the government owes you something, they should just deliver it. You should not fill out papers and process it because they already have all the information that they need. Likewise, if you owe the government or any private sector any money, they should be able to make the process easy for you.

A look from the inside

My daughter Amara was born in 2010. Once the midwife was happy that my daughter was healthy and okay, she registered her on the hospital computer, and my partner immediately started getting paid child benefits to her bank account. That was done automatically. Estonia has a population of 1.3 million, and because babies are so valuable, new mothers automatically qualify for child benefits.

This is how it works: an expectant mother goes to the hospital, hopefully well in advance of the birth, and registers as an expectant mother. The hospital creates a new record in its database. When the baby is born, the midwife just adds details of the baby (i.e., weight and gender, among others) to the mother's record, and that is the end of the manual work that has to be done. The child's details will be transferred automatically from the hospital system to the national population register.

The Ministry of Social Affairs is constantly polling and looking at the population register for new Estonians. As soon as they see a new child birth registered, they connect with the Tax and Customs Board's repository to find out the mother's salary and bank details. They do quick calculations, and they start making the payments into the bank. It is a business process that connects the Ministry of Social Affairs, the Ministry of the Interior, and the Tax and Customs Board to automate child benefits payment quickly. No forms to fill out, no queuing, no waiting.

Enabling policies

But this took a long time to spin up. One key policy that made data sharing possible was the 'Once-Only policy' in Estonia. Government agencies are not allowed to ask you for information that they already have. At the same time, agencies are not allowed to keep duplicate data; they are not allowed to keep records of data that already exist. So, if the Tax and Customs Board wants to get my address, they must get it from the population

register. Likewise, if I tell them that the address is wrong, they will update it for me in the population register, so there is always an authoritative source of data which means that you have the confidence in the system.

One of the most insightful questions that we ask at Proud Engineers is how a country uses and shares patient data to improve health outcomes. If we get the answer to that, we can understand a lot about the legal, data sharing, technological, and institutional maturity of the society, as well as the trust that people have in the system.

Estonia's platform connects all doctors and hospitals across the country, so if my daughter gets a fever when she is out on her grandmother's island during summer, the local doctor will have immediate access to her medical history, record of vaccinations, allergies, and blood type so they can immediately rule out problems. Any treatments to be provided by the doctor will be added to her records. Information will be made available to all doctors treating a patient at any particular time. This is particularly important if you are a paramedic. There is an e-ambulance app that is connected to the digital health platform, which will tell a paramedic in 30 seconds where a patient (or a potential patient) is. If it is really an emergency, using the person's ID, a paramedic can quickly pull out critical information about the person (i.e., medical records, allergies, etc.). Whatever assessment or treatment made by the paramedics is immediately made available to the hospital, so while the ambulance is driving to the hospital, the hospital will be prepared for the patient.

Ease of doing business

In Estonia, it takes about only 20 minutes to start a business—from the time you signed in to the portal to the time your business exists and is registered. Only one country has been able to beat that: Oman. They beat us once and did it within 18 minutes by using a business register built by Estonians.

Engineering mindset

It took an engineering mindset to build what is now working in Estonia, not just the platforms but also the legislations, policies, organizations, and institutions. Engineers—not politicians—built it. They are designed to work, not to compromise.

Seven principles of digital society

We have condensed Estonia’s learning into seven principles that every aspiring digital nation has to implement:

1. Everyone in the country must have access to the internet.
2. There needs to be a strong digital identity for people to assert their rights of data and for the data to be connected for them.
3. Data needs to be interoperable. They need to be able to share data between siloed platforms.
4. Trust from the people and on the system is needed to deliver automation.
5. People need to understand how their privacy will be protected. The system should be transparent. In Estonia, I can see anybody who has looked at my data on an online tracker. If they cannot prove that they have the right to access it or have the reason to do so, they can be sacked immediately and potentially be put in prison. So, it is highly transparent and highly accountable.
6. No legacy. Anything or any critical system over 13 years old needs to be rebuilt.
7. You need to continuously amuse and engage with your citizens and your businesses. Get constant feedback on how to improve the system.

One big challenge in Estonia is digital identity. What the government did is to solve that ‘chicken and egg problem’ by making it mandatory. Everybody had to have it. Once everybody had it, they started building services for it, not just

the government but also businesses (e.g., banks) because they want to push people unto their online platforms but there is a big risk on authentication, identifying who is really behind the device. This solved the problem for them.

X-ROAD is the backbone, which took about seven years to take off. It is the Once-Only policy that forced government agencies to share data across X-ROAD that made this happen. In Estonia, we have been voting online since 2005, and it has not been compromised. In the last election, nearly 50 percent of Estonian votes were done on the internet in over a hundred countries around the world. This shows that if you digitize, you can serve your citizens wherever they are in the world.

e-Residency

The government has kept its start-up DNA.

Because of its digital core, the State can rapidly, and relatively cheaply, test new services and business models. For example, “how might Estonia expand its customer base without increasing its resident population?”

e-Residency is the answer.

Similar to how Amazon invited third-party sellers to use their platform, the Estonian government has invited entrepreneurs around the world to use theirs. e-Residency allows pretty much anyone in the world become a virtual citizen, an e-resident of Estonia, and get access to the digital services there.

For example, an entrepreneur here in the Philippines can register as an e-Resident, register his/her paperless business in Estonia, and start a trading company in the European Union (EU) without ever visiting Estonia physically.

It is very popular in Ukraine, India, United States, United Kingdom, and Turkey for people wanting to establish EU-based companies. One of the top countries is Germany. It turns out, it is so much easier and cheaper for them to run their

company on Estonia's digital platform, than to use the systems in Germany, thus, many have moved their company to Estonia. In return, Estonia increases its customer base for relatively little cost.

It is digital, automated, and can be scaled up easily. But best of all, it took Estonia only six months to launch the program. It was conceived in mid-2014 and the first e-residents were accepted before the end of that year. Five years on, Estonia's virtual population is growing faster than babies are born in the country. And, by itself, the service is turning a profit, as well as creating demand for remote services from Estonian businesses.

Estonia has a new program called Accelerate Estonia, which will experiment with five more similar ideas in the next year. Because they have a digital core, experimenting is easy.

How might we?

Estonia has been experimenting and failing forward for nearly 30 years now. And it now has the agility to experiment with the business model of the state itself, delivering services to many

times its own population and generating revenue in the process.

Estonia was just the first. Singapore is just behind and many more are coming. So, how might governments compete in the new era of globalization? They have to digitalize their society at its core, get data flowing, and establish unique digital identifiers.

The question is where to start? Start simple with design thinking questions like:

- How might we establish the convention of only exchanging documents electronically? (In Estonia, it started with the government cabinet committing to being totally paperless.)
- How might we share patient data to improve health and well-being?
- How might we represent and protect our businesses in the global digital society?

This is a race. The value we get from learning from data and experiments compounds. Countries and businesses that get the process working first will have the advantage.

Presentation 3

Defending Philippine Sovereign Rights in the West Philippine Sea

Antonio Carpio | Former Senior Associate Justice, Supreme Court of the Philippines

SUMMARY: The South China Sea is one of the most important international waterways in the world. Trillion dollars' worth of shipborne goods traverse it annually, accounting for almost one-half of the world's shipborne trade in tonnage. It has also become a source of livelihood, with around 300 million people depending on it for their food. It is also rich in oil and gas around its coasts. Given this importance of the South China Sea, several countries, including China and the Philippines, have made competing territorial claims over it. Contrary to its claims, China never owned or controlled the South China Sea throughout its history. Historical maps showed the Scarborough Shoal and Spratlys, both of which are being claimed by China, have been traditionally part of the Philippine territory. The presentation also revisits the events after the signing of the 1898 Treaty of Paris, when Americans found out that there were many islands outside the treaty lines. The Americans and Spaniards renegotiated their agreement and signed another treaty, the 1900 Treaty of Washington, to clarify that the disputed islands then outside the treaty lines were also included in the cession of Philippine territory to the American government.

The importance of the South China Sea

Why is the South China Sea important? Why are we fighting over maritime areas in the South China Sea?

The South China Sea today is probably the most important international waterway in the world. About USD 5.3 trillion in shipborne goods traverse the South China Sea annually, accounting for almost one-half of the world's shipborne trade in tonnage. Four leading exporting countries use the South China Sea for their maritime trade: China, Japan, South Korea, and Taiwan. About 200 ships on the way to the South China Sea pass through the narrow Strait

of Malacca every day, which is the second busiest international waterway after the Strait of Dover in the English Channel.

Today, the petroleum imports of these leading exporting countries pass through the Strait of Malacca: 65 percent for South Korea, 60 percent for Japan and Taiwan, and 50 percent for China. Before 2015, 80 percent of the petroleum imports of China passed through the Strait of Malacca, which is about 2.7 kilometers at its narrowest. The Chinese were worried that if Malacca Strait were blocked, the Chinese economy might grind into a halt. China then built two pipelines for oil and gas from the coast of Myanmar to Kunming in Yunnan Province. These pipelines became operational in 2015. Today, 30 percent of the petroleum imports of China pass through these two pipelines.

The South China Sea is also rich in fishery. The South China Sea is a very small sea as it occupies only about 2.5 percent of the ocean surface of the world. However, the South China Sea accounts for 12 percent of the total fish catch of the world, worth USD 21.8 billion. Around 2 billion people live in the 10 countries bordering the South China Sea, and about 300 million people depend on the fish from the South China Sea for their protein.

The South China Sea is rich in oil and gas around its coasts (e.g., the Philippines' Malampaya and Reed Bank, Brunei, Sabah, Indonesia's Natuna Islands, Viet Nam, and China). The South China Sea is also rich in methane hydrates, which are lumps of natural gas encapsulated in ice crystals that form in very deep places in the sea, where temperature is very cold, and the pressure is very strong. China has estimated that the methane hydrates in the South China Sea could fuel the Chinese economy for a hundred years. China already has test production sites for methane hydrates off the coast of Guangdong. Only a few countries have the technology to extract natural gas from methane hydrates. Canada, US, Japan, and China are among these countries. The total world reserve of methane hydrates is estimated at more than four times the combined world reserve of oil and gas.

The South China Sea is dotted with small rocks above water at high tide. Even if a lump of rock is only an inch above water at high tide, that is already considered land or territory under Article 121 of the United Nations Convention on the Law of the Sea (UNCLOS). If there is a lump of rock above water at high tide in the middle of the South China Sea, that lump of rock is entitled to a 12 nautical mile territorial sea. The surface area of 12 nautical miles is about 155,165 hectares of maritime space. The maritime space generated is more than twice the land area of Metro Manila, which is 63,600 hectares, and more than twice the land area of Singapore, which is 70,000 hectares.

Countries fight over these tiny rocks above water at high tide because they are very valuable. If a State has sovereignty over such a tiny rock, that State owns all the oil, gas, and mineral resources, including the fisheries, within this 12 nautical mile area around the tiny rock. That State can also reclaim from the rock to the edge of the territorial sea.

China's false historical narrative to claim sovereignty over the South China Sea

China did not participate in the arbitration proceedings at The Hague, but it submitted a position paper to the Arbitral Tribunal which said: "Chinese activities in the South China Sea date back to over 2,000 years ago. China was the first country to discover, name, explore, and exploit the resources of the South China Sea islands and the first to continuously exercise sovereign powers over them."

This is China's historical narrative, which is taught to every Chinese citizen from grade school to college. Every Chinese general, admiral, politburo member, diplomat, professor, and businessman know it by heart, and they sincerely believe it. However, it is totally and absolutely false. I call it "the fake history of the millennium", "the false news of the century", and I will prove it.

On May 7, 2009, China submitted a nine-dashed line map to the United Nations. The *Note Verbale* which accompanied the map stated: "China has indisputable sovereignty over the islands in the South China Sea and the adjacent waters, and enjoys sovereign rights and jurisdiction over the relevant waters as well as the seabed and subsoil thereof." This means that China is claiming everything within the nine-dashed line.

In 2013, China produced a new map where it added a tenth dash on the eastern side of Taiwan. In this new map, China used the same shading in the continental land boundary and in the waters of the South China Sea. China treated the waters

within the nine-dashed line in the same way that it treated its land territory. The waters within the nine-dashed line form part of the national territory of China. That is why the Philippines protested this map.

China's creeping expansion in the South China Sea from 1946 to 2017

Before 1946, the southernmost territory of China was Hainan Island. Throughout the Chinese dynasties, China's southernmost defense perimeter was Hainan Island. Before World War II, China did not have a single soldier or sailor stationed in the Paracels, in the Spratlys, or in Scarborough Shoal.

Before World War II, the Japanese seized the Paracels from the French, and put up a submarine base in Itu Aba, the largest island in the Spratlys. That submarine base was used in Japan's invasion of the Philippines. Following the defeat of the Japanese forces in 1946, China, under Kuomintang rule, and for the first time in its history, moved south out of Hainan Island. China seized the Amphitrite Group, or half of the Paracels, from the French. The Crescent Group, or the other half of the Paracels, was recovered by the French and inherited by the South Vietnamese government.

Aside from its seizure of the Amphitrite Group in 1946, China made a great leap across the South China Sea. China took over from the Japanese forces and occupied Itu Aba in the Spratlys. China under the Nationalist vacated Itu Aba in 1950, and Taiwan under the Nationalist occupied Itu Aba in 1956. In 1974, toward the dying days of the Vietnam War, in the Battle of the Paracels, the Chinese seized the Crescent Group, the other half of the Paracels, from the South Vietnamese government, again expanding Chinese territory farther out of Hainan Island.

In 1987, China installed a weather radar station in Fiery Cross Reef. China declared that the weather station will help the United

Nations Educational, Scientific and Cultural Organization in its global oceanic survey. It was deemed a noble act then, and nobody complained. Today, Fiery Cross Reef is an air and naval base of China, which reclaimed about 270 hectares of land out of a very small rock that was above water at high tide.

In 1988, China seized Subi Reef from the Philippines. Subi Reef is part of the Philippines' continental shelf. However, the Philippines was not familiar with UNCLOS in 1988, and China's seizure of Subi Reef was not reported in the Philippine newspapers. In the same year, China seized Johnson South Reef from the Vietnamese. There was a skirmish, and about 65 Vietnamese sailors were killed.

In 1995, China seized Mischief Reef from the Philippines. This incident was widely reported in the newspapers. Mischief Reef is just 125 nautical miles from Palawan and is 594 nautical miles from Hainan Island.

In 2012, China seized Scarborough Shoal from the Philippines. This incident was also widely reported in the newspapers. Scarborough Shoal is just 124 nautical miles from Luzon.

In 2013, China seized Luconia Shoals from Malaysia. Luconia Shoals is just 54 nautical miles from the coast of Sarawak.

In 2014, China started building air and naval bases on the seven geologic features that China occupies in the Spratlys.

In 2017, China seized Sandy Cay from the Philippines. No Filipino fishermen, not even the Philippine navy and coast guard vessels, can go to Sandy Cay today. Sandy Cay is currently surrounded by Chinese maritime militia vessels. The Philippine government is in denial that it lost Sandy Cay, but the reality is that Filipinos cannot go there anymore.

These are the events from 1946 to 2017. The South China Sea dispute did not start in 2012 when China seized Scarborough Shoal. The South China Sea dispute goes all the way back to 1946.

The Philippines and China are not separated by a “narrow body of water”

The Arbitral Ruling came out on July 12, 2016. In February 2016, before the release of the Arbitral Ruling, Chinese Foreign Minister Wang Yi gave a talk at the Center for Strategic and International Studies (CSIS), a think tank in Washington, D.C. In front of the world’s diplomats, Minister Wang Yi stated that China and the Philippines are very close neighbors separated by just a “narrow body of water”. The narrow body of water that he referred to was the sliver of territorial sea and exclusive economic zone (EEZ) between the Philippine coastline and China’s nine-dashed line.

China considers the nine-dashed line as the common border between China and the Philippines. The nine-dashed line between the Philippines and China, running 1,700 kilometers, is very close to the territorial sea of the Philippines. It is just 64 kilometers off the coast of Balabac Island, the southernmost island in Palawan facing the South China Sea; 70 kilometers off the coast of Bolinao in Pangasinan; and 44 kilometers off the coast of Y’ami (Mavulis) Island in Batanes, the northernmost island in Batanes.

This is the problem of the Philippines. Even if the Philippines won before the Arbitral Tribunal at The Hague based on law, the Chinese government could not comply with the ruling today. If the Chinese government complies with the ruling, the Chinese people may overthrow their government for giving away sacred Chinese territory. The Chinese mantra is that they will never give up the sacred territory handed down to them through the generations by their ancestors. The Chinese will not give up even a square inch of their territory. But, again, this historical narrative, as far as the South China Sea is concerned, is totally false.

Before Chinese President Xi Jinping came here last November 2018, Chinese Ambassador

Zhao Jianhua published an article on *The Philippine Star* and wrote: “Being separated by only a narrow strip of water, China and the Philippines have been close neighbors for centuries.” This article was accompanied by a picture of Ambassador Zhao and President Duterte shaking hands in front of the Duterte cabinet. I asked the *Philippine Star* editors who gave the picture, and they said that the picture was sent by Ambassador Zhao. The subtle message is that President Duterte and his cabinet agree with Ambassador Zhao’s statement that the Philippines is separated from China by only a very narrow strip of water. Nobody objected to this article except me. The Philippine government did not object to this article.

Zheng He never reached the Philippines

Before President Xi’s November 2018 visit to Manila, there was an article penned by President Xi published in Chinese newspapers abroad and in Philippine newspapers (*Philippine Star*, *Manila Bulletin*). President Xi’s article was titled “Open Up New Future Together for China-Philippines Relations”. President Xi claimed: “Over 600 years ago, Chinese navigator Zheng He made multiple visits to the Manila Bay, Visayas, and Sulu on his seven overseas voyages seeking friendship and cooperation.”

Why is 600 years significant? President Xi’s article says that the Chinese arrived in the Philippines even before Magellan came in 1521. President Xi claims that Zheng He was in the Philippines more than a hundred years before Magellan’s arrival: “The Chinese were the first to discover the Philippines. The Chinese were also the first to name the country. Ma-I was the name that the Chinese gave to the Philippines.” This is the Chinese narrative, and of course, this narrative is totally false.

There is an International Zheng He society, and it has a chapter in Singapore. The International Zheng He Society of Singapore came out with a

book in 2005, where Professor Hsu Yun Ts'iao wrote an article titled "Did Admiral Zheng He Visit the Philippines?" His answer is no. Professor Hsu wrote: "When Professor Chiao-min Hsieh of the Catholic University of America wrote that Zheng He supposedly visited the Philippines, he thought that Chan Cheng, which appeared in accounts written by members of Zheng He's expedition, was an old Chinese name for the Philippines. However, the word Chan Cheng was actually the Ming Dynasty name for a Malay state in Indo-China."

Chan Cheng, the area mentioned in the chronicles of Zheng He, was actually a Ming Dynasty name for a Malay state in Indo-China. This is now Da Nang in Central Vietnam. Chan Cheng was the place where the Chams set up their kingdom. The Chams established a powerful maritime kingdom. They were the descendants of the Austronesians. Filipinos are also descendants of the Austronesians. The Chams spoke a language derived from the Austronesian language, in the same way that Tagalog is also derived from the Austronesian language. This is probably why the Chinese mistook Chan Cheng for a place in Luzon.

In 1988, the *International Hydrographic Review* published "A Brief Discussion on Zheng He's Nautical Charts", an article by Zhu Jianqui of the Naval Hydrographic Institute of the People's Republic of China. In this article, Jianqui drew Zheng He's route. From China, Zheng He went to Central Viet Nam, hugging the coast. The route showed that Zheng He never visited the Philippines. Zheng He never even saw the coastline of the Philippines. This is a statement from a Zheng He scholar way back in 1988.

In 2018, *National Geographic* came out with an article on "The 7 Voyages of Zheng He". The article showed that Zheng He's voyages from Nanjing took him westward to the Strait of Malacca, the Indian Ocean, and the Persian Gulf. The article also showed that Zheng He never even saw the Philippine coastline.

China never owned or controlled the South China Sea throughout its history

We won our case before the Arbitral Tribunal at The Hague because UNCLOS says that a State cannot claim maritime zones based on historic rights. A State cannot say that 2,000 years ago, the ancestors of its people went to the waters of Manila Bay and, therefore, their State now owns the waters of Manila Bay.

All claims for maritime zones have been codified under UNCLOS. Every coastal State can claim 12 nautical miles as its territorial sea measured from the coastline. If there is space, the coastal State can still claim another 188 nautical miles for a total of 200 nautical miles known as the EEZ. If there still is space beyond the EEZ, the coastal State can claim an additional 150 nautical miles from the edge of the EEZ as its extended continental shelf (ECS).

The Arbitral Tribunal ruled that there is no legal basis for China to claim any maritime area in the West Philippine Sea because Hainan Island, China's southernmost habitable island, is more than 600 nautical miles from the West Philippine Sea and none of the Spratly islands can generate an EEZ. Neither can Scarborough Shoal generate an EEZ.

The Arbitral Tribunal ruled that all historic rights in the EEZ, ECS, and high seas were extinguished upon effectivity of UNCLOS: "[A]ny historic rights that China may have had to the living and nonliving resources within the nine-dashed line were superseded, as a matter of law and as between the Philippines and China, by the limits of the maritime zones provided for by the Convention." In short, "there was no legal basis for China to claim historic rights to resources within the sea areas falling within the nine-dashed line."

The Philippines submitted to the Arbitral Tribunal over 170 ancient maps, including Chinese maps from the Song to the Qing dynasties,

Philippine and Southeast Asian maps, and European maps of Asia. This is the highest number of ancient maps ever submitted to an international tribunal. The purpose of submitting these maps, together with official documents of China after the Qing dynasty, was to show that China never owned nor controlled the South China Sea at any time in its history.

I will present only one Philippine map. This map is the *Carta Hydrographica y Chorographica de las Yslas Filipinas*, the mother of all Philippine maps. It is also known as the 1734 Velarde-Bagay-Suarez map. This map, which was printed in 1734 in Manila by the Jesuit priest Pedro Murillo Velarde, is important because this is the first map that showed and named Scarborough Shoal and the Spratlys.

In this map, Scarborough Shoal is given the name *Panacot*, a Tagalog word for danger. It was called Panacot because ships will run aground on the rocks of Panacot if the captains do not know Panacot's location. This is what happened to a British tea clipper ship called *Scarborough*. European cartographers renamed the shoal Scarborough after the ship *Scarborough* ran aground there.

This map also shows *Los Bajos de Paragua*. Paragua is the Spanish name for the island of Palawan. *Bajos* means shoals. *Los Bajos de Paragua* literally means the shoals of Palawan, and they are the Spratlys. Our 1734 map is the first map to give a name to the Spratlys.

In 1732, King Philip V of Spain instructed Governor-General Fernando Valdes Tamon to make a map of the Philippine territory under the control of the Spanish crown. Governor-General Tamon commissioned the Jesuit priest Pedro Murillo Velarde to make the map. As cartographer, Father Murillo Velarde sought the assistance of the engraver Nicolas de la Cruz Bagay and the artist Francisco Suarez. The inscription on the bottom right of the map reads: "Lo esculpido Nicolas de la Cruz Bagay, Indio Tagalo en Manila Año 1734". This map is very important because when you ask, "what is Philippine territory", you have to go back to this map.

China published its ancient maps in a three-volume atlas. The atlas is called *An Atlas of Ancient Maps in China*. The atlas was published by the Cultural Relics Publishing House in 1990 (Vol.1), 1994 (Vol. 2), and 1997 (Vol.3). The Cultural Relics Publishing House is the publishing arm of the State Bureau of Cultural Relics of China. China cannot disown the maps in the atlas because the Chinese government officially published them.

Map 97 of the atlas shows the *1098–1100 AD Map of the Ten Dao of the Tang Dynasty (Shi Dao Tu)*. This map shows Hainan Island as the southernmost territory of the Tang Dynasty.

Map 60 of the Atlas shows a map named *Hua Yi Tu*. This map is engraved in stone in Fuchang in 1136 CE during the Nan Song Dynasty. This map of China was published in 1903 in France from a rubbing of the stone engraving. The stone map is now in the Forest of Stone Steles Museum in Xi'an, China. The stone map shows Hainan Island as the southernmost territory of China during the Nan Song dynasty.

Map 193 of the Atlas shows the block-printed *Map of the Ten Dao under the Three Ministries (Nan Tai An Zhi San Sheng Shi Dao Tu)*. This map was published, together with 20 other maps, by Zhang Xuan in 1342 during the Yuan Dynasty (1279–1368). The map shows Hainan Island as the southernmost territory of China during the Yuan Dynasty.

Map 1 of the Atlas shows the *Great Ming Dynasty Amalgamated Map (Da Ming Hun Yi Tu)*. This map was published in 1389 during the Ming Dynasty (1368–1644). This map is painted in color on silk, and it shows Hainan Island as the southernmost territory of China during the Ming Dynasty.

Map 129 of the Atlas shows *The Complete Map of the Imperial Territory of the Qing Dynasty (Huang Yu Quan Tu)*. This map shows Hainan Island as the southernmost territory of China during the Qing Dynasty.

The Philippines presented these maps before the Arbitral Tribunal. We superimposed the ancient maps of China on the current world map, and showed the Arbitral Tribunal that, throughout

the Chinese dynasties, Chinese territory ended in Hainan Island. Chinese territory never reached the Paracels, never reached the Spratlys, and never reached Scarborough Shoal. Thus, the Philippines declared before the Arbitral Tribunal: “The Philippines submits that Chinese historic maps dating back to 1136, including those purporting to depict the entirety of the Empire of China, consistently show China’s territory extending no further south than Hainan [Island].”

Expansion of the southernmost territory of China started only in 1932

In 1932, the French occupied the uninhabited Paracels and the Chinese government under the Kuomintang protested. China sent a *Note Verbale* to the French Government on September 29, 1932 protesting the French occupation of the Paracels. In its *Note Verbale*, the Chinese Government officially declared: “The eastern group is called the Amphitrites and the western group the Crescent. These groups lie 145 nautical miles from Hainan Island, and form the southernmost part of Chinese territory.” China, by its own admission to the world, declared that its southernmost territory ended in the Paracels. The Philippines presented this *Note Verbale* to the Arbitral Tribunal. The *Note Verbale* of 1932 proves that Chinese territory never included the Spratlys and Scarborough Shoal.

There are many other documents that the Philippines presented to the Arbitral Tribunal.

The Philippines submitted China’s Republican Constitutions. China’s Republican Constitutions adopted the territory of the past dynasties. China consistently stated that the territory of the Republic is the territory of the “former empire (Qing dynasty)” (1914 Provisional Constitution of the Republic), the “traditional territory” (1924 Constitution), the “territory it owned in the past” (1937 Constitution), and “encompassed by its traditional boundaries” (January 1, 1947 Constitution).

In 1943, the Chinese Ministry of Information published the *China Handbook*. The handbook covered the period from 1937 to 1943. Chapter 1 of the Handbook defined the territory of China as follows: “The territory of the Republic of China extends from latitude 53° 52’ 30” N. (Sajan Mountains) to 15° 16’ N. (Triton Island of the Paracel Group to the South of Hainan) and from longitude 73° 31’ E. (the eastern fringe of the Pamirs) to 135° 2’ 30” E. (the confluence of the Amur and Ussuri Rivers).”

In 1946, China revised the handbook. The revised 1946 edition covered the period from 1937 to 1945. It was only in this 1946 Handbook that China started to claim the Spratlys. China called the Spratlys the Coral Islands, but they admitted that these islands are also claimed by the Commonwealth of the Philippines and the French Government in Indo-China. China never claimed indisputable sovereignty over the Spratlys in 1946.

In 1947, for the first time, China published a map showing the nine-dashed line. The Chinese government circulated this map internally in China in late 1947. In February 1948, China published this map in an atlas of national administrative districts. This map gives Chinese names to geologic features in the Spratlys but the names are transliterations from English names found in a British map. Scarborough Shoal appears in this map but it is not named, unlike all the other features that China claimed in this map. The Philippines was the first to name Scarborough in the 1734 Velarde-Bagay-Suarez map.

China’s sovereignty markers, found both in the Paracels and in the Spratlys, are totally fake. In 1987, the Committee of Place Names of Guangdong Province published a book titled *Compilation of References on the Names of all our Islands of Nan Hai*. This book contained an interesting Annex and Editor’s Note.

The book stated that in June 1937, the Chinese Kuomintang government sent Huang Qiang, the chief of the Chinese military region no. 9, to the

Paracels with two ostensible purposes: first, to check reports that the Japanese were invading the Paracels, and second, to assert Chinese sovereignty over the Paracels.

However, Huang Qiang had a secret mission—to place antedated sovereignty stone markers in the Paracels. Page 289 of the 1987 Compilation contains an Annex, which was Huang Qiang's *Confidential Report of 31 July 1937*. The confidential report documents the planting of antedated sovereignty markers in the Paracels. Huang Qiang went to the Paracels in June 1937 but the markers that he planted were dated from 1902 to 1921. The Annex states that there were 24 places where Huang Qiang placed these antedated stone markers.

When China published this book, a clerk saw this confidential report and included the confidential report in the book. Francois Xavier Bonnet, a Frenchman who has done a lot of research on the South China Sea, showed me a copy of the book. He said that he found the book in a library in Hong Kong. He told me that I have to get a copy of the book. I had a friend who frequented Manila and Beijing, and I asked my friend to go to the second-hand bookstores in Beijing to look for this book. He found the book, and I have one copy. The photo on the slide is the photo of the book. The Chinese cannot deny this book because it is from their own government. After I made the book's contents known, I understand that all copies of this book have been withdrawn.

When the book came out, the captain of the ship that was sent by the Kuomintang to go to Itu Aba in 1946 went to see the editors of the book. The captain told the editors that he was the captain of that ship, but their ship never went to West York Island, never went to Spratly Island, and never placed the markers mentioned in the book. They placed only one marker in Itu Aba. Thus, the editors made a note that the stone tablets on West York and Spratly Islands might have been erected by the Taiwanese Navy in 1956, and not in 1946. When Chiang Kai Shek

and his Kuomintang army fled mainland China in 1949 to go to Taiwan, he recalled the troops from Itu Aba to help defend Taiwan. The Kuomintang troops went back to Itu Aba, transported by the Taiwanese Navy, only in 1956.

In China's Manila Embassy website, China claims Scarborough Shoal because the shoal is allegedly the Nanhai Island that Guo Shoujing visited in 1279 and where he erected an astronomical observatory. The website states: "Huangyan Island was first discovered and drew [sic] into China's map in China's Yuan Dynasty (1271–1368 AD). In 1279, Chinese astronomer Guo Shoujing performed surveying of the seas around China for Kublai Khan, and Huangyan Island was chosen as the point in the South China Sea."

Legally, China cannot claim that Scarborough Shoal is the Nanhai Island that Guo Shoujing visited in 1279 because China had already used this argument against Viet Nam in 1980.

In a document titled "China's Sovereignty Over Xisha and Zhongsha Islands Is Indisputable" issued on January 30, 1980, China's Ministry of Foreign Affairs officially declared that the Nanhai Island that Guo Shoujing visited in 1279 was in Xisha or what is internationally called the Paracels, a group of islands more than 380 nautical miles from Scarborough Shoal. China issued this official document to bolster its claim to the Paracels to counter Viet Nam's strong historical claims to the same islands.

This Chinese official document, published in *Beijing Review*, Issue No. 7, dated February 18, 1980, states: "Early in the Yuan Dynasty, an astronomical observation was carried out at 27 places throughout the country. In the 16th year of the reign of Zhiyuan (1279), Kublai Khan or Emperor Shi Zu (sic) personally assigned Guo Shoujing, the famous astronomer and Deputy Director of the Astronomical Bureau, to do the observation in the South China Sea. According to the official *History of the Yuan Dynasty, Nanhai*, Guo's observation point, was 'to the south of Zhuya' and 'the result of the survey showed that the latitude of Nanhai is

15°N.’ The astronomical observation point Nanhai was today’s Xisha Islands. It shows that Xisha Islands were within the bounds of China at the time of the Yuan dynasty.”

In 1980, when China was quarreling with Viet Nam over the Paracels, China claimed that Gu Shoujing put up his observatory on Woody Island in the Paracels. But now that the Philippines is quarreling with China, China now claims that Gu Shoujing put up the observatory on Scarborough Shoal.

The distance between the Paracels and Scarborough Shoal is quite far, about 380 nautical miles. Gu Shoujing was a brilliant guy. He was the Leonardo da Vinci of China at the time. Gou Shoujing could not have mistaken the Paracels for Scarborough Shoal.

Physically, the massive astronomical observatories that Guo Shoujing erected in other places in China could not possibly fit on the tiny rocks of Scarborough Shoal.

Guo Shoujing put up a total of 27 observatories. There were 26 on the mainland and one on Nanhai. Today, out of these 27 observatories, there is still one that is still existing in Henan Province. This existing observatory is huge. It is 12.6-meter high, made of bricks, and has a long sundial. Could Guo Shoujing really have put up an observatory on Scarborough Shoal?

The biggest rock on Scarborough Shoal is just 2 to 3 meters above water at high tide, and not more than 6 to 10 people could stand on it. To be operated, these observatories of Guo Shoujing have to be manned every day since measurements have to be taken every day. It is physically impossible to operate such an observatory on Scarborough Shoal. A superimposition of Gu Shoujing’s observatory on Scarborough Shoal demonstrates that it is physically impossible to build such an observatory on Scarborough Shoal.

The Arbitral Tribunal ruled that China never had historic rights in the South China Sea. It declared that “there was no evidence that China had historically exercised exclusive control over the waters [of the South China Sea] or their resources.”

The Arbitral Tribunal was “unable to identify any evidence that would suggest that China historically regulated or controlled fishing in the South China Sea, beyond the limits of the territorial sea”.

Philippine sovereignty over the Spratlys and Scarborough Shoal

The 1898 Treaty of Paris between Spain and the United States drew a rectangular line wherein Spain ceded to the United States all of Spain’s territories found within the treaty lines. The Spratlys and Scarborough Shoal lie outside the treaty lines. Based on the Treaty of Paris alone, China argues that the Philippines does not have sovereignty over the Spratlys and Scarborough Shoal.

Chinese Foreign Minister Wang Yi, in a speech in 2016 at the CSIS in Washington, D.C., stated: “The three treaties that stipulate the Philippines’ territory, the first in 1898, the second in 1900, and the third in 1930, all regulated the Philippines’ western boundary line at 118 degrees east longitude. Areas in the west of the 118 degrees east longitude do not belong to the Philippines. But the Nansha Islands claimed now by the Philippines, the Huangyan Islands, are all in the west of the 118 degrees east longitude.” Wang Yi said that based on the Philippines’ own documents, the Philippines cannot own Scarborough Shoal and the Spratlys.

The second treaty mentioned by Minister Wang Yi is the 1900 Treaty of Washington. When the Americans came to the Philippines after signing the 1898 Treaty of Paris, they found out that there were many islands outside the treaty lines: Batanes, Scarborough Shoal, and Mapan Island in the Sulu Archipelago, among others. The Americans went back to the Spaniards and told them about their observation. The Americans asked Spain to clarify that these islands outside the treaty lines were also included in the territories ceded in the treaty. The Spaniards said no. The Americans said that they will add USD 100,000 on top of the USD 20 million that was paid to the Spaniards for the Treaty of Paris. The Spaniards then said yes. Thus,

the Americans and the Spaniards signed another treaty, the 1900 Treaty of Washington, to clarify that the islands outside the treaty lines were also included in the cession of Philippine territory.

In the 1900 Treaty of Washington, Spain clarified that it had also relinquished to the United States “all title and claim of title, which (Spain) may have had at the time of the conclusion of the Treaty of Peace of Paris, to any and all islands belonging to the Philippine Archipelago, lying outside the lines” of the Treaty of Paris. These territories outside the lines, west of the 118 degrees east longitude, included Scarborough Shoal and the Spratlys.

The Treaty of Washington is the more important treaty, but it is not being taught in our history classes. It is not taught to our schoolchildren. The 1900 Treaty of Washington includes as Philippine territory the islands inside and outside the treaty lines of the 1898 Treaty of Paris. The islands lying outside the treaty

lines are the islands included in the 1734 Velarde-Bagay-Suarez map. Remember that this is the official map of Philippine territory, and this is the territory that Spain referred to in the 1900 Treaty of Washington. There was a cession to the Philippines of Scarborough Shoal and the Spratlys in the 1900 Treaty of Washington. The 1734 Velarde-Bagay-Suarez map closes the loop. This is why the 1734 Velarde-Bagay-Suarez map is very important today. It is still alive. It defines Philippine territory. This map was auctioned on September 14, 2019 for PHP 46.7 million. In the 2016 auction, the map was bought for PHP 12 million. Its value has grown by leaps and bounds. Philippine territory as drawn in the 1734 Velarde-Bagay-Suarez map should be taught to all schoolchildren.

With that, I end my presentation. Thank you for your kind attention.

Reaction 1

Erlinda Medalla | Member, Eminent Expert Resource Committee of the Philippine APEC Vision Group, and former Senior Research Fellow, PIDS

I am so honored to be in the company of such illustrious panel.

We all know how the globalization onslaught has affected us. It is a disruption. From the presentations we heard earlier, we learned that it will continue to disrupt. Because of this, it has elicited some pushbacks (e.g., Brexit, trade wars). Some think that this is the end of globalization. Maybe, there is some truth to that—the world becoming more polarized. Hence, I like the theme of this conference: New Globalization. We are talking about globalization but not as how we knew it before.

No stopping globalization

Technological innovations will not stop globalization. What innovations do is change the character of globalization, more in the form of what Dr. Baldwin describes as ‘telemigration’ where people in one country work in offices located in another country. We see this new form of globalization manifested in changes in the trend of global trade and cross-border data flows. In the past decade or so, there has been a slowdown in global trade of goods and services, which has been more than made up for by the rapid rise of cross-border data flows.

We know that technology will change the character of global trade further, as well as the character of jobs in the workforce, and new

emerging risks will arise (i.e., climate change, increasing tensions within and across countries, US-China disputes, territorial disputes). These risks will come with human and economic costs. Hence, we need workable (often difficult) solutions and global institutions to manage these risks.

Openness and globalization do not mean we give up our sovereign and territorial rights. It does not mean we will erase boundaries. What it requires is better enforcement and knowledge of our rights. So, it helps to have global frameworks or institutions to help settle disputes that could arise.

Multilevel changes

How do we navigate then the New Globalization? There are many complicated things and factors, and—sometimes—when you look at them, they are mind-boggling and are difficult to comprehend. What we need to realize is that they are happening at multilevels, with multisectors and multistakeholders involved. They open different ideologies and disciplines across geographies. All of these have great demands for global, regional, national, and local governance.

The formation of governance does not come from nowhere. There has to be a big input coming from domestic and local levels. The appropriate domestic and local response is also key, and should be interactive at the individual, national, and regional levels. Navigating in this

area is not easy, that is why we need structures. We need laws and rules which will help us navigate the New Globalization.

Our speakers helped us understand what the New Globalization looks like. Dr. Baldwin presented interesting insights and some very likely implications of the New Globalization in the form of telemigration (remote intelligence), robotics (artificial intelligence), and automation (blue- and white-collar types), which are all happening together. Things are really fast and it is a wave that could really faze everyone.

Listening to the speakers, the implications of globalization on the future appear to be more threatening, but Dr. Baldwin's presentation was calming and encouraging. When we look back at the first, second, and third industrial revolutions, we saw new jobs appearing, and that there would always be forthcoming benefits. I agree with Dr. Baldwin that there would be opportunities, as there will always be areas where 'humans' can do what RI and AI cannot. And the challenge is to find these advantages and make the necessary preparations.

I am also encouraged by the conclusion of Dr. Baldwin that there will be more human, more local jobs in the New Globalization. I just wonder where the limits are in terms of automation covering more and more areas over time. I am sure there will be limits, but humans are creative. Whatever limits there might be, human creativity will outpace them. I also wonder what the population will look like by then. Are we going to stagnate at 7 billion, or are we going to double over time? What does it mean if more and more activities will be automated? Will human creativity also outpace these constraints in resources?

Nonetheless, Dr. Baldwin also concludes that we will become a richer, more generous society. I think this is doable. There is no endpoint. We will continue to evolve. To become a richer, more generous society, we need to manage the transition, as Dr. Baldwin puts it. Here, the government has a crucial role. We need efficient regulations; we need infrastructure; and we need to advance the flow

of information. But we can only make use of the digital economy if we have good human capital that goes with it.

Slowly but surely

Thank you to Calum as well for his presentation. I am so envious of e-Estonia. I thought, at first, that you were challenging both the private and public sectors to go digital. But when I listened to you, you were really challenging the government. This is really a huge challenge. I remember when we were trying to implement the national single window for trade, and I do not know if we got that already.

But, it is possible. We might be very slow in adopting some, but if you just look at the people and the pace at which we are learning, it will be possible. New technology and digitization have allowed us to learn more quickly. The seven principles of digital society he talked about will be difficult to attain perfectly, as within and across the country, there will be varying degrees on how to do it. Everybody might try to do things differently. I wonder if there is going to be convergence or divergence because it is important to have a common understanding across countries and that they should speak to each other.

In closing, let us think of "humanity as an edge, not as a handicap", as suggested by Dr. Baldwin. We need local actions, but we cannot lose sight of the bigger picture. In the end, both governments and global institutions will have big roles, but everyone needs to play a part. Actions at all levels should be aimed at helping humans compete in the New Globalization. It should not just be one-way, from top to bottom, but it must be two-way and bottom-up as well. It is not just the top influencing us 'humans' on the ground, but 'humans' on the ground need to contribute to the local, national, and global levels to manage global risks.

In managing cross-border data flows, we need to be involved. This is our future, and we need to shape it together. Not just the politicians and scientists.

Reaction 2

Cielito Habito | Professor, Ateneo De Manila University

I am glad that Dr. Medalla did a faithful job of reacting to the presentations of the speakers. What I decided to do was to prepare a few slides that more of complement than respond to the presentations that have just been made. I will touch on the Fourth Industrial Revolution (FIRe), which was the topic of the previous APPC, and situate that within this session's perspective, particularly on the matters of demographic shifts and the shifting of the global economic balance, and how we fit in there.

Age of disruption

Let me start with FIRe, which we all know as the age of disruption with the rapid advancement of technologies. In the Philippines, there are numerous jobs that seem to be under threat because of artificial intelligence. Even jobs that we would expect to require humans (i.e., call center agents) are under threat.

In the video just shown (<https://www.youtube.com/watch?v=yDI5oVn0RgM>), we heard a very natural conversation. The other side did not even suspect that she was talking to a machine. That is just to show that even call center jobs could well be under threat. To put it simply, so many jobs are under threat.

We have heard about autonomous vehicles or driverless cars. One thing that strikes me most about the projections on this is that once these are widely used, we would not really need 90 percent

of the existing cars on the road, because you can summon them the way you summon a Grab car, and hardly anyone will need to own a car at all. This would dramatically reduce the fleet of cars that need to be on the road, and free up huge areas of parking lots for more productive uses.

In terms of the future of agriculture in the country, exciting new applications of technology have started to make farming appealing to young people again. A new generation of techie agripreneurs is emerging.

Earlier, Dr. Baldwin mentioned Watson, a product of IBM, which, in short, can do better than a lawyer because it has access to all the jurisprudence of the world stored in the cloud. It is said to be able to diagnose cancer better than medical practitioners can. Thus, it is not only manual labor that is at risk, but also the jobs of professionals.

You may have heard of Tesla's "Power Wall" and how it allows you to store the energy you generate from solar panels on your roof. Its developers claim that with it, households can stop connecting to the grid and rely on storable power from solar panels. The whole power industry will be changed.

In other parts of the world, drones are now able to deliver pizzas to people's doorsteps.

Another thing that has not been mentioned so far but is instrumental to the rapid change felt across the world is blockchain, along with

the Internet of Things. Blockchain is disrupting the disruptors. If they say that Uber and Grab are disrupting the taxi industry; with blockchain, you do not even need a third party like Uber to connect drivers with riders because now they can go straight to one another, with the track record of each already directly stored in the blockchain and accessible to all. In short, things are rapidly changing even as we have been swept with rapid changes already.

Demographic shifts

The next thing I want to highlight is the uniqueness of our own population. We can compare population profile graphs of Japan, Thailand, and the Philippines to show what I mean. Japan finds itself with a growing preponderance of the elderly in their population now, while having a very narrow base of children to take over the current generation of working-age people. Demographers' projections show that by 2050, Japan's population will be top-heavy: there will be a large number of elderly people that need to be cared for, far outnumbering the working and productive members of their population. This is the reason that in the renegotiations for the Philippines-Japan Economic Partnership Agreement, Japan is interested to open up even more to our nurses and caregivers, along with farmers and others as well.

While Thailand has a bulge of working-age people now, they have a very narrow base of a successor generation to take over, after the success of their aggressive family planning drive in recent decades. In 2050, their profile will be similar to Japan's reverse pyramid, though not as drastic. But even now, they are already worried of their aging population.

In contrast, the Philippines has a unique pyramid-shaped population profile, with a very broad base of children. In 2050, its profile will look like what has been described as a demographic sweet spot, with a wide band of working-age people, underpinned by a similarly wide band of young children to take over. It suggests that the OFW phenomenon is probably going to stay: whether

we like it or not, we will continue being exporters of human resources because the rest of the world will need them. In the face of globalization that we are now talking about, we must ask ourselves how we might position ourselves to make best use of that demographic advantage?

All this means that millennials and the so-called Generation Z will dominate the workforce. It has been said that while a goldfish has an attention span of 9 seconds, a millennial has an attention span of 8 seconds! We can really expect a different kind of workforce. According to studies by psychologists, those who belong to Generation Z will most likely change jobs 10 times before reaching age 34—which makes one wonder about the Security of Tenure Law being debated now—could it be the employers who will actually need that security, rather than the employees, given the observed restlessness of young people now in the workforce? Avoiding rigid work styles and remote working conditions are now more common because these are suitable for the younger generation. Note that this is a generation that was born into the internet age; they cannot imagine a world without the internet. That kind of technology must be inherent in the workplace of this new generation of workers.

The implications include accepting the reality of high turnover of workers, so like we said, it might be the employers needing security of employment rather than the other way around. Again, there will be need to embrace and apply technology in the workplace. But we would also need to invest more in “soft skills” (e.g., persuading, working in teams, communicating well, etc.), which employers have expressed greater difficulty in finding, more than technical skills which can be easily acquired online and via training.

A current disturbing reality is higher incidence of suicides among the youth, because of factors including stress in the workplace, which has to be deliberately managed. This had brought about workplaces like that seen in Google, and even in Globe Telecoms, where in their offices in BGC in Taguig City, there is a very different

ambiance that looks more like a place for leisure, which suits their young generation of workers.

Global economic balance

Right now, what dominates the global economic scene is the US-China trade war. Some noteworthy impacts include the downslide of US imports from China, but also of US imports from the rest of the world other than China—which means that world trade generally slowed down. It is for this reason that there is worry that a global slowdown and even recession may be imminent.

We have been talking about opportunistic gains from the trade war that we can possibly take advantage of, but Viet Nam is actually the biggest winner in the neighborhood. They are attracting not only trade but also foreign direct investments out of China in serving the US market, to which they have preferential access now.

The International Monetary Fund projects 3.2-percent global gross domestic product (GDP) growth in the year ahead, but this will not come from advanced economies but rather from emerging markets and developing economies, including the Philippines. Notably, it projects that the growth in these fast-growing economies will average 4.1 percent, so even though it is bad news that our GDP slowed down to 5.5 percent, it is still among the fastest growth rates in the world.

Biggest threat to our future

Not many of us are aware that one in every three (33.5%) Filipino children 5 years old and below is stunted because of severe malnutrition. Physiologists and psychologists tell us that 90 percent of brain development happens within the first five years of life. If within those five years, a child is severely malnourished, as physically manifested in stunting, then he/she is damaged for life, and will never reach his/her full physical and mental potential.

Brain scans of a healthy child compared to a stunted child show much less white matter in the brain, which is what matters for cognitive ability, memory, and intellect. Once that is compromised at age 5, the damage to the child is permanent.

If we consider that one in three Filipino children has that problem, what I described earlier about a demographic sweet spot may well turn out to be a demographic time bomb instead. Yes, we may have an abundant number of workers, but one out of three will be of low productivity, misfits for their jobs, or at worst, even criminals. This could well be the biggest threat to our country's future right now.

It is not a problem just for the future; it is here now. Since the 1980s, stunting has affected 30–40 percent of children in the country and has changed little since then. Even our current working-age people are products of a situation where more than one out of three were severely malnourished and, therefore, could not have attained maximum physical and brain development. A controversial study shows that the Philippines has the lowest average IQ compared to other countries in the Association of Southeast Asian Nations. Could this be the result of the severe malnutrition and stunting that has been plaguing us for generations now?

I am convinced that this has been one of the pernicious but less-understood impacts of the fact that rice is twice more expensive in the Philippines than in our neighboring countries. Why? Our stubborn insistence in shielding our domestic rice market from international competition through more open trade has led to complacency and neglect on the part of government in working to raise productivity and competitiveness of our rice farms, and of Philippine agriculture, in general. The result has been much higher production costs, hence prices for our food staple than could have been the case.

In closing, the compelling need for us in the Philippines is to make food more widely accessible, and feed the youngest of our children, if we are going to have a positive future at all in this globalizing world.

Open Forum

Question 1

Dan Agustin (Masaganang Sakahan): Thank you, Justice Carpio, for the excellent presentation. My question is on investment and economy. Can we enter into an arrangement with a foreign investor or a country, like a fishing agreement or exploration on the West Philippine Sea in our so-called exclusive economic zone, say on a 40-60 arrangement?

Antonio Carpio: Thank you for that question. We have signed a memorandum of understanding (MOU) with China to cooperate on gas and oil explorations. In that MOU, China agreed that the China National Offshore Oil Corporation (CNOOC) will enter into a commercial contract with any of our service contractors, and we are looking here at Reed Bank and the service contractor is Forum Energy. In other words, China will tell its commercial enterprise (i.e., CNOOC) to sign a commercial agreement with Forum Energy either as an equity holder or a subcontractor.

Now, in the contract of Forum Energy with the Philippine government, it is expressed there that Forum Energy recognizes that the Philippines has sovereign rights over the gas. That is very clear. Forum Energy is providing services to the Philippine government and, in payment, the Philippine government will either pay in cash or in kind (i.e., gas). It is very clear that Forum Energy recognizes that we have sovereign rights. If CNOOC steps into the shoes of Forum Energy as

subcontractor or equity holder, impliedly, China will be recognizing we have sovereign rights. And that is why I have supported the MOU.

But, are we there already? Well, I said, that is just one document. Let us wait for the terms of reference (TOR), which will be signed afterwards. The TOR mirrors what is in the MOU. In other words, China agreed to implement the MOU using the same structure: they will enter as a subcontractor or a service contractor. And that is fine with us.

When President Duterte went to Beijing recently, we exchanged the names for the members of the joint steering committee to implement the MOU and the TOR.

I have always viewed the South China Sea dispute in three phases. In the first phase, China said they have indisputable sovereignty. When the ruling came out, China said meet us halfway. I asked the Chinese, what do you by mean halfway? Half of the sovereign rights or half of the income? They refused to answer. There is a third phase where China will impliedly or expressly recognize our sovereign rights, but they will be the service contractor and get 40 percent or 50 percent of the revenue.

The MOU, TOR, and the exchange of members place the dispute now in the third phase. Are we in the third phase? I think we are. Of course, China can always walk out. But we are there, and the next step for the Philippine government is to name now Forum Energy as a party to talk to CNOOC, and they will discuss commercial terms.

If that happens, then we have solved the problem of the South China Sea dispute. I have talked to the Vietnamese, and they said they are willing to do that also; as long as they have sovereign rights, they are prepared to give China 40 percent. Anyway, right now, we are paying Shell about 40 percent to 50 percent already. It is no skin off our backs if we pay CNOOC the same amount. CNOOC is clearly not claiming they have sovereign rights because they will just step into the shoes of Forum Energy.

They say that the lasting legacy of President Aquino was the arbitral ruling. I think, if we clinch this, the lasting legacy of President Duterte would be to quietly implement the ruling.

This will be South China Sea-wide because this same formula will be offered by China to Viet Nam. I have talked to Vietnamese scholars, and it is acceptable to them. I supposed it will be acceptable to Malaysia, Brunei, and Indonesia. So, we are in the cusp of a final settlement of the maritime dispute, not the territorial dispute.

Is it certain? No, I cannot say because China can always walk away. But the major elements are there, and, hopefully, we will stay the course. As long as China comes in as a service contractor, we are safe. We are not waiving any of our sovereign rights.

Question 2:

Imelda Tiongson (Fintech Philippines Association): Estonia has been named as one of the most advanced digital societies and one of the first in coin or token-offering, as well as in blockchain technology; yet, it is also one of the lowest in terms of online and credit card frauds. The Philippines has just started digitalization, yet we have seen a few online scammers. Estonia, at the same time, is also among the countries strong in good governance and transparency. You have mentioned ‘trust’ as one of the seven principles. Has good governance played a major role in building trust in the system? Or could it be that the low scam rate is just a factor of the population size?

Calum Cameron: Thank you for the question. Obviously, the population size is going to affect the numbers. Estonia is number one in the world for a lot of things, if you do it on a per capita basis. When it comes to online frauds or scams, I think the average is a little over one per day.

But, of course, being in a digital world, the population does not have a lot to do with it because we are surrounded by billions of people who are online, who might take advantage of all the opportunities that Estonia has to offer for getting into the system.

As an example, Estonia has been in the news recently for a massive money laundering scheme that was going from Russia and Ukraine and ending up in offshore UK accounts. Estonia was held out because a lot of the transactions took place in bank branches in Estonia. The thing to point out here is that they could not have been done in Estonia going to Estonian accounts because the level of transparency in Estonia means we know exactly who is behind each business or account. They cannot hide. So, what happened is the money went to big foreign banks who had branches in Estonia. The management was done elsewhere, and the money ended up in UK accounts because they do not have to be transparent about the ownership.

So, I guess, good governance is there in that respect. The structures are set up to make sure there is absolute transparency. This also goes back to my point that the system was built by engineers. From the start, it was built to deliver its purpose. We need transparency. We need to be trusted, so these are the things that must be done. The politicians cannot argue us out of that. To be fair, the politicians were visionary when they backed this. They were very bold when they did this, but there were some who argued against it.

Again, trust the engineers. If you give them the right direction, they will build you what you need.

SESSION A

**WORSENING
INEQUALITY**

SESSION OPENER

Marife Ballesteros | Vice President, PIDS

One of the empirical evidences we have noted in the past decade is worsening inequality. In this session, we seek to understand this global economic restructuring, what the megatrends are, and how the acceleration in economic and political change affects fairness and inclusiveness of growth.

We have four speakers in this session. Our first speaker, Dr. Lucas Chancel, cannot be with us today, but sent a videotaped presentation, which we would play later. This will be followed by presentations from our speakers from the Asian Development Bank, World Bank, and PIDS. We were initially advised to have the videotaped presentation at the end of the session. But if you look at the flow of discussion, we decided it would be better to look at the international or global trends first, before moving to regional trends specifically technical revolution and how it is affecting inequality in Asia, and then to national and community trends in the case of the Philippines.

Presentation 1

Global Inequality Trends and Drivers¹

Lucas Chancel | Co-Director, World Inequality Lab, Paris School of Economics

SUMMARY: This presentation is based on the *World Inequality Report 2018*. It shows that global income inequality can be relatively well estimated from 1980 to 2016, by combining data on national incomes and available Distributional National Accounts. Our contribution is threefold. First, we attempt to go beyond country-level inequality data by comparing inequality dynamics between and within large geographic aggregates such as Europe, North America, or Asia. We show that inequality increased almost everywhere, but at different speeds, revealing the importance of national institutions and policy in the shaping of inequality. Second, we combine data on income inequality within these aggregates to estimate a global distribution of income since 1980. We show that our general conclusions are robust to several alternative methodologies to measure global inequality. According to our benchmark results, the global richest 1 percent of adults captured 27 percent of total income growth since 1980, which is two times more than the bottom 50 percent of adults, who collectively captured 12 percent of total growth over the period. The top 1-percent income share increased from 16 percent to 20 percent over the period. We observe a trend break after the financial crisis, but this is only due to between-country reduction in inequality, as within-country inequality continued to rise. Third, we estimate the future evolution of global inequality between 2016 and 2050 by testing several assumptions about national income and population growth rates and inequality dynamics. We find that optimistic assumptions about growth in emerging countries in the future will not be sufficient to reduce global inequality between individuals between now and 2050 if countries continue their own inequality trends since 1980, highlighting the need for a renewed debate on the set of policies required to generate more equitable growth pathways.

Introduction

Thank you very much for the invitation to this conference. I would have liked to be present today, but unfortunately, this is not possible. Doing this video presentation will help us save a lot on carbon emissions, which, beyond global inequality, is one of the challenges of the decades to come.

I am Lucas Chancel, one of the co-directors of the World Inequality Lab, which is an international research institution with headquarters in Paris and Berkeley, California. We operate with a network of over a hundred researchers located all over continents to combine the most recent, most transparent data sources that allow us to track income and wealth inequality both from

¹ This text is based on a transcript of Lucas Chancel's presentation for the conference done by the organizers.

international and historical perspectives. What we do is we combine national accounts, tax data, and data that we were able to obtain from leaks like the Panama papers or the HSBC leaks, in order to provide the most accurate picture of the evolution of inequality and level of inequality today. We feel this had to be done because there is a gap in transparency when it comes to measuring and tracking income and wealth inequality.

Very often, public statistics do not provide an accurate picture of inequality levels partly because some financial flows are poorly monitored across countries. This relates to tax evasion. This is also partly because the statistical tools of national statisticians are not tailored to tracking inequality. Survey data, statisticians know, tend to be largely under-reported and underestimate top incomes and top wealth levels.

Administrative tax data is a good way to have better information on what is happening at the top of wealth distribution within countries. We now know that lots of actions have been taking place at the top of the distribution. So it is important to have the right set of statistical tools and the right amount/set of data to measure these trends. This is what we seek to do with the distribution of national accounts project that is published in the World Inequality Database. What we seek to do is to reconcile microeconomic study of inequality with the macroeconomic study of the economy. We also seek to reconcile databases and different concepts in order to provide an accurate picture of the distribution of economic growth.

Findings from the *World Inequality Report 2018*

If we look at the 40-year period starting from 1980, it would show that despite the strong rise of emerging countries, strong growth in China and India, and other large emerging countries, global inequality, understood as inequality between world citizens, has increased over this time span. This is one of the key results of our *World Inequality Report*

published in 2018, which I will largely draw from for this report and presentation.

The top 1 percent captured twice as much global income growth as the bottom 50 percent between 1980 and today. That being said, what is extremely important to have in mind is the rise of inequality within countries we observed across regions in the world, with very different social and political organizations.

There is a lot of variation, there is a lot of variance in the trajectories that we observed. This is what is really interesting because it reveals that there is no fatality in the rise of inequality across countries. The rise of inequality is not a deterministic by-product of globalization or technological progress. It is really the result of policy. It is when we stop looking at the changes in institutional frameworks, tax policies, and changes in terms of investment in education that we are able to understand the different trajectories followed by different countries when it comes to their inequality trends and drivers.

The key conclusion is that policies matter a lot. But in order to form these policies and policy debates on inequality, we need more transparency in income inequality. This is what I will try to show in this presentation: the preliminary ways on how to reconcile the macro and micro.

Income inequality across key world regions from 1980 to today

In a perfectly unequal world, the top 10-percent income share will be 100 percent. In a perfectly equal world, this top 10-percent income share will be 10 percent and we see that countries started in 1980 at various levels. The bulk of countries—India, US, Canada, Russia, China, and Europe—around 30 percent. The rate of Russia is at slightly more than 20 percent. What is striking here is the generalized rise of inequality across these regions but this rise happened at a very different speed. What is particularly interesting to show here is Russia, the most equal country within this subset of regions up to 1991. In just five years, it became one of the most

unequal countries in the world—the extent of the rise of inequality was absolutely shooting in a short period of time. Other countries that experienced a strong rise in inequality but appear to be much more progressive are India and the US. Starting from 30 to 35 percent for the top 10-percent income share, it has grown to 47 percent in the US today and much more 56 percent in India, but should rise in both regions over this four-decade time span. There are more moderate increases in China and Europe.

If we take a broader historical perspective, we can see that all these regions in the 1980s were at the end of a relatively low inequality period. Whether we think about mixed-economy regimes (e.g., US, Canada, and Europe), communist or socialist economies (Russia and China), or highly regulated economies (e.g., India)—from the 1950s or at the end of the World War II to the late 1970s—all of these regions went through a phase of compression of inequality or very low inequality levels by historical standards in the late 1970s, and with a rise afterwards.

The question we might want to ask ourselves are: Where are these regions going to? What could be the new normal in terms of inequality levels? To discuss these questions, I am adding on this graph three regions: the Middle East, Brazil, and Sub-Saharan Africa. Data are not as good quality before the 1980s, but evidence points toward the fact that these three regions did not go through the stage of inequality reduction throughout the second half of the 20th century. So, income inequality levels are relatively stable in these three regions but at extreme levels. These very high inequality levels can actually set a new horizon in terms of inequality within countries. The question is, are all these formerly low-inequality regions getting back to the historically extreme levels of inequality they experienced earlier in their historical development at the beginning of the 20th century and in the 19th century?

Before I get back to this question of the future, let me first do a thought experiment. What would happen to inequality in all of these

regions if we are breaking national boundaries? What would happen to inequality between world citizens irrespective of their nationality? One very powerful way to look at this is to focus on this incidence curve that is for each group of the world population from the poorest in the left to the richest in the right. We have here 100 groups of the global population. So the bottom 1 percent to the top 1 percent. For each percentile, what we plot is the real income growth rate per adult over the 1980 to 2016 period. What comes out of the graph is what we could present as three pictures of globalization.

The first picture of globalization is a very positive picture—strong growth in emerging countries, growth of over 100 percent, doubling incomes in real terms, so this is the emerging economies catching up with the West. This is a very positive news for the global economy.

Now if we go to the right-hand side of the curve, it appears that some groups grew at a much lower level—below 50 percent. We will see that in some countries, the growth of the bottom half of the population of some rich countries like the US is much lower than 40 percent or even close to 0 percent over the entire time period. This is a more negative picture of globalization.

Finally, the right-hand side of the graph also deserves attention—growth rates of over 200 percent for the top 1 percent. What we are able to show—thanks to the new combination of administrative tax data, national accounts, and surveys—is the extent of this increase.

One might say that what is happening at the top is not necessarily meaningful from a macroeconomic point of view because this only represents 1 percent of the global population, so in the end, we should not really care about what is happening there. A good way to move forward is to present the exact same data except that the scale is a little bit different. Basically, we are exploiting the top 1 percent into different subgroups, and what is represented in the box is that the top 1 itself represents 1 percent of the global population

by definition but captures 27 percent of global growth. This has to be compared with the total growth captured by the bottom 50 percent over the period, which is just 12 percent of total growth. This means that about twice as much any of the new yuans, rupees, dollars, and euros created in the world since the 1980s, more than twice as much of all this growth was captured by the top 1 percent itself rather than by the bottom 50 percent. This can be translated in the rise of global inequality despite the rise of emerging countries, which is one of the key new results of the evolution of global income dynamics in the past decades.

The trickle-down narrative

We needed a very strong growth at the top in order to have growth at the bottom or the so-called trickle-down theory about economics. What can we say about trickle down? Let me focus on two sets of countries: the US and Western Europe to start with, and then I will focus on China and India.

We have two regions: the US and Western Europe, from 1980 to 2016, two indicators (the top 1-percent income share and the bottom 50-percent income share). We can see that they are similar in terms of size and population, as well as in the level of development and in terms of inequality levels in the 1980s. You see that the top 1 percent's income share and the bottom 50 percent's share are falling in similar ranges. But, over the course of time, the evolution is strikingly different. In the US, there is almost a complete inversion of the relative position of the top 1 percent—the bottom 50 percent's share of national income collapses from 20 percent to a bit more than 10 percent. At the same time, the top 1 percent's income share rose from 10 percent to 20 percent. This happened in the context of near stagnation of the bottom 50 percent's average incomes in the US. The bottom half (poorest half) of the American population was cut out from economic growth.

There is a very different picture in Western Europe. It is important to keep in mind that

these are pretax incomes, these are not after redistribution. The big gap in terms of US and Western Europe's dynamics is not primarily a matter of what is happening in the fiscal and redistribution system but what is happening with predistribution of market incomes. It is extremely important to think about the set of policies.

The final point is that inequality is not about trade or technology per se. Note that these two regions—US and Western Europe—opened up in relatively similar ways to trade and technologies over the period but have followed radically divergent pathways.

The story of China and India has a relatively similar message, even though these regions have different levels of development and institutional setups. But they have similar levels of inequality in the 1980s and diverging trajectories over the course of time. Basically, the opening of global markets and the liberalization of the economic markets can be done in different ways. What is also interesting to see in India vs China is that, if you look at the top of income distribution in both countries, they have very similar growth rates.

At the bottom of the income distribution, the share of the bottom 50 percent of Chinese grew four times faster than the share of the bottom 50 percent of Indians. This is not because the rich Chinese grew much faster than in India that the bottom 50 percent or the poorest Chinese grew at a much higher rate than in India. The reasons must be found elsewhere. Specifically, this has a lot to do with the importance of investments in education and health, as well as investments in infrastructure in rural China, that were not done at the same extent in India.

Future of global inequality

We do not know what the future of inequality will be like at the world level, but we can make projections. What is useful in this exercise in my sense is that we see that if we assume that emerging countries will continue to catch up—and we are more optimistic than the OECD, for instance,

when it comes to the future catch-up of Africa, Latin America, or Central Asia and Southeast Asia—if countries continue to distribute income growth in the same way as they have done since the 1980s, business-as-usual distribution of growth but more growth in emerging countries in the future than in the past, then we are still in a continuing trend in terms of the rising global top 1-percent income share. Indeed, this trajectory is possible if all countries distribute growth in the same way that the US did in the past decade, the top 1-percent income growth will be even higher than in the business-as-usual scenario of about 27 percent by 2050. Countries can also distribute growth in a fairer way. If the European trajectory is followed, there is a slight reduction of the top 1-percent income share.

But the bottom line is that, between country convergence, it will not be sufficient to reduce global inequality or to counter the strong divergence that is happening within countries. One of the key messages that I would like to have is that between 1980 and today, we are moving from a world where nationality mattered to a world where nationality matters less than income differences within countries when we try to understand global inequality between individuals.

I will conclude here by saying that with the publication of this data, our objective is not to make everybody agree on inequality. There is no

single silver bullet to tackle inequality. But there are many silver bullets if you want to tackle the rise of incomes and wealth at the top. Progressive taxation is key. If you want to lift the bottom 50 percent of the population, investments in education and health are key. And how do you finance important investments in the universal access to education and health? It is through progressive taxation. There needs to be a connection, an integration of predistribution policies and redistribution policies in taxes.

What also matters is for everybody—policymakers, media, and researchers—to have access to quality information on distribution of growth. But this is not the case at the moment. Governments should publish the statistics with the help of the United Nations, and this would be essential to find appropriate policy responses to these trends.

The positive news is that there has been a rise in global income, but the rise is not a fatality. We can organize globalization in a very different way. The different trajectories across countries suggest that much more equitable pathways can be followed in the future. For developing countries like the Philippines, this may add another layer of complexity to the challenging tasks of developing a globally competitive industry. It might also put the viability of low-cost manufacturing and services exports at risk as source of growth and development.

Presentation 2

Technology and Inequality in Asia

Donghyun Park | Principal Economist, Economic Research and Cooperation Department, Asian Development Bank

SUMMARY: Growing income inequality is a global concern. While income disparities across countries have narrowed significantly over the past several decades—thanks to the robust economic growth achieved by many low- and middle-income economies—income gaps within countries, both advanced and developing, have widened. In developing Asia, inequality has increased generally since 1990. High inequality can “hollow out” the middle class, limiting the domestic market size. It can damage institutional quality as well—through possible elite capture, rent seeking, and corruption associated with highly concentrated growth, dampening the poverty reduction impact of economic growth. What are the underlying causes of this inequality trend? In addition to globalization, market deregulation, and population aging, recent economic literature has focused on technological progress as the key contributing factor to rising inequality. In this era of the Fourth Industrial Revolution, there are a variety of ways governments of Asia and the Pacific region can handle the increasing trend of inequality.

Inequality in Asia

Thank you very much for the invitation to present in this forum. The figures I will present here are also available in the *Asian Development Outlook 2017*, which can be downloaded from ADB’s website.

The first speaker gave a very good picture and description of global inequality and its implications. My presentation is from a more regional perspective and also from the perspective of this specific issue—the effect of technological progress—which we know is crucial to economic growth and development in any economy.

We are aware of the conventional risks and hazards that technological progress, along with international trade, has on the economy. We are aware that despite its benefits, it can also worsen inequality. As economists, we are generally

encouraged to use positive terms. But inequality is a bad thing, so I will not sugar-coat terms and use “worsening inequality” instead of the less caustic term “widening inequality”.

Countries in Asia have diverse heterogeneous income and income development levels: from Bangladesh, which is a typical low-income country, all the way up to China, which is an upper middle-income country according to World Bank definition. If you look at these countries between 1990 and 2017 or over the last three decades, data on income inequality measured by what people consume, not just their income, show that the share of consumption of the richest 10 percent rose significantly in the Asian region.

One thing to be emphasized here is that the economy of developing Asia grew rapidly by a wide margin compared to other parts of

the developing world like emerging European countries, Middle East, Sub-Saharan Africa, and Latin America. As a result of that, our record of poverty reduction over the last 40 years—however you define poverty (e.g., percentage of people living on less than USD 1 per day)—has been unprecedented. Of course, there are Western guys who will say that rapid growth is not the same as quality of growth. Regardless, data show us that the cumulative reduction of poverty rates in the Asian region is much larger than in other parts of the developing world like in the Middle East or in North Africa, for example, where extreme poverty has led to economic and social stagnation, as well as broader social problems.

Developing Asia has an impressive record of growing rapidly in terms of gross domestic product (GDP) and, at the same time, reducing poverty by an unprecedented margin in a relatively short period of time. Economic growth is a great thing, and the biggest benefit or consequence of that is unprecedented poverty reduction. Having said that, developing Asia is not immune to this global problem of rising inequality.

Inequality is a worldwide issue affecting advanced countries, emerging markets, and developing countries in all regions of the world. The fact that inequality has garnered worldwide attention may explain why a relatively difficult book like Tomas Piketty's *Capital in the 21st Century* has become a global bestseller despite being highly technical in nature. The point here is inequality is not an Asia-specific issue but a global problem.

Why does income inequality matter?

This question is germane to what I talked about earlier—poverty reduction. If the level of inequality remains the same as opposed to increasing economies, our GDP growth rates would have already lifted an additional 165 million people out of poverty. That is 5 percent of the Asian region's population. In other words, inequality and poverty

may be different concepts but are very much related. What has impact on one will also impact the other.

My family and I eat out every Sunday, and my wife—who is sometimes more perceptive than I am—observed that you could actually feel the middle-class population expanding based on the crowd in malls and restaurants. This shows that the Philippines is experiencing a more broad-based economic growth. But one thing I heard from the conference earlier today, which comes across as unpleasant, is that one-third of Filipino children are undernourished at an early age. This kind of inequality is bad for human capital and the future economic growth, and thus needs to be addressed.

People talk about trade-offs of inequality and economic growth, or between economic equity and efficiency. To grow the economy faster, you have to suffer higher level of inequality and vice versa, or trade-offs in one form or the other. But recent rigorous econometric analyses show that there is no trade-off; inequality has a negative effect on growth. Inequality is bad for growth. Why? Because inequality encompasses not only incomes but also access to opportunities.

Based on disturbing multifaceted socio-political issues we face today, such as the emergence of populist ultra-right-wing parties and hostility to immigration, we can say that there is an increasing backlash against capitalism, free markets, and private enterprise.

The backlash may be due to the notion that, right now, we do not have the kind of Adam Smith merit-based capitalism where the best man wins. Few people will have a problem if someone like Steve Jobs, or an entrepreneur who creates a socially useful product or service, becomes a millionaire several times over.

This is the form of capitalism that rests on the assumption that anybody with drive, talent, and ambition can make it. But, increasingly, this is not the kind of capitalism we are seeing. Instead, we have hereditary capitalism (i.e., I'm rich because

my parents are rich), which creates a highly uneven playing field.

Intuitively, it does not take a genius to figure out that economic growth is significantly lower in hereditary capitalism than in merit-based capitalism.

What are the main drivers of inequality?

The inequality you see in the world today is multifaceted: inequality of income, inequality of wealth (i.e., a laborer's share in gross national income), and spatial inequality (i.e., rural poor vs urban poor, coastal areas vs interior areas) amid a rapidly aging population in Asia. As regards technological progress, globalization, and market deregulation, however, a common element or currency in all these areas is skill. Those who have access to develop these skills or expertise have decided advantage over those who do not have skills.

Let us focus on technology inequality.

There have been several remarkable periods of technological revolution in history; the most recent of which is the information and communications technology (ICT) in the mid-90s to early 2000s. This led to improvements in productivity because it drastically reduced the cost of communicating and disseminating information. However, as with previous technological revolutions, there was fear of jobs being displaced or destroyed by ICT.

We are now in the middle of another type of technological revolution—the Fourth Industrial Revolution—things like artificial intelligence, Internet of Things, 3D printing, naval technology, and robotics. Everyone is once again expressing the same apprehension. There is a tendency to revert to this luddite way of thinking that technological

progress is bad and will cause millions to lose their jobs. But history has shown that this is largely the same old story. In short, the more things change, the more things actually remain the same.

There is plenty of cause for optimism and, at the bare minimum, there is no undue cause for pessimism. There are so many positive factors: new jobs, new industries, stronger demand, and so forth. Of course, cognitive jobs will grow faster than routine jobs. If you look at policy responses, what will strike you is that they are more or less the same things expressed during the ICT revolution and the technological revolutions before that. Perhaps the crucial thing is not the change in technology, per se, but how the economy adjusts.

The role of the government is to help the economy structurally adjust through, for example, flexible labor markets. Of course, we need social protection for industries, but the key response has to be lubricating the wheels of economy's structural adjustments to these kinds of technological change through flexible labor markets, worker training, and retraining. I believe there is plenty of cause for optimism.

Lastly, because we are in Manila, let me say something about the Philippines.

There is a lot of concern over the future of call centers, which have been a large engine of growth for the Filipino economy. Experts have shared the same story; many of these call center jobs will be phased out because it will be quite easy to automate. But if you will look at the evidence, the Philippine ICT business process outsourcing industry is already moving up, leveling up, so this is a positive sign. It shows that the Philippine economy is structurally flexible and can adjust to challenges imposed by technological revolution.

Presentation 3

Poverty and Inequality

Gabriel Demombynes | Program Leader for Human Development for Brunei, Malaysia, Philippines, and Thailand, World Bank

SUMMARY: Despite rapid economic growth in the Philippines in recent years, the pace of poverty reduction has been slow. The World Bank's forthcoming Systematic Country Diagnostic offers a four-part diagnosis of the constraints to the Philippines achieving its *Ambisyon Natin 2040* goals. First, the country can enact policies that maintain its high rates of growth but also make that growth more inclusive and generate good jobs. Second, investments in human capital can ensure that Filipinos can lead healthy lives and have the skills for those jobs. Third, the Philippines can build its resilience to natural disasters and the looming climate crisis while continuing to build the peace in Mindanao. The common thread across all these challenges is the need for follow-through and implementation, which points to governance as the core cross-cutting challenge.

Introduction

Thank you very much, and I am very pleased to have the chance to talk to you today. I like very much that the presentations started with the global level, then regional level, and I will focus on inequality in the Philippines.

Poverty inequality covers everything, so I struggled a bit to figure out what to discuss. I thought I would talk a bit about the facts—the numbers we have about poverty inequality in the Philippines—and then talk about what I see as the principal steps and priorities for addressing poverty and inequality. So, for the second part, I will present the poverty assessment published last year. I have here copies of the executive summary, so please feel free to pick one up if you are interested. We are also preparing a systematic country diagnostic, which is the overall take of the World Bank on the development of

the Philippines. We are in the final stages of that work. We already sent drafts to the government for review and to get their reflections, and that will be released in the next couple of months. So, in a way, this presentation is a preview of the soon-to-be-published country diagnostic.

Philippine poverty statistics

My initial training before I became a coordinator manager of the Bank was as a poverty economist. So, I could not resist the temptation to give you the full description of the ins and outs of poverty statistics in the Philippines. I found that, not just in the Philippines but for most countries in the world, the numbers can be quite confusing: you have many different poverty lines and poverty grades.

In the Philippines, the story tends to be a little bit confusing because data are collected in

the Family and Income Expenditure Survey every three years for the poverty rate and other things. The Philippine Statistics Authority (PSA) releases poverty rates for the full year once they have the full year of data. But it also releases a poverty rate based on the first half of the year when it does not yet have the full data, as a preview of the poverty situation. The result is you end up with two series, which can cause confusion.

Data show that the poverty rate in the Philippines between 2006 and 2015 was lower for the full year than for the first half of the year. I have not done a full analysis of this trend, but I suppose it is because for the second half of the year you have harvest time, 13th-month bonus, more remittances coming in, and more robust spending due to the holiday season. In other words, a bunch of reasons for the second half of the year may lead to higher income and consumption for that period.

The additional complication comes from the fact that PSA is now switching from a consumer price index (CPI)-old basis to a new basis. You can see the trend for 2015 to 2018 showing quite a substantial drop in poverty for the first half of the year.

The full-year data will come out in a couple of months—November or December. We can project, based on past experience, that the rate will be substantially below what we saw in 2015. That is complicated because we also know that in the first half of 2018, the Philippines had very high inflation. But we can be confident to expect that the full-year poverty rate for 2018 will show a continued drop in poverty.

We see that for quite a period of time, the Philippines has had small changes, small declines in poverty. But in recent years, starting from 2015 and 2018 data, you see a more substantial drop. That is a bit of good news.

However, over the longer trend or time period, we also see that the overall improvements in welfare have been relatively slow in the Philippines compared to East Asia and the Pacific. Over the period of 2002 to 2015, you can see that for the broader region within this period, extreme

poverty has come close to being wiped out. It has come down from being close to 30 percent to less than 5 percent for the region as a whole. You see a huge number of people entering the global middle class. Overall, there are large improvements in the region as a whole.

In the Philippines, despite the fact that it had fairly substantial economic growth, we see very little economic progress in terms of groups moving up within this period of 2015 to 2018. You see a bit of upswing at the end. You see the extreme poverty group shrinking in the last few years. If we extend it further to 2018, we will see more progress. But, overall, the general story has been relatively little progress in the Philippines compared to the rest of the Asia region, considering the relatively higher economic growth for that period.

Another way to read this story is to look at various annual growth rates over the period of 2006 to 2015. Again, annual gross domestic product (GDP) per capita growth rate for that period was 3.6 percent, which is a pretty respectable rate of economic growth. It must be in the higher range of growth rates across the world. But if you look at the growth of average wages for that period, it is just 0.4 percent per year.

Now, wages are an imperfect measure because not everybody is working on a waged job. Many people work in nonwage jobs. We also consider that some people during this period are moving out of nonwage jobs into wage jobs to see if it can improve their income. But, nonetheless, it is striking how little wage growth has taken place.

Another measure is average income based on household survey data, which is at 1.6 percent. This 1.6 percent per year is enough to have some impact on the welfare of people, but it is relatively slow compared to the growth of GDP per capita.

We can also look at the median income growth, which is at 2.2 percent—a little bit better but still surprisingly low compared to overall GDP per capita growth.

Another measure we use at the World Bank is the average income of the bottom 40 percent

of the population. This figure is registered at 2.9 percent, which is higher than the overall income as measured in household surveys. There seems to be generally a positive story of declining inequality.

But, of course, there is an important caveat to this. Survey data are quite limited in their ability to shed light on what is happening at the very top.

The first presentation gave an eloquent explanation of why this is happening. To go a little bit into the details, the household survey is done by PSA. Their representatives go to households and ask them about their job, income, etc. The PSA takes all that information, crunches it, and produces this kind of data. However, we do know that wealthier people are less likely to respond to these surveys. They are less likely to be interviewed because they may live in a house or an apartment with restricted access. They may refuse to answer these surveys, and if they do answer these surveys, it is likely they will underreport their income, especially capital income.

We realize that what is going on at the very top is not well-measured in these household surveys. We look at this mismatch between what is going on in average income survey and GDP per capita, which raises the possibility that a disproportionate part of the gains from growth is going to those at the very top and not being measured by the household survey.

The first speaker talked about their global project to understand inequality better using tax data. We do not have that kind of data in the Philippines or at least access to that kind of data to do that in the Philippines. But we do have other circumstantial evidence that shows us that part of what is happening is a large part of gains go to the top. One piece of that is that if you look at the National Accounts data, there is a measure of shared income that goes to capital vs labor. Shared income going to capital increases over time.

Another rough measure is we take the Forbes Richest Filipinos list from 2015 to 2018 and look at how their wealth has grown over that period. We found that their real wealth grew by an average rate of 9.1 percent per year. The caveat, of course, is that

this is a rough estimate from Forbes—a very limited peek at the slice of wealth. This also suggests that gains are disproportionate to those at the top.

If you look at household survey data—producing inequality measure based on household survey data—the Gini coefficient of the Philippines based on household surveys is at 40 percent or 0.4 in that measure, which is relatively high but not at the extreme measure, again with the caveat that we are not fully capturing incomes from the very top.

Another measure is looking at the cross-section or an estimate of the world income share by the top percentile, specifically the share of wealth owned by the top 1 percent. A study by Credit Suisse shows the Philippines as one of the most unequal countries in the world with more than half of the country owned by the top 1 percent.

That is the review of the numbers. The question for us is, going forward, what are some priorities and key challenges to reduce poverty and improve shared prosperity to ensure gains go not only to those at the top?

Key challenges to reducing poverty

Looking at the overall poverty situation of the country, one thing that is quite striking is the very high levels of poverty in areas affected by conflict and areas affected by disasters. These are principally parts of the Mindanao region, especially the Bangsamoro Autonomous Region of Muslim Mindanao (BARMM) and areas around BARMM, and for disasters, it is Eastern Visayas. The poor are generally vulnerable to both conflict and disasters.

Looking forward, there is reason to be more concerned about the longer-term impact of climate on the poor and the overall economic distribution. This analysis takes the same economic categories we have in the earlier figures: economic groups from extreme poor to global middle class, and projects forward up to the end of the century. Fast forward to the end of the century, how do we expect these groups to evolve?

First is a scenario projecting economic growth in the absence of climate change. In this scenario, you see that extreme poverty and even moderate poverty are completely wiped out roughly by the middle of the century. By the second half of the century, most Filipinos will join the global middle class.

However, in the scenario with climate change, you will see much worse potential results. This shows that the impacts of climate change can be quite extreme on economic growth and poverty distribution in the Philippines. In this scenario, we can see roughly that by 2050, economic growth will stall almost completely, and most Filipinos will not be part of the global middle class.

There are two key challenges to reducing poverty and producing shared prosperity. First is strengthening peacebuilding and supporting BARMM administration so it can be a success. Second is protecting the country from climate disaster threats both by mitigation and adaptation efforts.

The previous speaker already mentioned this point on the human capital side; 1 in 3 under-5-year-old children in the Philippines has stunted growth. This is a concern because stunting is a key indicator of malnutrition, and we know from research, both in the Philippines and around the world, that children who are stunted are likely to have limited cognitive development, more likely to drop out of school early, more likely to struggle to learn in school, and less likely to get good jobs.

The second concern under human capital is the quality of schooling. The Philippines has done a tremendous job of putting more children into school. After a whole series of efforts, you now have senior high school, universal kindergarten, the *Pantawid Pamilyang Pilipino* Program, and various

education efforts. Now, Filipino children are very likely to go to school and finish junior high school and senior high. In this measure (i.e., average years of schooling), the Philippines is second after Singapore in the Association of Southeast Asian Nations (ASEAN).

But, of course, what is important is not just how much time you spend in school but also what you learn when you are there. We produced a learning adjusted years of schooling measure. In the Philippines, the average years of learning adjusted school is 8.4. By that measure, the Philippines is no longer number 2 in ASEAN. This shows that there is a learning gap between the learning adjusted number and the nonadjusted number. This underscores the importance of school quality. These figures show us two additional challenges: reducing child malnutrition and closing the learning gap in basic education.

Other challenges are building quality infrastructure and opening the economy to competition. We think of these more as general issues for boosting economic growth, but certain aspects of this can be focused principally on boosting those at the bottom, specifically infrastructure in rural areas, as well as economic competition that benefits those at the bottom.

In all of these areas, there are existing government policies and programs intended to address these challenges. This points to what the overarching priority is in the implementation of these policies and programs, specifically the need to upgrade policy implementation to be fit for purpose. Some challenges to be addressed, for example, are the need to improve procurement practices, improve overall capacity service, and reduce overlapping responsibilities in different agencies.

Presentation 4

What Do We Mean by Structural Change? Occupations and Earnings in a Village Setting

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SUMMARY: This seeks to address the need for a better picture of employment and unemployment in agriculture and other gaps in official statistics. A rural employment survey was conducted in two large agricultural provinces and preliminary results are presented here. We find that majority of the sample individuals work in agriculture, but not primarily as farmers. It was also found that agriculture workers switch occupations frequently on a three-month or quarterly basis. Older workers or the length of agriculture work experience does not result in better pay. Regarding education, four-fifths of agriculture workers, which is a large number, did not finish high school. Agriculture workers are found in both rural and semi-urban zones, but those closer to the urban center have higher basic daily pay. Other implications and research suggestions were also mentioned in the study which advise that a more elaborate study must be done to understand these gaps.

Introduction

As you may notice, the title of this presentation is phrased as a question because this presentation is very much a work in progress. Unlike the previous three speakers, I will not be here to answer questions; the nature of this report right now is to raise questions. This report will look at Philippine inequality from the lens of structural change, meaning, the composition of where income has been generated across the basic sectors and mainly focusing on agriculture.

One of our key findings is that from 2006 to 2015, based on a decomposition of sources of poverty reduction, a little less than two-thirds of the reduction came from the movement of workers

out of agriculture, which does two things: it shifts workers to a higher-paying job and it indirectly raises wages among remaining workers in agriculture.

Another finding is that one-half of poverty reduction is actually based on a transfer program of many sorts—the leading one is the government's *Pantawid Pamilyang Pilipino* Program—but this also includes private transfers or household-to-household transfers and income from overseas remittances.

How did that happen: two-thirds plus one-half? This is because entrepreneurial incomes contributed a negative 15 percent to poverty. This means, had entrepreneurial incomes not fallen or kept constant in real terms, then poverty reduction would have been 15 percent higher than what was actually experienced in 2006.

The first part of the presentation will discuss the reduction of poverty involving movement out of agriculture. We will have some discussion on what agricultural employment entails and some stereotypes of agriculture employment. I will look at some data of the Philippines based on official information, which has some gaps, and which is the reason for conducting a more micro study of selected villages (about 30 villages) in selected provinces of the Philippines.

Here are some of the notions of agricultural employment and the role it plays in poverty reduction. The idea is, if you are a wage worker in agriculture, then you work mostly in agriculture. The reality is, you may be doing a lot of agriculture activities on an intermittent basis. Your annual work cycle is punctuated by seasonal demand of whatever happens to be the main crop in your area.

In one of the areas we sampled (i.e., Nueva Ecija), the main crop is *palay*. When we arrived, the season there was land preparation, which is one peak of the cycle. The second peak is harvest. The cycle repeats for the second cropping. For the other area of our study (i.e., Negros Oriental), there are also two peaks per cycle. One is land preparation and second is harvest for the sugar cane industry, which is the main crop there.

Profile of agricultural workers

The tendency is that lesser skilled—meaning, lower-educated individuals—are the ones who end up in agricultural work. Of course, wages are low, hence the importance of structural change. If you move a worker from agriculture to nonagriculture, on average, that will raise the wage and therefore cause poverty to go down, especially if the person who left is poor.

There is also the age profile. Notably, it is younger people who tend to move out of agriculture, leaving behind older people. Farm operators who are wage workers are probably better off than the landless wage workers due to their additional income from access to land, whether they own the land or are renting it. But in the

Philippines and in other developing economies, we mostly have smallholders. Therefore, it is still true that the daily earning equivalent of such workers who are already farm operators is still lower, and it still pays to do the structural transformation of moving them from agriculture toward another better-paying sector.

If you have a shift, you will expect a reduction of poverty from the movement of resources—mainly labor from agriculture to nonagriculture—preferably to industry and services, the latter of which is the biggest employer in the Philippines today. So, this shift supposedly reduces poverty and causes wages in agriculture to also rise.

We have been hearing reports that operators are complaining that they can hardly find harvesters and laborers to work on their farm anymore. We can guess that the tightening of the local labor market might lead to higher wages, even in real terms, so the convergence of earnings in agriculture and nonagriculture may contribute to potentially reducing inequality.

Agriculture employment facts and figures for the Philippines

We merged the Family Income and Expenditure Survey (FIES) data with the Labor Force Survey (LFS) data so we can exploit the occupational information of household heads in the LFS data with income profile of households in the 2015 FIES.

We saw that the result is still close to official data despite the merging of FIES and LFS data. Poverty in the entire country is 23.3 percent. Poverty is higher in urban than in rural areas. Almost 80 percent of the poor are in rural areas, hence the characterization of poverty as a largely rural and agricultural phenomenon. Why agricultural? This is because the result showed 62.4 percent of the poor belonging to households headed by agricultural workers. This means that if you have an antipoverty program but are focused on sectors outside of agriculture, you are actually missing most of the poor.

In addition, there is a high correlation with visible underemployment. If you look at visible underemployment, the poverty rate for that group is at 34 percent, with 21 percent of poor workers visibly underemployed. Visible underemployment means the worker is employed but is working below 40 hours per week and expresses desire to have more hours of work. This is in contrast to simple underemployment, where a worker expresses desire for more hours of work despite having a full workload of 40 hours per week.

The share of agriculture employment and output has been dropping. Since 2011, there is not just a relative decline in agriculture in terms of employment share. The absolute number of workers based on Philippine Statistics Authority (PSA) data has also been declining from 11.8 million down to 10.3 million people from the period of 2015 to 2017. This decline has been unprecedented. There were years where agricultural work has declined, but these were brief episodes brought about by natural phenomena such as the El Niño. This sustained decline of workers in absolute numbers has been accompanied by rising real wages based on the 2012 consumer price index. Not only have nominal wages increased, even if we account for inflation, real wages have also been rising. With the declining share in number of workers, even though gross domestic product growth of agriculture itself has been very tepid, the output per worker has been dramatically improving in real terms.

Consider this figure: 1.6 million net departure of agriculture workers into other occupations. As an anecdote, let me share with you our experience while conducting the survey. We were looking for beneficiary organization members who were randomly selected, and we were told that they are only available for interview after five in the afternoon because they are still busy doing construction work for the Department of Public Works and Highways. This scenario shows an example of agriculture workers moving into industry work like construction.

Visible underemployment in agriculture is about 21 percent. Agriculture industry employment is dominated by male workers, although there is a nearly even split. Workers in agriculture tend to be older and shift to higher age profiles faster than other types of workers. Statistics in 2015 indicate that only 18.6 percent of agriculture workers—both farmers and wage workers—are above the 54-year-old age bracket. This is in striking contrast to the usual narrative we see in newspapers, which report the average age of Filipino farmers as 57 years old. I am unable to confirm this statistic.

In terms of educational attainment, majority of workers in the Philippines have finished secondary school, but the better-educated ones tend to be working in industry and services sectors, not in agriculture. There are some caveats for all of these official figures. If you look at the LFS, it is based on a one-week reference period. But if we analyze figures to factor in seasonality of agriculture work, we may have a better picture of employment and underemployment that can be compared across months of the year.

Some findings of the PIDS agricultural study

What we are doing is to address this need and other gaps in official statistics. We conducted a household survey and followed a panel of households for four quarters in 2018, with a reference period of one month. We attempted to make a one-quarter recall, but this proved to be too difficult because the nature of information we collected required too much detail.

As a screening question, we only covered households with agriculture as primary occupation of at least one member of the family in the household in the past month. We selected two provinces in two regions that reported the highest number in absolute terms of agriculture workers: Nueva Ecija and Negros Occidental. We then selected the top three municipalities as stated there, focused on seven rural

barangays based on official statistics of PSA, and proceeded with household sampling.

We targeted 400 households; in rural areas, you can see some attrition over just one year. We lost 12 households over this period.

We were looking at individuals of working age and you can see that a slight minority of these individuals aged 15 years and above are female. The average level of education attainment is high school, specifically junior high. The share of females among workers is quite low—only a third of them. Among working females aged 15 and above, 40 percent were employed. Among males aged 15 and above, about 78 percent were employed and this fell to 62 percent toward the end of the survey. Now you might think they are getting more work. But remember the cut-off age is 15 years old. These people should be in school but a lot of them are already working in this rural setting.

What are the employed doing? We classified them based on their primary occupation, specifically agriculture occupation, nonagriculture occupation, or if they have their own business (i.e., agribusiness operation, agriculture-related business, and nonagriculture business occupation). Employment excludes workers below 15 years old because they are not supposed to be working per Philippine law. But, in fact, while we were doing our survey, we noticed a substantial number of young people below 15 years old working up to a third by the fourth quarter.

Among agriculture workers, a lot of them are holding down a single job. But a fairly large number also hold down a second job or business. Those with multiple occupations account for about 14 percent of the sample by the end of the fourth quarter. Average daily basic pay is pretty low, averaging to only PHP 260. This amount rises a bit if you include daily pay from other occupations (not necessarily agricultural) and total compensation from business and entrepreneurship. Notice that quarter-by-quarter figures vary widely. These are interesting patterns.

A lot of our agriculture wage workers are working for more than the 40 hours standard. The share of visible underemployment is very low. You will never have guessed these figures if you look at the LFS alone. It turns out that a fairly substantial share of work is in agriculture (60%). But work in services and industry, specifically construction, is also substantial. Among the business operators in rural villages we went to, surprisingly, the number of work hours is very low. Most of them were relatively new farmers and in the first quarter, none of them were engaged in farming activities, although some of them trickled into farm work over the succeeding quarters.

Of those employed in agriculture, a significant portion of 36 percent in the first quarter down to about a fifth in the fourth quarter have sideline jobs or secondary employment. As for full-time agriculture workers, there is very low average visible underemployment rate of about 3 percent. Their daily compensation is also lower than the average of PHP 260. But there appears to be a large quarter-to-quarter variation, and we are still trying to figure out what is behind this.

In terms of our cohort analysis, in the first quarter, we had 477 individuals. By definition, their primary job is agriculture. By the fourth quarter, 47 percent have already shifted out of agriculture. A large number say they have already stopped working altogether. But a lot of them also shifted to nonagriculture work or went into agribusiness.

Some conclusions

Basically, we find that majority of the sample individuals work in agriculture but not as farmers; many have secondary employment. Most work full time. Involuntary unemployment is low. There is low pay from agricultural work for agriculture workers but with large quarter-to-quarter variations.

If you do a cohort analysis, you will realize that agriculture workers switch occupations frequently on a three-month or quarterly basis. Some of them

stop working entirely for that quarter. They shift when agriculture work is scarce or when pay is low, but they maintain the same level of working hours and basic daily pay.

Agriculture workers are mostly male. Female agriculture workers have shorter working hours, but an interesting observation is that while daily pay in agriculture work is slightly lower for females, the daily compensation for all work done is higher for females than for males.

Two-thirds of agriculture workers are of prime working age. Older workers or the length of agriculture work experience does not result in better pay. Four-fifths of agriculture workers, which is a large number, did not finish high school. Among agriculture workers, being better educated does not necessarily mean you are better paid.

Agriculture workers are found in both rural and semi-urban zones, but those closer to the urban centers have higher basic daily pay. This is an interesting pattern, which also makes sense because there is bigger competition now to hire workers, especially near urban areas.

Some of the stylized facts hold up. There is more agriculture employment for men, with daily pay slightly higher for males than females. There is low average educational attainment. Agriculture

workers tend to be of prime working age and not much older. Involuntary unemployment is low contrary to national statistics. There is some variation in daily pay throughout the year. What this suggests is that we need a more nuanced understanding of agricultural employment (i.e., duration of spells of agriculture employment in rural areas) and structural change. If a worker leaves agriculture, that same worker may come back to agriculture within the year, but this movement cannot be captured by statistics if your reference period is too short. They may not necessarily leave the village but do a nonagricultural job. Maybe instead of saying move out of agriculture, we should have a better understanding of how long or short is the spell of agricultural employment of the workers, especially in rural areas.

What does this demand? Ideally, we can do more studies like this: national representative time-series panel data of agricultural workers, tracked them over the entire calendar year. We can also link this to the study on the importance of rural-urban migration. I understand that the National Economic and Development Authority already conducted a rural migration study. It will be interesting to compare the results of that study with some of the findings here.

Open Forum

Question 1

Rodrigo Celicious (All-Asian Centre for Enterprise Development): I head a research firm and we are conducting similar studies. My first question is for Dr. Park. Is it safe to say that when there is an increase in GDP, poverty is also reduced automatically?

Donghyun Park: Quite clearly, that is not the case. There are cases where there is a lot of economic growth in terms of size of the pie increasing quickly, but due to inequality of opportunity and the fruits of growth accruing to just a tiny part of politically and otherwise well-connected elite, such growth is not widely shared so this is a very negative kind of economic growth.

Rodrigo Celicious: Thank you, Dr. Park. This confirms our doubts that we cannot really equate GDP to reduced poverty. Gabriel has also demonstrated a similar conclusion about the results of poverty data and the interventions that can be done, specifically addressing climate change and peacebuilding because we have done our research in Mindanao. From Dr. Briones, we learned that poverty will always be there if agricultural workers cannot migrate to industries and services sector. The key factors are health and education. While there are interventions in education, the quality of education is quite problematic. How you teach the students is more important than the curriculum. But right now,

we just deliver the curriculum but we do not have the measurement of whether there is some kind of understanding. My assessment is that unless we migrate agricultural workers to industries, they will remain as underprivileged.

Question 2

Ricardo Toquero (Department of Finance): It is good that based on data, the real income of agricultural farmers is rising in the Philippines. But I am also curious about the situation of those who may not be captured by the data, specifically those who belong to the informal sector.

Question 3

Ronald Talion (Talion Equipment and Contracting Inc.): My comment is for Dr. Briones. In the Philippines, the price of rice is PHP 45 to PHP 52. In other countries, it is only equivalent to PHP 15. We need to improve the supply chain of the agriculture sector. We should have five to six times of harvests per year. We can have rice around 65 days compared to 90 days of production and also explore the utilization of fertilizers coming from seaweeds. These should be studied more. It would be good if we can apply these innovative researches to improve our agricultural systems and help reduce production costs.

Arsenio Balisacan (Philippine Competition Commission): This notion that agriculture is no longer important or key to poverty reduction should be tempered. I have a paper from a few years back which shows that the capacity of rural areas to deliver poverty reduction depends so much on the current characteristics or states of agriculture. For example, in areas where agriculture is quite close to urban areas, there are opportunities for services such as manufacturing employment. The power of agriculture to deliver poverty reduction in those areas is perhaps weaker than in other areas. But in cases where proximity to urbanization is not there, and other things like the quality of human capital and infrastructure, we find that agricultural development is still key to poverty reduction in those areas. Given that the Philippines is heterogeneous across regions, the quality of urbanization and rural development is also heterogeneous. It is not correct to argue that agriculture is inferior as a source of poverty reduction. I just want to make that clear.

Roehlano Briones: Looking at the nature of the sampling, we made sure that one of the criteria for selecting the rural barangays in the subsequent stages of our survey is to have an exclusion region—10 kilometers around the nearest urban center—to make sure we are capturing the more remote rural areas in our survey. We do random sampling based on our barangay master list. Regardless of where you are, we will look for you and interview you within the bounds of safety for our enumerators. I think official statistics were based on this kind of sampling methodology as well, and we can be assured that it captured the more marginalized sectors.

On the comment of Engineer Talion on the need for innovation—yes, indeed, we are pointing out that even though we say that moving agricultural workers out of the sector is one way, I believe this is also related to the comment of Dr. Balisacan, that the remaining agricultural workers will remain poor unless something is done for

them. One of the delivery mechanisms to boost their incomes is through technological change or raising agricultural productivity. The other one is the natural supply and demand movement. If there are workers moving out of agriculture, it is the constant labor demand that would bid up the wages. This is a testament to the continuing power of agriculture that even though workers leave the sector, the remaining workers will still get a poverty reduction boost through rising wages. One pattern is, as an area urbanizes, the income opportunities from other services go up. But it turns out that even agricultural workers get compensated more in the urban fringes. The expansion of urban centers as more and more barangays turn urban centers into townships is also a boost not just to structural change but also to incomes of people remaining in agriculture.

Jennifer Guste (IBON Foundation): May I suggest that we also look at how we measure poverty in order to come up with a realistic poverty situationer for our country? The methodology for measuring poverty has been changed three times in the last decade. Each time the methodology is changed, some 5 million households are suddenly elevated or moved out of poverty. In the last change, there is, what we call in our analysis, a preferential diet, or a forced diet rather than a preferential diet, because as we all know Filipino workers are paid very low; as what has already been shown earlier, there is just a 4-percent growth in wages. If we could move or increase the wages of our workers and change the way we measure poverty into a more realistic measurement, then maybe we can have a more realistic view of how many Filipinos are poor. Maybe, then, we can have a more effective policy reform to really move more Filipinos out of poverty. I support Dr. Balisacan's statement earlier that it is not as simple as moving people out of agriculture, so we will have more Filipinos with better-paying jobs. We have to develop agriculture and give more support to this industry.

Question 4

Leah Payud (Oxfam): I am interested in the study of agriculture and have two specific questions. First, what is the coverage of agricultural labor? What does it include? Does it include planting, harvesting, and marketing? In Oxfam, we have a current intervention on unpaid care work and we are very much interested in the findings that female agriculture workers have shorter working hours. Does your research cover the reason why women have shorter engagement in agriculture? Can we look at its relationship with unpaid care work of women? Women have to go back to their homes and do the unpaid care. The PSA has limited data on unpaid care work and it is important to look at this given its implications for Sustainable Development Goal 5 (4.1).

Gabriel Demombynes: On poverty methodology, generally, the PSA has done a good job in its use of poverty methodology, specifically by using a similar approach that is being used around the world (i.e., pricing a basic basket of goods and seeing what fraction of households has a level of consumption acceptable to reach and require the entire basket of goods). There are always things that can be changed and improved. There are also alternative poverty measurement approaches, such

as the multidimensional poverty index. Generally, all those different measures showed fairly similar results. The general story that we see is the disappointingly slow poverty reduction in the Philippines for a long time, and then in the last 5 to 6 years, a more substantial drop regardless of methodological approach. I agree, generally, that expanding our ways of measuring poverty is a good thing to do.

Roehlano Briones: The second question on the nature of the survey partly reflects back to the point made by Dr. Balisacan. There are so many agricultural activities and so many ways of paying agriculture. We covered all of that in our survey. We only excluded very tiny plots like backyard gardening in the enumeration of agricultural work. But it has something to do with crop and fishing, but not trading except for the business side if you are operating an agricultural trading which is also classified as agricultural business. However, this is just a small portion of our sample. The bulk is operating farms. There is a breakdown of the various activities (e.g., planting, weeding) and the different wages (*pakyaw* system, daily pay, payment in kind or cash). Thanks to the prompting of some of our research fellows, we have also put in household work hours with some basic disaggregation. We have not done the analysis relating shorter working hours of women to care work at home, but we hope to do that eventually in subsequent studies.

SESSION B

GLOBAL TRADE RESTRUCTURING

SESSION OPENER

Francis Mark Quimba | Senior Research Fellow, PIDS

This morning, we heard from Prof. Baldwin about the New Globalization—the globotics upheaval. After that, we heard two countries’ experiences: that of Estonia from Calum Cameron and that of the Philippines concerning the West Philippine Sea as discussed by Justice Carpio.

First, let me tell you about the four issues related to this New Globalization. First is worsening inequality, second is global trade restructuring, third is the challenges to the underprovision of global public goods, and fourth is the weakening of social cohesion and trust.

The topic that is assigned to us this afternoon is global trade restructuring. We will hear specific discussions on what is going on in the global landscape, for us to prepare/understand what is driving this and figure out the possible strategies that the Philippines can do to maximize the opportunities and manage the risks.

Presentation 1

The Trade Conflict and Its Impact: An Updated Assessment

Kristina Baris, Mahinthan Joseph Mariasingham, and Reizle Jade Platitas | Research Associate, Senior Statistician, and Research Associate, respectively, Economic Research and Regional Cooperation Department, Asian Development Bank

SUMMARY: This paper analyzes the effects of the current trade conflict on developing Asia using the Asian Development Bank's Multiregional Input–Output Tables (MRIOT). The use of MRIOT allows the calculation of the impact of the conflict on individual countries and on sectors within countries. The analysis estimates the direct impact on all tariff-affected goods; uses input–output analysis to estimate indirect effects on gross domestic product (GDP), exports, and employment; and allows for redirection of trade toward other producers using the approach of Feenstra and Sasahara (2017). A full escalation of the bilateral United States (US)–People's Republic of China (PRC) trade conflict would shave 1 percent off PRC GDP and 0.1 percent off US GDP. The rest of developing Asia could see small net gains, thanks to trade redirection, particularly in the electronics sector. A trade war in autos and parts would hurt the European Union and Japan. The conflict has substantial negative effects on PRC and US employment, but only minor impacts on current account balances.

The United States (US)–People's Republic of China (PRC) trade conflict reescalated in mid-2019 but slightly eased by Phase One trade deal

Virtually all bilateral PRC-US merchandise trade is now (or will soon be) subject to a tariff. Here is a summary of recent events:

- Following a truce in December 2018, US-PRC negotiations broke down in May 2019, and the US raised the tariff rate on USD 190 billion worth of Chinese imports from 10 percent to 25 percent on May 10, 2019. In retaliation, the PRC raised tariff rates to varying degrees (up to 25%) on USD 60 billion in imports from the US.
- On August 1, 2019, the US announced a 10-percent tariff, some of which took effect on September 1, 2019, and the remainder slated for December 15, 2019 on its USD 274-billion imports from the PRC. When the PRC retaliated with new tariffs (5%–10%) on USD 75 billion worth of US imports effective September 1, 2019 and December 15, 2019, the US immediately responded by announcing that they would raise the tariff rate on the USD 274 billion from 10 percent to 15 percent, and further increase tariff rate on the USD 236 billion from 25 percent to 30 percent effective October 1, 2019.
- As a result of high-level trade talks, tariff hike in October and further escalation

in December last year were indefinitely suspended. ADB estimates that, had those threats been implemented, 95.1 percent of US imports from the PRC will be under tariff, with an average tariff rate of 19.1 percent; and 82.7 percent of PRC imports from the US will be under tariff, with an average tariff rate of 14.5 percent.

- On January 15, 2020, the Phase One Trade Deal was signed by US President Donald Trump and Chinese Vice Premier Liu He. The US then announced that it will cut tariffs by half from 15 percent to 7.5 percent for about USD 112 billion worth of PRC goods effective February 14, 2020. The PRC responded by halving additional

tariffs from 5 percent and 10 percent to 2.5 percent and 5 percent, respectively, for about USD 75 billion worth of American goods. But this still leaves 65 percent of US imports from PRC covered by additional tariffs and 81 percent of PRC imports from the US. These are summarized in Figure 1.

Increased tariffs and threats have not been limited to the US-PRC conflict

On June 5, 2019, the US revoked the preferential trade status on USD 5.6 billion of imports from India, and India retaliated with tariff hikes worth roughly USD 0.22 billion from the US. While the

Figure 1. A chronology of the US-PRC trade conflict, January 2018–February 2020



Notes: Bubbles with broken lines (---) refer to the Total Value of Imports in 2018. Actual values by end-2019 may vary. Shaded bubbles refer to the cumulative value of tariff-affected goods, while shade gradation reflects tariff intensity.

US tariffs applied exclusively to PRC's goods is now estimated at USD 378.3 billion as of September 1, 2019, while PRC tariffs applied exclusively to US goods is now estimated at USD 116.2 billion (including only goods in the USD 75 billion worth of US goods announced in August 2019 that were tariffed for the first time).

¹The tariff rates for the additional USD 60 billion for PRC in September 2018 were calculated by taking the average tariff rates of affected goods. These rates were raised on June 1, 2019 to as much as 25 percent, thus a new weighted average was calculated based on six-digit product level 2017 imports data from COMTRADE.

²The tariff rates for the additional USD 75 billion for PRC were calculated by taking the average tariff rates of all affected goods in List 1 (which started on September 1) and List 2 (to be implemented on December 15, 2019).

Source: ADB staff estimates

economic impact on US-India trade is not significant, the moves have damaged trade relations. The US also declared 5-percent tariffs against Mexico, though these were aborted at the last hour. Tensions between the US and Europe over aerospace subsidies and French tax levies on tech companies, and tariffs imposed by Japan on the Republic of Korea over

World War II reparations, have further shaken global trade and business confidence. The conflict has also moved away from simple tariffs toward investment restrictions and export controls, and the targeting of specific multinational companies. Table 1 shows a list of nontariff measures so far in 2019.

Table 1. Nontariff measures and threats in the trade conflict

Date	Measure or Threat	Impact and Current Status
May 15, 2019	The US President issues an executive order banning US companies from using equipment that the Commerce Department declares a national security risk. ¹	The US Department of Commerce is given sweeping powers to ban technologies considered a national threat. The executive order does not identify any particular company as a threat but is seen as a move mainly against Huawei Technologies Company Limited of the PRC.
May 15, 2019	The US Commerce Department adds Huawei and its affiliates to a Bureau of Industry and Security “entity list”. ²	US companies are banned from selling parts and technology to Huawei without government approval. ³ On July 23, 2019, Huawei announces the layoff of over 600 US workers in its research arm Futurewei in response to being blacklisted. ⁴
May 20, 2019	Huawei gets a temporary reprieve as the US Commerce Department issues temporary licenses. ⁵	Huawei is permitted to keep existing networks and to issue updates to existing phones, tablets, and other devices until August 19, 2019. ⁶ On that day, the US Commerce Department extends the temporary licenses for 90 days. However, another 46 affiliates of Huawei are added to the entity list, raising the total to more than 100. ⁷
May 31, 2019	The PRC Ministry of Commerce announces that it will list foreign companies that cut supplies to PRC companies for noncommercial reasons as “unreliable entities”. ⁸	No announcement is yet made on the specific rules, restrictive measures for listed entities, or the companies on the list. However, the PRC can use the list to retaliate against foreign governments targeting specific PRC companies. ⁹
June 8, 2019	The PRC announces the establishment of an export control mechanism for sensitive technology using guidelines from a national security law passed in 2015. ¹⁰	This could impose further restrictions on technology exports, in particular military equipment, some encryption technologies, and some dual-use products. ¹¹
June 11, 2018	Visas for graduate students from the PRC in robotics, aviation, and high-tech manufacturing are shortened from 5 years to 1 year, but they remain renewable each year. ¹²	On June 6, 2018, a State Department official confirms that embassies and consulates have been instructed to conduct additional screening of students studying in sensitive areas. ¹³ Processing times for foreign visas are reported to have increased by 46 percent in the last 2 fiscal years. ¹⁴ New enrollment of international students at US graduate schools declines. ¹⁵
June 25, 2019	The PRC launches an investigation into FedEx Corporation and whether it undermines the legitimate rights and interests of clients in the PRC. ¹⁶	PRC authorities suspect that FedEx illegally held back over 100 Huawei packages. FedEx denies it and sues the US Commerce Department over the diversion of Huawei packages. ¹⁷ The PRC investigation rejects a FedEx claim that it misdelivered Huawei packages to the US. ¹⁸
July 2, 2019	The PRC pledges more support for foreign investment and that it “will unswervingly promote opening-up on all fronts.” It announces that caps on foreign ownership of financial firms will cease by 2020, a year earlier than previously scheduled. ¹⁹	The PRC State Administration of Foreign Exchange announces on September 10, 2019 the abolition of investment quota restrictions for qualified foreign institutional investors and renminbi-qualified foreign institutional investors. ²⁰
July 11, 2019	The US looks to create a cooperative to boost the domestic production of rare earth elements and compounds amid speculation that the PRC will impose rare earth export controls. ²¹	From 2014 to 2017, 80 percent of US imports of rare earth elements and compounds came from PRC. In 2018, the PRC accounted for 71 percent of rare earth production globally and for two-fifths of global rare earth reserves. ²² Export controls could affect technological inputs, from thin film resistors and high-end capacitors to pharmaceutical ingredients.

Table 1. (continued)

Date	Measure or Threat	Impact and Current Status
August 5, 2019	The US Treasury labels the PRC a currency manipulator. ²³	The action followed the renminbi depreciating past CNY 7 to the dollar. The designation allows the US to take “remedial action” such as prohibiting federal government procurement of goods and services from the PRC.
October 8, 2019	The US Department of Commerce blacklists 28 Chinese entities from buying US-made goods or importing American technology. ²⁴	The ban is placed on 28 Chinese groups including eight artificial intelligence firms and 20 government entities over human rights abuse of Muslim ethnic minorities.
October 14, 2019	Pres. Trump imposes sanction to Turkey because of its incursion into Syria. ²⁵	The sanction includes doubling of tariffs on imports of Turkish steels as well as halting talks over a USD 500 billion trade deal.
November 19, 2019	The US Commerce Department issues a new 90-day extension allowing US companies to continue doing business with China’s Huawei. ²⁶	Huawei said in a press release that the temporary reprieve will not have a substantial impact on Huawei’s business and has already caused more harm to American enterprises.
January 10, 2020	The Trump administration imposes new sanctions on Iran following attacks on US and allied troops in Iraq. ²⁷	The penalties target multiple sectors including construction, manufacturing, textiles, and mining, and eight top officials, some of whom were already under sanction.
January 15, 2020	Pres. Trump and Vice Premier Liu He signs the Phase One trade deal which includes chapters tackling intellectual property, technology transfer, trade expansion, and exchange rate among others. ²⁸	The PRC promises to apply criminal penalties on anyone caught stealing commercial secrets and stop forcing foreign companies to transfer their technology to Chinese companies as condition for obtaining market access or admin approvals. It also commits to refrain from competitive devaluations and targeting of exchange rates. Beijing agrees to purchase at least USD 200 billion of US goods and services over the next two years on top of what it imported in 2017. ²⁹

PRC = People’s Republic of China; US = United States

¹ <https://www.federalregister.gov/documents/2019/05/17/2019-10538/securing-the-information-and-communications-technology-and-services-supply-chain> (accessed on September 17, 2019).

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¹⁷ <https://about.van.fedex.com/newsroom/fedex-statement-on-department-of-commerce-litigation/> (accessed on September 17, 2019).

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²¹ https://www.rubio.senate.gov/public/_cache/files/fcea6a9e-6392-415e-a627-938bcd1703a4/07F234F026CA8B3ADB9BFB9C7A46EF3A.re-coop-21st-century-manufacturing-act-.pdf (accessed on September 17, 2019).

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Updated estimates of the direct impact of the trade conflict show that PRC will lose even more under the current scenario, while other countries in developing Asia would gain

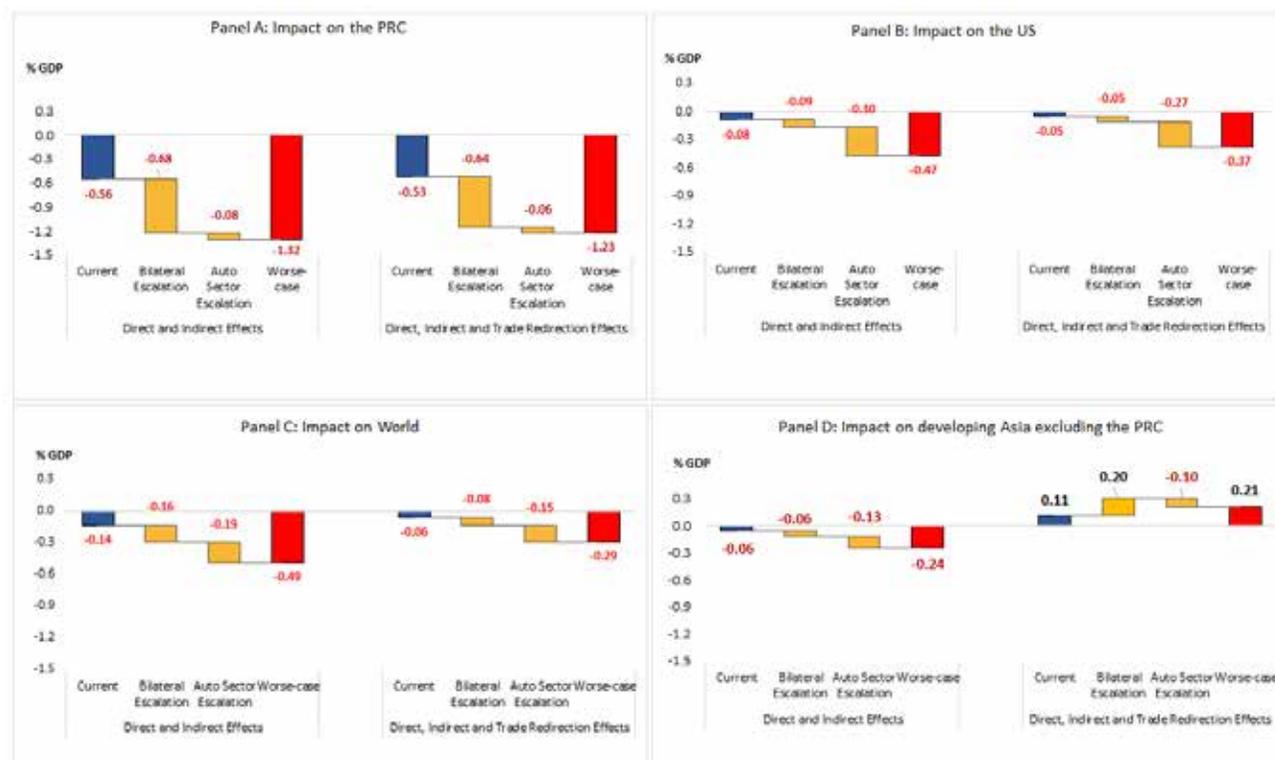
The current scenario, which includes tariffs implemented as of February 14, 2020, would shave 0.53 percent of PRC’s gross domestic product (GDP) relative to a no-conflict scenario, while the loss to the US would be 0.05 percent of GDP (blue bars, Figure 2). A revised “bilateral escalation” scenario, which assumes 30-percent tariffs on all bilateral US-PRC merchandise trade would shave 1.17 percent off PRC GDP and 0.10 percent off US GDP. The effect on developing Asia, excluding PRC, would be small but positive with trade redirection, adding 0.31 percent to its GDP. These estimates exclude

the effects of nontariff measures both countries have been considering (Table 1), which are harder to quantify.

The scope for trade and production redirection—and hence the potential gain to other developing Asian economies—has increased, particularly in electronics and textiles/garments

The model results show that there is a negative impact on a diverse set of sectors in PRC and US, including services, which are part of the affected value chains. Under the current scenario, Southeast Asian and East Asian economies are set to gain the most, particularly in machinery and electronics sectors and related services (Figure 3A). Viet Nam gains

Figure 2. Impact of the trade conflict on gross domestic product, by scenario



Notes: Blue bars represent the estimated GDP impact under the current scenario (tariffs implemented as of September 1). The first yellow bar represents the incremental impact brought about by the US-PRC trade threats (30% on all bilateral exports) and the second bar is the auto sector (tariffs on all auto and auto parts traded globally) escalation. The red bars represent the sum of all the impacts under a “worse-case” scenario.

Source: ADB staff estimates

0.5 percent of GDP due largely to higher demand for textiles and garments. Under a worse-case scenario—in which PRC would significantly raise tariffs on electronics and machinery—Viet Nam, Malaysia, and Taipei,China, would be the biggest winners largely due to redirection of electronics and machinery trade (Figure 3B).

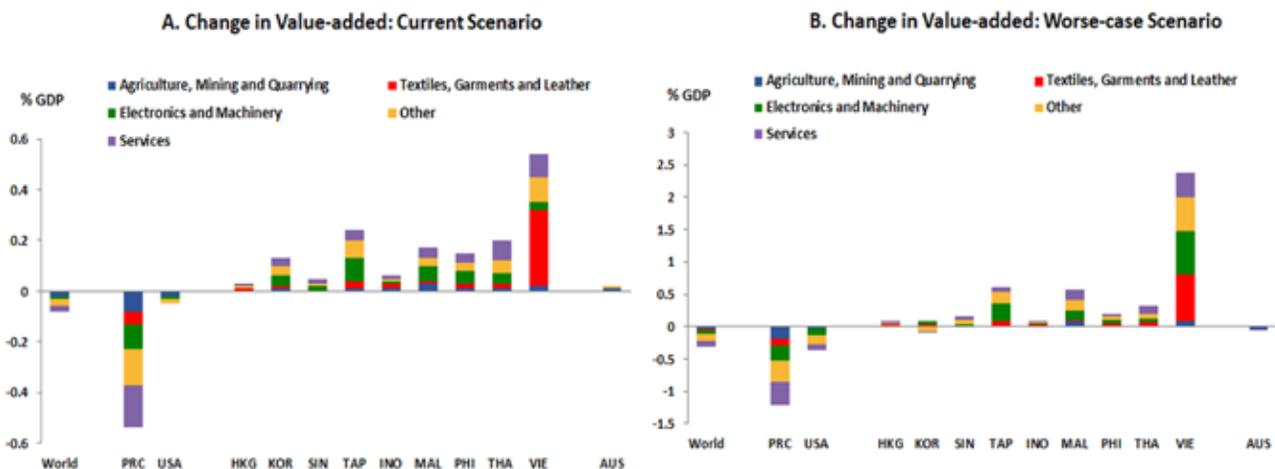
Bilateral trade data from the first half of 2019 already showed the impact of the trade conflict. By June 2019, PRC exports to the US that were subject to tariffs had contracted by around 30–40 percent year-on-year (Figure 4), and tariff-affected US exports to the PRC had contracted by a similar magnitude. The timing of the decline corresponded closely with the imposition of tariffs, although there was evidence of frontloading for some PRC import categories prior to tariff imposition.

Recent trade data also provide evidence of trade redirection. In the first six months of

2019, US imports from PRC fell by 12 percent relative to the same period in 2018. At the same time, imports rose by 33 percent from Viet Nam, 20 percent from Taipei,China, and 11 percent from Republic of Korea, particularly machinery and transport equipment (Figure 5).

Going forward, prospects for a quick resolution of the conflict are poor. Many analysts view the trade conflict as a symptom of deeper underlying issues, including a geopolitical struggle for economic and technological dominance. Moreover, how the current coronavirus disease or COVID-19 outbreak will affect US-PRC trade tensions is unknown, leaving the outlook highly uncertain as the situation remains fluid. Many producers are thus acting as if tariffs and other nontariff measures will persist, and some are already exploring shifting of production to reduce exposure to current and future protectionist measures.

Figure 3. Net impact of the trade conflict on selected economies, by sector¹

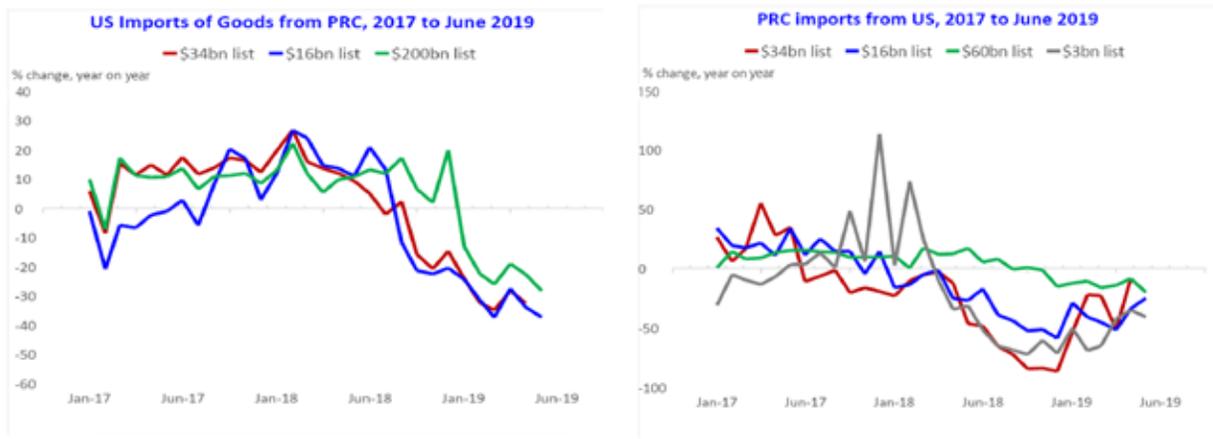


Notes: PRC = People's Republic of China; HKG = Hong Kong, China; INO = Indonesia; IND = IND; KOR = Republic of Korea; MAL = Malaysia; PHI = Philippines; SIN = Singapore; TAP = Taipei,China; THA = Thailand; USA = United States of America; VIE = Viet Nam. For sectors, "Other" includes other manufacturing, utilities, construction, and transport. Current scenario includes all trade measures implemented as of September 1, 2019. Worse-case scenario assumes all US-PRC bilateral trade is levied at 30-percent tariffs.

¹'Net impact' is the effect of direct, indirect, and trade redirection effects, which could take 2–3 years to fully materialize.

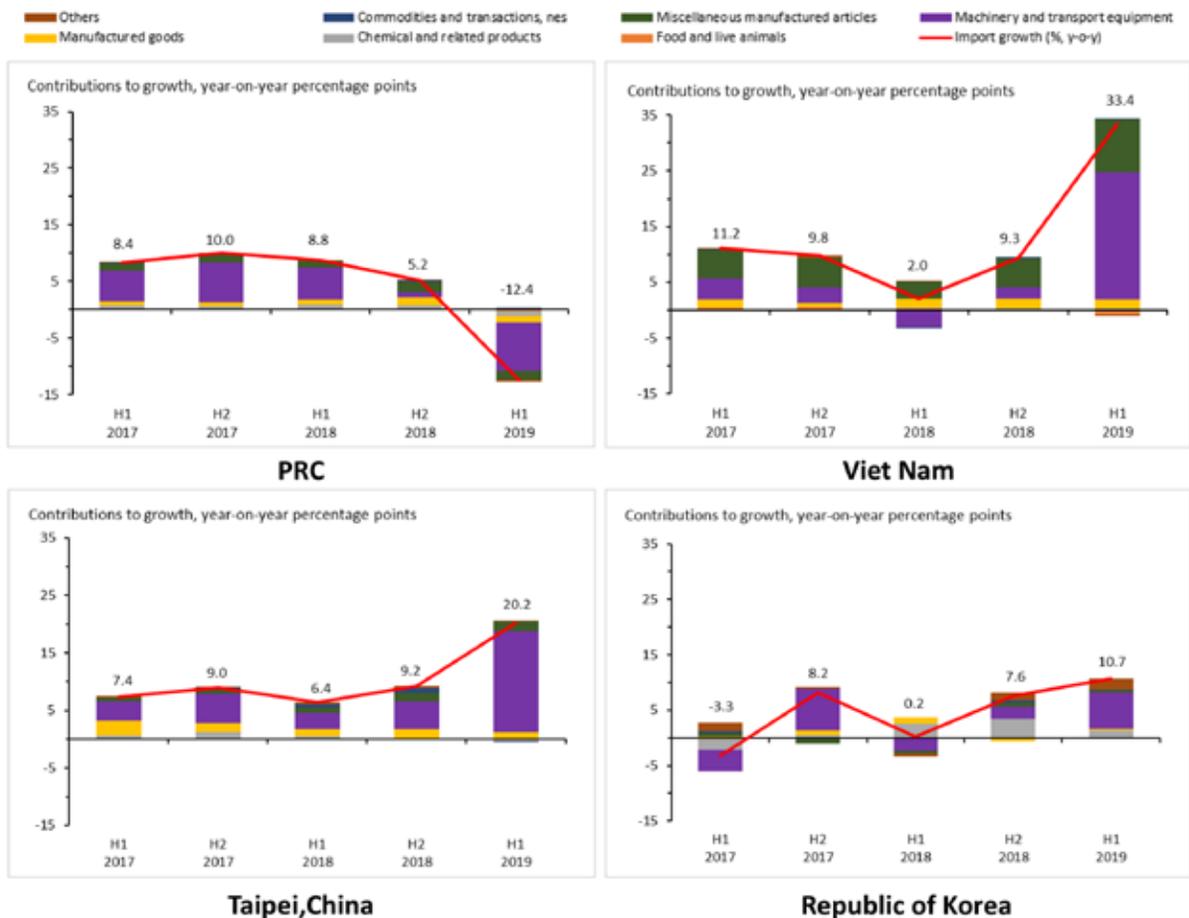
Source: ADB staff estimates

Figure 4. Import growth of tariff-affected goods, US and PRC, January 2017–June 2019



Notes: Broken lines are the tariff effective dates. PRC = People’s Republic of China, US = United States. Left panel: July 6, 2018 = 25 percent on initial USD 34 billion list; August 23, 2018 = 25 percent on USD 16 billion list; and September 24, 2018 = 10 percent on USD 200 billion list, rising to 25 percent, on May 10, 2019. Right panel: April 2, 2018 = 15–25 percent on USD 3.3 billion list; July 6, 2018 = 25 percent on initial USD 34 billion list; August 23, 2018 = 25 percent on USD 16 billion list; and September 24, 2018 = 10–25 percent on USD 60 billion list, rising to as much as 25 percent on May 10, 2019. Sources: ADB staff estimates

Figure 5. US imports from selected DMCs, 2017–2019



Source: CEIC Data Company

Presentation 2

Industrial Promotion Strategies amid Global Economic Restructuring

*Ma. Corazon Dichosa | Executive Director, Industry Development Services,
Board of Investments*

SUMMARY: As a trading nation, the Philippines is a net importer. For the period 2014–2018, the country has accumulated a trade deficit of USD 127.93 billion, with an annual average growth of 76.54 percent. The top sources of this deficit are China, South Korea, Indonesia, Thailand, and Taiwan. Automotive, petrochemicals, coal, and steel account for a big portion of this trade deficit. The Philippines competes in the same markets like the United States (US), Japan, China, and the European Union (EU) as its neighbors in the Association of Southeast Asian Nations (ASEAN), and mainly in the same product segments. Its ASEAN competitors are bigger exporting countries than the Philippines, which accounts for only 0.36 percent of world exports. In the midst of this tough competition, trade measures are imposed globally, making it more difficult for the country's industries to export more. Fortunately, the Philippines has not been a subject of recent trade remedies. Still, the Philippines is affected by 145 trade measures compared to 701 measures against Thailand, 628 against Indonesia, and 385 against Viet Nam. The ongoing trade war between the US and China is not seen to relent anytime soon and may even escalate. By December 15, 2019, only 4 percent of China's total exports to the US will not be covered by trade remedies. This trade tension has, meanwhile, provided opportunities for other countries to attract companies leaving China. Viet Nam and Malaysia are seen to benefit the most, particularly in low-end manufacturing of information and communications technology products, such as intermediate components and manufactured consumer goods like mobile phones and laptops. The Philippines is also expected to benefit, although not to the same extent. But with a robust industrialization policy, the Philippines can fully take advantage of these opportunities and improve its position in the global value chains.

Introduction

The Philippines, as a trading nation, is a net importer. In the past five years, its trade deficit has been continuously growing at an alarming rate. From 2014 to 2018, it amounted to USD 127.93 billion. In 2018, it has reached an alarming value of negative USD 47 million from just negative

USD 5.95 million in 2014. The growth of trade deficit for the past five years has averaged 76.54 percent. Looking at the sources of this trade deficit, China is the highest contributor, accounting for 32.41 percent, followed by South Korea, Indonesia, Thailand, and Taiwan. These are the top five sources of the country's trade deficit and they account for more than 90 percent.

In terms of product, most of the country's imports are automotive, petrochemicals, coal, and steel because it does not have much of them. Steel, for example, is used much in construction especially with the Build, Build, Build program. The country's own steel plants are just starting to expand to cope with the demand from infrastructure. Meanwhile, it imports coal from Indonesia because what is being produced locally has a low heating value, making it unfit for power plants.

As for automotive, the target is to grow it more, hence, the implementation of the Comprehensive Automotive Resurgence Strategy (CARS) program. For the past decades that the country has been supporting the automotive sector, it has not really grown to a certain point that it can supply local demand. When you look at the records of the Land Transportation Office, the sale of motor vehicles has been increasing. It would have been better if these vehicles were assembled in the Philippines, but most of them are imported, thus contributing a lot to the trade deficit.

The Philippines and its ASEAN neighbors also export to the same markets (US, EU, Japan, and China). The sources of its trade deficit are also its competitors in the export markets. Thailand, for example, exports to the exact same markets as the Philippines—Hong Kong, Korea, US, EU, Japan, and China. For the ASEAN member-states, the common major markets are the EU, US, China, and Japan.

Looking at the economic structure of ASEAN, the member-states also export the same product categories—electronics, garments, and textiles. These member-states are bigger exporting countries than the Philippines and this has an impact on the policies and interventions that the government should be doing.

Global trade tensions

Deepening the country's global value chain integration has been an advocacy of the Department of Trade and Industry (DTI). However, the rising global

tensions are making it more difficult for the Department to do so. According to World Trade Organization records from October 2008, there have been 8,720 trade measures imposed by different economies. The economies imposing most of these trade measures are US, EU, and China, which are the Philippines' major trading partners. Out of these 8,720 trade measures, 296 were imposed only in the last seven months leading to May 2019.

In terms of the trade measures imposed by both US and EU (in the last seven months leading to May 2019), these are all trade remedies or trade protectionist measures. How then can the Philippines export more to these markets? One will definitely need a bit of trade facilitation, a reduction of trade import/export tariffs and taxes, and simplification of customs procedures. Seventy-one percent of the total trade measures imposed by the Philippines' markets, from October 2018 to May 2019, have been trade remedies or trade protectionist measures. What is alarming is that from October 2017 to October 2018, the trade value covered by these trade-restrictive measures have amounted to USD 588.3 billion. In the last seven months leading to May 2019, it reached USD 339.5 billion. That is almost 1 trillion in total for the last 19 months leading to May 2019.

Analysts think that this will not stop or relent any time soon. It will only continue to escalate. More and more of these trade measures will be imposed and, therefore, the trade values of the affected goods will only get bigger.

The main countries affected by the measures imposed by the US are China, Korea, and India. Among the ASEAN countries, Thailand, Viet Nam, and Indonesia are the most affected. Fortunately, the Philippines is not included in the top 10 affected countries. However, if you look at the top 10 countries affected by measures imposed by the EU, one sees China, India, Thailand, and Indonesia again. Fortunately still, the Philippines is not included. This scenario is almost the same when

you look at the measures imposed by China, which affects the US, Thailand, Malaysia, and Indonesia.

This gives us hope for the Philippines—to be one of the beneficiaries of the US-China trade war. However, it is saddening that it actually benefits a lot less than the other ASEAN countries.

The Philippines is the least affected, among the other big ASEAN economies, by the increasing number of imposed trade measures. Comparing the measures imposed since 2008, Thailand has received the most at 701 and Indonesia came next with 628. In the recent past leading to May 2019, there has not been any new measure imposed on the Philippines. There were 3 for Viet Nam, 18 for Thailand, 7 for Malaysia, and 15 for Indonesia. This presents some opportunities for the Philippines, only if it plays it right.

Looking closely at the China and US trade war, one can see that as its trade deficit expanded to USD 419 billion in 2018, US started imposing sanctions on Chinese imports. If one looks at the different products that China exports to the US, notice that there are very few products exempted from the US sanctions. Only mineral products are substantially not affected by the impositions, and then some chemicals. In terms of the total, only 4 percent of the total exports of China to the US are not covered by trade sanctions or remedies. Still, a big portion of these sanctions will be imposed by December 15, 2019.

Some of the products that are being exported by the US to China are also facing the biggest tariffs compared to other countries that are exporting to China. One example is the 42.4-percent tariff imposed by China on US exports of farm and fish products, while it only imposes 18.9 percent on exports of the same product from other countries. When it comes to automotive, the Philippines and the US are imposed the same tariffs (as of May 2019), but this may change. The big bulk of tariff rates imposed by China is on US agricultural products.

A lot of studies have been done to look into the companies fleeing China to continue access to the US and EU markets in view of the China and

US trade war. A study by financial services group Nomura shows that a lot of companies fleeing China are going to Viet Nam. Their next options include Taiwan and Thailand. The Philippines comes after, thus, the DTI and the Board of Investments (BOI) have been making the rounds to catch the moving investments.

Electronics sector

Companies leaving China include manufacturers of electronics, thus, if ever the Philippines will benefit, it will be more in this sector. In fact, it is already happening. According to the Economist Intelligence Unit (EIU), Viet Nam and Malaysia could benefit the most from trade escalation, particularly in the low-end manufacturing of technology products such as intermediate components (IC) and manufactured consumer goods like mobile phones and laptops. What is going right for Malaysia and Viet Nam is the fact that there are a lot of US, Japanese, and Korean (electronics) companies already in their countries. Even if they relocate some of their production activities from China, they do not have to set up anew. They can just expand the volume and set up an expansion facility there. They do not necessarily have to redeploy investments.

The Philippines, on the other hand, is part of the disruption list. It is among the countries that will benefit from the redirection but not to the extent that it wants. What the Philippines has mostly are assembly and testing; it does not have much of the high-value portion of the production chain. It needs more of the higher-value services, including IC design. Only then that it can get a lot more of the electronics companies into its shores.

Automotive sector

In terms of the automotive sector, the EIU sees the Philippines in the middle, with mild benefits. It sees Malaysia and Thailand benefiting more in terms of the auto war that is happening between US and

China, because Malaysia and Thailand already have very deep and comprehensive supply chains.

They have auto electronics for a lot of metal parts and plastics. They even have petrochemicals and a steel industry. Thus, it is easier for some companies to deploy their resources in Malaysia and Thailand, and expand volumes of production rather than set up new investments in other countries. Also, in Malaysia and Thailand, they not only have the Japanese brands but also the US and European brands. These are the advantages that these countries have over the Philippines.

Prospects for the Philippines

The trade deficit earlier mentioned can be resolved by either exporting more or importing less. But whether this is possible for the Philippines, it is difficult to ascertain unless it has good supply chains.

So far, what has been the impact on the Philippines should one ask. In 2017, its exports to the world grew by 19.7 percent. In 2018, when the trade war started, it only increased by 0.9 percent. Its exports to the US expanded by 9.1 percent in 2017 and 10.1 percent in 2018. In 2017, the Philippines' export growth to China was 25.8 percent, while in 2018, it was just a 10-percent growth. Its exports to the US and China are all still growing, but adjustments (to the trade tensions) may still happen.

In terms of the 2018 approved investments, the BOI was able to register PHP 48 billion worth of investments coming from China and this was mainly in the iron and steel sector. Chinese companies are also looking at other places to do their production, so they can still access the large US market.

For the country to solve the trade deficit and to benefit more from the US-China trade war, the best trade strategy is to have a robust industrialization policy.

Countries that will benefit more from the relocation are those with very good supply chains—those with good infrastructure and

logistics. An industrial development policy will be the key to all of these things. Even in trying to elevate the country's industries to keep up with the technology, regional integration through lowering of tariffs and trade facilitation to promote seamless global value chains, the Philippines will not do what China and the US are doing. It will not go to adopting protectionist measures. It will remain open. It will always make sure that there is a level playing field for all market players but it will not hesitate to impose trade remedies as it sees necessary.

In fact, it has already imposed a safeguard measure on cement. Any (cement) import coming from Viet Nam, which is a major source of cement coming into the Philippines, will now be imposed additional tariffs. The same will be done for other products in the coming months.

Who will benefit the most from this trade war? It really depends on who has the deepest production capabilities and the widest network of supplying industries in the country.

Now, what are the prospects for the Philippines? The country has a very expansive market access. It has a network of free trade agreements (FTAs), including the ASEAN, and the (ASEAN) Regional Plus One with economies like Japan, Australia, New Zealand, China, Korea, and India. It also has a bilateral FTA with the European Free Trade Association (i.e., Switzerland, Norway, Lichtenstein, and Iceland). It enjoys a Generalized System of Preferences (GSP)+ beneficiary status with EU, which means more than 6,000 tariff lines enjoy 0-percent tariff when exported to the EU market. Lastly, it also enjoys GSP benefits from the US, Russia, and Canada.

The Philippines is less vulnerable to trade wars. None of the trade measures that have been imposed recently target the Philippines. It is not dependent on exports, and that is what is saving it from being heavily affected by the global recession and global slowdown. Its exports account for only 15 percent of the gross domestic product. It is quite strong in terms of domestic demand.

However, the Philippines cannot stay as such. Its economy must grow. It should tap on the different FTAs that it has. It is good that it has very strong economic relations with both US and China.

Negotiations for a Philippine-Korea FTA are ongoing. Hopefully, these will conclude before the year ends. The government is also committed to reforms, particularly in the ease of doing business.

Industry development initiatives

Creating an enabling business environment

Aside from the Anti-Red Tape Act, a lot of other interventions are underway. With the memorandum of understanding on IPU-Net, the DTI offers a network of investment promotion units in 36 different agencies to resolve investor concerns. The BOI offers its services not just to registered enterprises. Any businessman or investor can go to the BOI to access its services, and help resolve concerns with agencies like the Bureau of Internal Revenue, Bureau of Customs, Department of Finance, Securities and Exchange Commission, and other agencies it works with.

Intensifying industry promotion strategies

The DTI does this particularly in Taiwan. Many companies in Taiwan are looking for areas to

relocate their factories because they are having problems accessing the markets because of their production sites in China. So far, the Department has been able to get medium to large companies from Taiwan, and they are setting up in the Batangas area, mostly in the industrial parks. The Department is also going to Hong Kong to encourage more companies there to relocate to the Philippines.

Enhancing the local value added

The DTI works with the World Bank to strengthen industry development programs. It matches small and medium enterprises (SMEs) with multinational companies, and conducts reverse trade fairs, to tailor fit the capabilities and capacities of SMEs to the requirements of the multinational enterprises. This has been done for the automotive sector.

Developing the human resource

In relation to Dr. Cielito Habito's point on the increasing concerns on stunted growth of Filipino children, a lot of convergence needs to be done with the country's health and education institutions. Its population needs to continue being a demographic sweet spot. The goal should be to create a better future for the Filipino people in the Philippines rather than simply sending them abroad.

Presentation 3

How Technology Will Change Global Businesses and Local Work

Jove Tapiador | Co-founder and Development Technology Consultant, Fintech Philippines Association

SUMMARY: Global trade restructuring is a net effect of the rapid geopolitical, technological, and environmental shifts happening and accelerating now. From the US-China trade war that is disrupting supply chains, to the advances of digital technology in all areas of life, to the demographic impact of resource loss and extreme weather, the current trade structure is under attack and will need to adapt. There are many angles to address these changes. Some can be applied to mitigate adverse effects, but most require a fundamental shift in paradigms and leveraging technology to produce socioeconomic change. In the Philippines, the country faces challenges in sustaining its critical information and communications technology industry and manufacturing sectors as well as supporting the transformation of the agriculture and financial services industries. The rise of artificial intelligence, blockchain, Internet of Things, 3D printing, and a host of related technologies alter industry dynamics in the business process outsourcing, automotive, retail, food production, banking, and creative sectors. Underpinning all these is not just technology adoption to current business models, but a pivotal upgrading in human resources to drive productivity and innovative value-adding work. These require policy and regulatory changes on how work is defined, compensated, located, and protected. It also requires targeted investments in connectivity, training, and alternative workplaces.

How do we approach the massive changes the world has gone in the past few years and in the next decade? Do we see it from the lens of economics and trade or do we look at it from the prism of other dimensions?

VUCA world

Global trade restructuring is a net effect of the rapid geopolitical, technological, and environmental shifts happening and accelerating now. From

the US-China trade war that is disrupting supply chains, to the advances of digital technology in all areas of life, to the demographic impact of resource loss and extreme weather, the current trade structure is under attack and will need to adapt. Often mentioned in public talks and policy circles, we are facing what pundits call a VUCA world or Volatile-Uncertain-Complex-Ambiguous world—a term first used by the US Army in Afghanistan in the early 2000s.

Technological impact

There are many angles to address these changes. Some can apply changes on business and political processes to mitigate adverse effects, but most require a fundamental shift in paradigms and leveraging technology to produce socioeconomic change. In the Philippines, the country faces challenges in sustaining its critical information and communications technology (ICT) industry and manufacturing sectors as well as supporting the transformation of the agriculture and financial services industries. The rise of artificial intelligence, blockchain, Internet of Things, 3D printing, and a host of related technologies alter industry dynamics in the business process outsourcing, automotive, retail, food production, banking, creative, and other sectors. How can these technologies help Philippine industries adapt and thrive in the midst of global changes in the business and trade landscape?

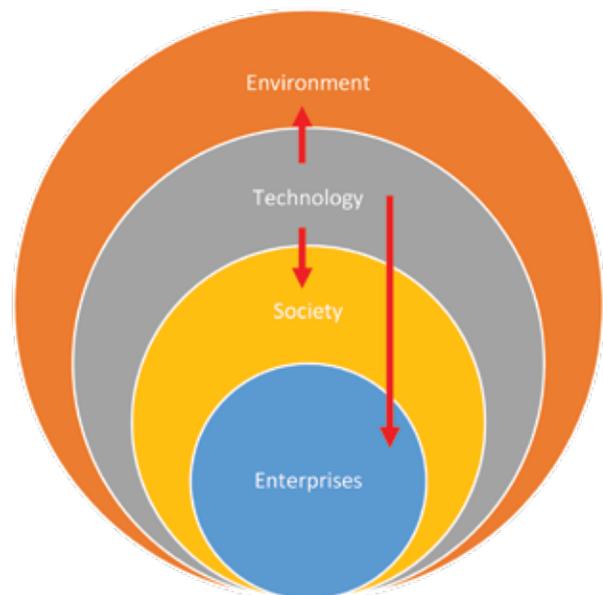
Even now, smart people are asking themselves what can be done to change the status quo to be better. These basic aspirations lead to rethinking of value chains and business processes. More often, these lead to a reconfiguration of business models and emergence of new ways of doing business. Take for example the motorcycle ride-hailing firm *Angkas*. Established a few years ago to solve commuter traffic and travel time, it has since grown into thousands of riders serving tens of thousands of commuters daily, thereby helping commuters avoid traffic and arrive safely on time. This was made possible by the founders' vision to rethink how public commuting can be made convenient and safe by building a platform for motorcycle drivers to earn extra income.

As result, this has led to more travel choices for commuters and also to the growth of the motorcycle industry as a whole as thousands of units are being sold for motorcycle drivers wanting a piece of the action. Who knows the greater impact it has on those who trade and import

motorcycles for the Philippines? Will this spur greater investment in the motorcycle distribution and servicing industry? This example merely shows that technology has far greater impact on society. It used to be that society has impacted how technology is developed, disseminated, and shared. Nowadays, technology in the hands of creative and driven people is impacting society as a whole—changing relationships and ways of interacting. Technology itself is changing the natural world as seen by climate change. At the enterprise level, technology will also fundamentally reshape how trade is being conducted. The rise of Alibaba and Amazon has already disrupted trade patterns. This will only continue to grow as their business models are now being applied in India, the Middle East, and other emerging economies.

As shown in Figure 1, technology impacts enterprises, society, and the environment in fundamental ways that profoundly change all.

Figure 1. Technology as a change driver



Source: Author's rendition

Table 1. Shift in work

From	To
<ul style="list-style-type: none"> • Cost focus • Managing people • Repetitive tasks • Education then employment • One location 	<ul style="list-style-type: none"> • Productivity focus • Managing people + robots • Creative tasks • Education and employment • Multiple locations

Source: Author's compilation

Shifting paradigms

Underpinning all these is not just technology adoption to current business models, but a pivotal upgrading of human resources to drive productivity and innovative value-adding work. Technology is making impact because the people who create and implement technology have been knowledgeable and equipped to capitalize on these inventions at scale. Thus, how leaders also scale this human capital and reap the rewards of innovation should realize that the way work is done is also changing and should be encouraged. Table 1 shows the fundamental differences in the dimensions of work as it shifts to new business models.

Examples abound on this shifting work paradigm. As demand for profitability increases, business leaders look for ways to improve margins beyond cost-cutting measures. One way is to look at how technology can improve productivity. In one case, a combination of chatbots and artificial intelligence allows a contact center agent to do the work of what used to be five call center agents. Lower-level customer inquiries are answered by chatbots, while higher-level problem solving is addressed by humans. This leads to managing not just people, but the management of both people and machines to drive productive work.

How will this affect the contact center? This will require the contact center to employ people skilled in chatbot design and natural language processing. As a result, a different skill set is required. Either the contact center hires people well-versed in software development and program management, which is limited and expensive, or

train qualified people displaced by technology on these new skills. Consequently, what used to be a linear line of educating and then employing people is now a parallel activity of both educating and employing people. The fast changes and tempo of this new work are such that people will have no choice but to learn on the job. This means work is both learning and implementing.

Multiply this scenario across various industries and you will see an exponential shift in work structures, productivity, and output that will turbocharge an economy. Furthermore, this upending of traditional work processes has led to the rise of the telecommuting phenomenon, growth of co-working spaces, and greater demand for collaboration tools and broadband connectivity. All these provide a fertile ground for new businesses and blossoming of new in-demand jobs.

In the Philippines, online professional networking site LinkedIn has identified the top 3 in-demand skills of 2019: front-end web development, human-centered design, and social media marketing (Figure 2). These are skills less than 10 years old in the job market with demand 4 to 13 times the average.

Figure 2. Top 3 rising skills in the Philippines



Source: LinkedIn

The Philippine government response

Even the Philippine government is aware of this fundamental shift such that the Department of Information and Communications Technology (DICT) has formulated a Digital Philippines roadmap that recognizes the need for digitally enabled industries and workers (Figure 3).

Figure 3. Graphic representation of the Digital Philippines roadmap



Source: Department of Information and Communications Technology, Philippines

In a presentation to various stakeholders in August 2019, the DICT cited a new framework to approach the coming-of-age of Philippine digitalization. As mandated by law, the DICT plays a primary role in policy, planning, coordinating, implementing, and administrating the national ICT development agenda of the executive branch of the Philippine government. To accomplish this, the DICT crafted a policy and action framework under the banner of Digital Philippines that seeks to introduce digital approaches in three areas: (1) governance, (2) economy, and (3) society.¹

¹ <https://dict.gov.ph/about-us/our-mandate/> (accessed on September 9, 2019).

In addition, it will dive deep into developing policies and programs that support the three areas into the following five dimensions:

1. **Digital workforce** – Upskill the Filipino labor force equipped with competencies relevant to ICT and adaptive to the future of work.
2. **Digital workplace** – Revolutionize workplaces utilizing ICT to make work convenient, efficient, and more accessible for everyone.
3. **Digital classrooms** – Improve classrooms that are fully equipped with specialized software, computers, assistive learning devices, network connectivity, and other learning tools relevant and suitable for the students’ learning needs.
4. **Digital government** – Improve public service delivery powered by ICT infostructure, shared services, automated processes, and online portals.
5. **Digital communities** – Improve economic growth and social well-being through the presence of better connectivity, ICT tools and applications accessible to the public, and digitally empowered citizens.

Underpinning all these are the following focus initiatives:²

- National ICT plans and policies – Involves the development of national ICT plans, roadmaps, or blueprints that set the direction for ICT development through the identification of subsector goals, targets, and performance indicators.
- Digital connectivity – Aims to improve internet speed by accelerating the deployment of fiber optic cables and wireless technologies in the country and ensure that all Filipinos have access to broadband capability.

² DICT presentation to stakeholders, August 2019, DICT Central Office, Diliman, Quezon City, Philippines.

- **Digital literacy** – Aims to build ICT capacities and develop ICT competencies that will help enhance the capabilities of the Filipino people toward an ICT-enabled society. The program includes the development of ICT Training Information System, Professionalization of the Government Workforce, and Research and Development as part of its major components. This includes expanding the training activities of DICT to provide basic and specialized ICT training program for the special needs sectors in unserved/ underserved communities nationwide, to bridge the digital divide, and to promote grassroots development for inclusive growth and poverty reduction.
- **Cybersecurity**–The Cybersecurity Development and Management Program aims to enhance security and resilience of critical infostructure, and government public and military networks to deal with sophisticated attacks, increase efforts to promote adoption of cybersecurity measures among individuals and businesses, and grow a pool of cybersecurity experts. The program shall support the operations of the DICT Computer Emergency Response Team and the Public Key Infrastructure facilities.

Ways forward

These initiatives require policy and regulatory changes on how work is defined, compensated, located, and protected. It also requires targeted investments in connectivity, training, and alternative workplaces. Thus, a proper Digital Philippines logical framework is prescribed to identify key goals, outcomes, activities, indicators, and means of verification. This also requires incorporation of priority projects that will

address social and ICT policy needs, bridging of data and information gaps, involvement of local government units, and setting up of monitoring and evaluation processes.

To this end, I propose a scaling-up program for ICT workforce upskilling dubbed Future of Work and Human Resources Development (FOWAHRD) Program. This covers the following components:

1. Upskilling in the areas of artificial intelligence, blockchain, cloud computing, data science, and edge computing/internet of things as well as soft skills such as critical thinking, team collaboration, and active learning.
2. Utilization of government and private sector co-working spaces powered by targeted, high-density connectivity.
3. Identify and incentivize ICT enablers that can accommodate training, incubation, and investments to support ICT industry players and start-ups.
4. Incentivize ICT industry players to invest in upskilling and technology upgrading.
5. Build on or enhance laws, rules, and regulations to support FOWAHRD, such as the Telecommuting Act, Philippine Innovation Act, and Innovative Startup Act.

The idea is to build more connections, particularly quality connections, among people, organizations, and ideas. The outcome is to create opportunities that incentivize companies to invest in upskilling and new technologies for overall economic productivity and innovation as well as the use of co-working and co-living spaces. Finally, this can drive government to invest heavily in science, technology, engineering, mathematics, and the arts.

Presentation 4

Borderless World: Is the Philippines Ready?

Imelda Tiongson | Trustee, Fintech Philippines Association

SUMMARY: The shift to a digital world is underway and this is demonstrated by the shift to a borderless society, especially in trade. Twelve percent of the world's major banks have fully converted digitally, while 38 percent are still in the transformation stage. Financial technology, also known as fintech, is reshaping payment systems, asset management, and fund-raising activities, with new and more efficient methods evolving each year. While there are many advantages to going digital, there is a need to be aware of the risks associated with it and find ways to balance these risks. Building trust is essential. In addition to payments and remittances, there are other avenues not yet explored, such as token or digital asset offerings. In time, market forces will reach an equilibrium and there will be a healthy combination of good governance and proper regulations that can make the country leapfrog into attracting more secured foreign direct investments. The future will be “everything digital”, but what is important today is building trust in the space, the system, and the people.

Introduction

The world is shifting away from paper money to digital money, according to the World Economic Forum 2018.

Have you heard about e-Estonia? This place has already fully embraced digital money and blockchain in their daily lives, from buying groceries to making major business trades; that is what a complete digital ecosystem is about. Here in the Philippines, we are already taking baby steps starting with the use of paperless payments using Bank API or Quick Response (QR) Codes to make payments or transfer value. The more of these digital transactions happening, the more we are slowly building the digital ecosystem. By

combining this with data analytics and artificial intelligence (AI), we can now see its value and how it can help in various businesses and decision-making processes.

The Philippines is already doing PHP 160 billion worth of global investments in fintech or digital trade alone. As predicted by the Department of Trade and Industry, in 2030, it will have a PHP 1.9-trillion economic impact. Looking at the records from January to December 2018, QR transactions have substantially increased by a minimum of 300 percent. A major factor to this rise is the increasing number of Chinese tourists doing business transactions in the Philippines.

Digital money

a) As a currency

There are two types of digital money: (1) fiat, which is our typical local currency (Philippine peso), and (2) crypto (short for cryptocurrency), such as bitcoin.

Fiat

Each day, more and more people do their transactions using bank applications, such as applying for a loan digitally or paying bills or sending money via Pesonet and Instapay using Philippine peso.

In China, people can apply for a loan, get approval, and get funds credited to their QR within an hour. This can be done because of the availability of individual consumer data using what China calls Social Credit (SC) rating. A high SC rating means you get approval faster. To get a high rating, you need to watch your credit score by paying bills on time. The social part includes your buying habits. For example, if you buy excessive drinking alcohol daily, your SC rating will be low. Those with a high SC rating, e.g., 95 percent, would be chased by lending institutions.

Digital transactions using paperless money will play a significant part in our future, whether via trade, loan, or through the ecosystem.

Crypto

What is not yet considered, though being studied, is the use of crypto as a medium of exchange. There are many reasons why crypto has had low buy-in in the past. One of the reasons is the fear of fraud. Second is it is highly volatile, i.e., its value is not stable.

While there is a vast potential to reduce costs and increase the palatability of making fund transfers easier across borders, trust is still a significant issue.

Have you heard of USDC or USD Coin? Libra of Facebook? These are cryptocurrencies that are termed “stablecoins”. In the Philippines, the subsidiary of Unionbank is also developing PHx, which is a stablecoin. One of the main issues with crypto coin is its high volatility. To make it stable, you attach a collateral to it. In the banking world, it is like a cash holdout, and this is the heart of the stablecoin; it does not fluctuate as much as if it does. The firm uses the collateral to keep it from fluctuating. When already stable, you would not even know you are trading crypto, and it can already be part of the ecosystem.

b) As a funding source

A business looking for equity can source funding using the Ethereum (crypto) to fund its project because it has the blockchain technology connected to it. The funding is made direct and does not pass through any financial intermediary. This is what is known as utility token or security token offering (also known as digital asset offering). While both are used to fund a project or business, the utility works like a rewards system (like a Timeshare scheme) while the security token works like company shares.

In the Philippines, there are many brilliant people with good ideas for start-ups. Unfortunately, most of them do not have money for equity to start their business. When these start-ups apply for a bank loan, they would typically get denied. In the crypto space, they could get a chance to get funding from overseas without the need to pass strict credit requirements using security token offerings. How come countries have not aggressively embraced this? The main reason is because the earlier offerings have led to many scam transactions as they are not adequately regulated. In 2016-2017, nearly 95 percent of security token offerings had gone down because of scammers. Several countries started to ban them and only recently began to reopen when regulators have begun to impose regulations on security tokens.

Security

According to the National Privacy Commission, there are three firms facing jail terms because of privacy infractions. So, how do you build trust? One way is to assure the public you have good cybersecurity; the other is strengthening loose ends by teaching your employees good governance values.

A social experiment was conducted involving five countries, including Japan, where five wallets were left in five different areas of the country. The study revealed that it was only in Japan where the five wallets got returned. Other countries had a low return rate.

The Fraud Triangle

According to the World Bank-International Finance Corporation, there is a Fraud Triangle composed of three components with an acronym of ROP. R stands for Rationalization, O is opportunity, and P is Pressure. If you take out one of these components, fraud will most likely not happen.

Another social experiment was conducted again in Japan, with 30 Grade 1 students. These students were given luscious chocolate cakes in front of them, and they were told not to eat it. After one hour, the teacher returned and happily discovered not one ate the cake. In the context of Rationalization, this shows that the children strongly have it in their culture to follow and respect authority. They know that it is unethical to get something you are not allowed to get.

Trust is essential in the digital world

In the previously mentioned fraud triangle, if you take out one of the components in the equation, fraud will most likely not happen. If you take out Opportunity (by placing regulations as check and balance) or Rationalization (by getting people to imbibe good ethical standards like those children in Japan), there is a strong chance that fraud will

be minimized, maybe even eradicated. That is why good governance is important in the digital world. We need to build trust in the digital world to create an ecosystem. We need to take calculated risks. It is the way to move forward. We need to build that equilibrium, that balance of placing regulations, but at the same time, not hinder growth. In the Philippines, we are fortunate that our regulators have shown openness to the digital space to promote financial inclusion. There is also the Revised Corporation Code that has included the fintech corporations (companies dealing with public interest) to ensure the implementation of good governance.

What else is happening out there in terms of regulations? The *Bangko Sentral ng Pilipinas* has applied a “test and learn” approach. If there is a tech idea involving digital technology, they do not decline them outright, but a test-and-learn strategy is implemented. Alternatively, projects can also be placed in a “sandbox”, and if the project becomes feasible, it can be fully rolled out. The Securities and Exchange Commission, on the other hand, does public consultation. It involves private stakeholders to comment when crafting laws.

The digital world is growing exponentially. In the United Kingdom, start-ups are grabbing 15 percent of the market, which is at USD 2 trillion but, in the Philippines, we have not created any unicorn because we have not yet completed some of our regulations. What needs to be done, as far as the government is concerned? We need openness, regulatory sandboxes, appropriate laws, and good implementation of the laws.

Money becoming paperless will happen. We now need to look at how to strengthen and create higher trust in the digital space.

Recommendations

a) Imbed Good Governance

For businesses, several approaches can be done, such as the stick-and-carrot approach, meaning, reprimand the bad and reward the good. However,

it has been proven that the best approach which lessens fraud and build stronger trust is to embed Good Governance. Start them young and ensure the governance mindset is inculcated in the company's corporate structure.

b) Re-tool/re-skill

For the public, we need to be aware of the risk and the usage. We need to retool. We lack good people in AI; we need more data scientists and chief technology officers, not necessarily information technology people, preferably in big companies and government institutions as well.

c) Promote diversity in skills even at the board level

Most boards or government decisionmakers do not have tech or digital skills. Either train them or get at least one decisionmaker to be tech-savvy.

Elon Musk said, "Paper money is going away." We need to protect the digital wallet. Technology shows us what we could do with the data. Laws and regulations show us what we are allowed to do. But ethics (or good governance) tells us what we should do.

Open Forum

Question 1

Dan Agustin (*Masaganang Sakahan*): In our grading as far as competitiveness is concerned, we are ranked number 6. The Central Bank says our foreign direct investments slowed down. Another report says that in the automotive industry, some car exporters would circumvent taxes by going to ASEAN countries (i.e., they go to ASEAN countries so that they can pay lower taxes).

In 2017, the DTI commissioned the Duke University to study our global value chain products. I do not know why we did not implement their recommendations because we have to avail of the expertise of some people. Like in China, they hire American consultants. You mentioned that in UP alone, we have 120 scientists. But the World Bank also commented that we do not have enough research and development centers. I do not know if BOI and DTI can address these challenges so that we can have a better future for our country.

Ma. Corazon Dichosa: Actually, we have a lot of studies in the DTI. And, of course, we try to look at the recommendations and we try to prioritize. As you know, in the government, our resources are limited. The engagement with Duke University was for a short time. Duke University's study was paid for by USAID. Nonetheless, some of our initiatives, such as the Innovative Startup Act and the Innovation Law, are all coming in.

We are also trying to facilitate the finalization of the implementing rules and regulations. Even the One Person Corporation under the Revised Corporation Code was welcomed. This will really provide a stimulus for a lot of start-ups.

In the BOI, what we are working on is to update our laws. Those laws were crafted in 1987. For example, in terms of addressing equity restrictions, we do provide incentives but only in a limited way. Some of the recommendations, we can do them; but before we can do them, there is a lot of policy reform that we need to do but we are working on them.

In addition, in the BOI, we have more than 36 industry roadmaps. In these roadmaps, we have a lot of priorities, selected by industry associations. So, if they see that the Duke University recommendations are not realistic in the current situation, we do not take them.

Aside from the incentives that we provide, we also do a lot of capacity building for our industries. For agribusiness, we do a lot of convergence with the Department of Agriculture because we think that if we promote agribusiness, we should not be supporting imported agriculture. We should always also provide a lot of assistance to increase agricultural productivity. The appointment of Secretary Dar is actually a welcome development for us.

In terms of research and development, we are working closely now with the Department of Science and Technology (DOST). In fact, we have a lot of new facilities in the DOST in Bicutan.

The latest one that will open next week is the new additive manufacturing center. That will be the national center for all 3D printing activities of the country. It was launched in March. It will facilitate a lot of prototyping in our manufacturing sector. So, this is a shared investment of the DOST and the DTI. We have many names for these facilities (e.g., innovation labs, fab labs, co-working spaces) to encourage a lot of industries to innovate. For next year, we are collaborating with our electronics industry to encourage our manufacturing companies to open up and see how the Internet of Things (IoT) can help them in their manufacturing. That will be in June next year. We are hoping that the electronics sector and the semiconductor industry in the Philippines will be able to help our manufacturing companies particularly the SMEs to understand how to use IoT and artificial intelligence (AI) in this globalizing world.

Imelda Tiongson: May I add something to this? It may sound simplistic. The technology on contracts is connected to Ethereum. While the technology is superior, there is some slowness when it comes to some transactions. But having said that, why do you think Facebook is creating Libra? Why did they pirate the president of PayPal? They also bought UK blockchains. I hope that answers it. It is just like an app; the transfer is done through blockchains. Therefore, it will be done in a transparent and immutable format.

Jove Tapiador: I will attack it from another angle by answering the gentleman's question. More than a hundred million Filipinos (45 million in the labor force, 2 to 3 million OFWs)—most of the information in the discussion revolves around trade, when in fact we are not a trading nation. We are a service economy. More than 50 percent of our GDP is services. So, if you want to look forward to the future, you should have a diversified economy.

But the reality is that we need to upscale our human resources because these drive services, in particular, ICT, BPO, and that is the future. Therefore, when we talk about how to move

forward and catch up in the global economy, we are not in the trade war, we are not significantly affected because we are not in that space. Our playbook is to develop our human resources, develop the skills, be the workforce of the service economy. Therefore, investments should go into that—our education system, our healthcare systems. It is all about creating value domestically by having start-ups that will eventually become exporters of these intellectual products.

So, when we now talk about blockchains and AI, these are the emerging technologies where we can have a leg up over our export-oriented, manufacturing-oriented neighbors. At the end of the day, when you are talking about specific technologies, let us say blockchains, the applications are limitless. We see how money can be digitalized, and we see how digital money can be used in the banking sector. In law, for example, in legal contracts, you do not need pen and paper. That can be codified in a smart contract using blockchains. Why blockchains? Because it is transparent and immutable. Meaning, anybody can look into that—those transactions are recorded. Anybody who tries to hack destroys the chain of information.

When these technologies are enhanced at the macro level, we can fundamentally reshape our business relationships because when you now talk of business relationships, these are put in contracts. But what if they are put in software, in codes—this is why we need more blockchain developers, data scientists, and AI people.

Imelda Tiongson: I am sure we know the root cause of why we are not competitive. One of these is expensive tax, expensive electricity, etc. By the way, the coin offering is becoming popular around the world. Seventy-seven percent goes to the bank and half of this is going blockchain. What I am trying to say is that it can grow here in the Philippines assuming that we have the proper regulations. These investors, some of them, are on the 'wait and see' on how open the Philippines is on these. We think that having a more competitive tax, electricity, labor, I think the Philippines is really one of the countries

that will zoom up. With the new RTA law, I believe we are going up. I am very pleased with the present administration for doing steps about it and being open to discussion and cooperating with industries like us emerging industries.

Francis Mark Quimba: I am thinking of the possible application to customs.

Imelda Tiongson: They probably would not like it.

Francis Mark Quimba: Yeah, but in the spirit of transparency.

Question 2

Ed Menez: Listening to the discussions, it appears to me—because I have been in the government for quite a long time—that the emerging industries seem to be a much quicker way to jumpstart or increase what the country is earning. Whereas our traditional investment schemes or ways of trying to jumpstart our manufacturing sector are much slower. There are still a lot of regulations and a lot of laws that we need to reform.

Jumping off on what you were saying, maybe the Philippines is still stuck in that paradigm where a country must have a strong manufacturing sector, so that we can advance. But if we focus on the young population and developing that young population, maybe, there needs to be a conversation to focus on how we can be a successful country in the shortest possible time—to try and go back to manufacturing might be a step backwards.

Imelda Tiongson: If I may quickly comment, even without the tech, only one out of five start-ups will generally survive in the next five years. That is why the Innovative Startup Act includes training to teach them the business end of things. We have to balance it out. We have to find that equilibrium and we also need to ensure

that we have proper regulations, not too strict, but not too easy so that the Philippines is not looked at as a bad country where you can do laundering.

Ma. Corazon Dichosa: Thank you for the comment. We have 36 industry roadmaps. We have priorities; it is just that we are not publicly stating them. Those roadmaps were submitted by the private sector. The roadmaps are just a blueprint for the government and the private sector to look at; it is up to the government to balance private sector interests. Sometimes, their positions are not converging. We have different levels of engagements in terms of the roadmaps.

In terms of manufacturing, we have recognized that we have been a services country for the past 25 years. But we still have a huge labor pool that cannot go into services. So, we still need jobs to be created for the low-skilled workers. We cannot walk on just one leg.

In terms of growth, we need to walk on two legs: both manufacturing and services. Some of the services requirements are high-end. We have to have both. We also recognize that we have problems with cost competitiveness. But, again, we have to be very selective in terms of the sector. We have to look at all of these with the private sector because they are the ones who know the opportunities that go with them in terms of market access.

Jove Tapiador: For Industry 4.0, with the fusion of services and manufacturing, let us take a look at 3D printing technology. They are going to launch an advanced additive manufacturing lab. That is an element of manufacturing. The differentiator is not the technology but the creativity of the design that goes in the additive tool. So, there can be that fusion where we are entering mass customization with the use of additive technology. That additive technology is not necessarily limited to just one or two sectors. It is available across the manufacturing sector. So, we can be cost-competitive because now we are talking about creative design, which is human-centered.

Ma. Corazon Dichosa: DTI has been a champion of the Fourth Industrial Revolution (4IR). But if you look at it, the Philippines has to create a lot of jobs. Whether we are going straight into automation, IoT, or AI, whether the job creation will be as fast as the job displacement, I do not know if the government can cope with the demand. I do not think we can go straight to 4IR. Maybe we can prepare the path. Because on the way there, we have to double-time on job creation. I do not know if we have that capacity given the industry structure that we have. And we are still

implementing K-12 which would actually put us on par with other countries in terms of the education system. If we adopt 4IR, we need to create a lot of jobs as fast as we can to mitigate the job displacements.

Jove Tapiador: We are already experiencing job displacement sooner than later. If in two to three years, one-third of the BPO is decimated, we cannot do it (job creation) incrementally step by step anymore. Something radical has to be done.

SESSION C

**CHALLENGES TO THE
PROVISION OF GLOBAL
PUBLIC GOODS**

SESSION OPENER

Michael Ralph Abrigo | Senior Research Fellow, PIDS

Global public goods (GPGs) are not new concepts. These are goods and services that affect people, businesses, and governments that go beyond geopolitical boundaries and across generations. Their publicness may arise from the classical notion that GPGs are nonexcludable, i.e., it is impossible or very costly to exclude anyone from consuming them, and nonrival, i.e., their consumption by an individual does not limit others from benefiting from them. Beyond this classical ideation, however, GPGs, like many other public goods, involve publicness in provision, i.e., their production is not confined to governments but instead involves a large number of different actors, which often require publicness in decisionmaking, i.e., the process by which political decisions on GPGs are arrived at necessitates the participation of different stakeholders with governments being just a part of it.

In this session, we will delve into the different issues surrounding the provision of GPGs. Why are they important in our daily lives? What challenges do economies face in providing them? What should we be doing to address these issues? We have a number of distinguished speakers who will talk about GPGs in their respective fields: public health, environment, and international rule of law.

Presentation 1

Financing Global Public Goods for Health: How Can We Make the Case?

Gavin Yamey | Director of the Center for Policy Impact in Global Health and Professor of Global Health and Public Policy, Duke University

SUMMARY: Many health challenges go beyond the boundaries of individual nation-states, and so, they require international collective action. Examples include pandemic preparedness, antimicrobial resistance, the transnational spread of risk factors for noncommunicable diseases, and the spread of counterfeit drugs. This paper discusses “global common goods for health”, which are also known as the “global functions” of health cooperation. These terms refer to health activities that go beyond the boundaries of individual nations to address transnational issues. The paper also presents a taxonomy of global functions and lays out key value propositions of investing in global functions. It also provides a brief summary of the current funding flows to global functions and the estimated funding gap, which is large.

Based on a recent paper for a special issue of the journal *Health Systems and Reform* (see <https://www.tandfonline.com/doi/full/10.1080/23288604.2019.1663118>), a range of options for directing additional funding to global functions is proposed. These options are organized into resource mobilization mechanisms, pooling approaches, and strategic purchasing of global functions. Given its legitimacy, convening power, and role in setting global norms and standards, this paper argues that the World Health Organization is uniquely placed among global health organizations to provide the overarching governance of global functions.

I am delighted to have the opportunity to talk to you today about financing of what we at the Center for Policy Impact in Global Health call global functions, and what the World Health Organization (WHO) is calling “global common goods for health”.

The work that I will be presenting today is part of a new program of work led by the WHO on Financing Common Goods for Health, which is being published in a special issue of the journal *Health Systems and Reform* coming out in September in time for the United Nations General Assembly (<https://www.tandfonline.com/toc/khsr20/5/4>).

In that special issue, there are seven papers on this topic of common goods for health (CGH):

- Paper 1: When both markets and governments fail health
- Paper 2: When markets fail: The case for common goods
- Paper 3: What is needed for governments to succeed in the financing of common goods for health
- Paper 4: Core government functions in health emergency and disaster risk management
- Paper 5: Financing common goods: A country agenda

- Paper 6: Financing common goods for health: When the world is a country (the one that I coauthored and led)
- Paper 7: The case for public financing of environmental common goods for health

Today, I am going to focus on the paper that I coauthored on financing global common goods for health.

Questions to be answered by the series

In this series, we are addressing several questions:

- What are these “common goods for health” or CGH?
- Why have they not been financed by markets or by governments?
- How much would it cost to finance these goods?
- What country-level financing mechanisms are able to finance CGH?
- What are the potential global-level financing mechanisms and challenges?

Definitions and conceptual framework

Let me just briefly give you the definition that we are using in this series on CGH. This term refers to population-based functions or interventions that require collective financing—either from governments or donors, or both. Funding these functions as CGH is based on the following conditions: (1) they contribute to health progress and economic progress and (2) there is a very clear economic rationale for these interventions based on market failures with a focus on public goods.

CGH refers to public goods, which economists define as goods that are nonrival and nonexcludable, and goods/interventions with large social externalities. The series makes the point that not all public or common goods are within this definition and vice versa, but all common goods for health must generate large

societal health benefits that cannot be financed through market forces alone.

I want to focus specifically on global common goods for health. In the *Global Health 2035* report by the Lancet Commission on Investing on Health, released in December 2013, we, the commissioners, used the term “global functions” (<http://www.globalhealth2035.org/>). This is another way of saying global common goods for health. When we talked about global functions, we were referring to activities that address transnational health issues that go beyond the boundaries of individual nations.

When you invest in global functions, you derive, by definition, transnational benefits. We categorized these global functions into three types:

1. Supporting global public goods, such as generating and sharing health knowledge across borders, market shaping to bring down the prices of drugs, or setting international norms and standards;
2. Fostering leadership and stewardship, such as convening for consensus building; and
3. Managing cross-border regional and global externalities, such as outbreak preparedness and response or responding to antimicrobial resistance.

The value of investing in global CGH

In our paper that is coming out in September on financing global CGH, we lay out an investment case or a value proposition. We argue that there are at least five reasons why it is valuable to invest in global CGH, like pandemic preparedness or research and development for diseases of poverty.

- **The first is that, if we do nothing, the costs are extraordinary.** For example, Victoria Fan, Dean Jamison, and Larry Summers showed in a paper in the Bulletin of the WHO that the expected annual losses from pandemic risks are around USD 500 billion a year (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5791779/>). There is also research

by Naylor and colleagues that shows that if the current rates of antimicrobial resistance continue, the annual GDP loss 40 years from now would be around USD 454 billion (<https://pubmed.ncbi.nlm.nih.gov/29713465/>). So, the costs of doing nothing are enormous.

- **Secondly, if we do invest in global functions, the payoffs are very large.** There are very impressive health and economic returns. For example, the returns to investing in an HIV vaccine will be very large when eventually we develop such a vaccine. Rob Hecht, Dean Jamison, and colleagues showed, for example, that if by 2030 we are able to develop an HIV vaccine of even partial efficacy (50% efficacy, for example), the returns would be huge. If the costs of the investment in the HIV vaccine are around USD 900 million a year to 2030, which is what we are currently spending, then the returns are still going to be orders of magnitude greater than the investment—somewhere between USD 2 and USD 70 in return for every dollar invested (https://www.copenhagenconsensus.com/sites/default/files/hecht_et_al.pdf). We know that there are similar examples of large returns to investing in other global functions like market shaping for the pentavalent vaccine.
- **It is also possible that by investing in transnational activities, global functions could have in the end greater benefit for low- and middle-income countries** than the direct funding of services because the funding of global functions could be less fungible.
- **It also could be a way to address the so-called “middle-income dilemma”.** The middle-income dilemma is that middle-income countries, as you know, are now graduating out of development assistance for health. They have reached a national income level (the GDP per capita) that is disqualifying them from receiving aid, and yet around 70 percent of the world’s poor are in those transitioning middle-income countries. Thus, there is a dilemma; these

middle-income countries do not qualify for aid and yet most poverty and most poverty-related ill health are now in middle-income countries and not in low-income countries. We argue that investing in these global functions could be a very powerful way to continue to improve the health of the poor in middle-income countries. For example, if you take multidrug-resistant tuberculosis, affected communities in middle-income countries would benefit from product development, market shaping to reduce prices, and collective purchasing of commodities.

- **And our fifth argument is that middle-income countries are going to be graduating away from official development assistance (ODA) for health**—thus, there is an opportunity for aid reallocation. In other words, this direct country support could instead be invested in global functions.

Geography of investing in global CGH

We also argue that you can invest in global functions at multiple different levels.

You can invest at the global level—the supranational level. For example, investing in the Coalition for Epidemic Preparedness Innovations (CEPI) or in global vaccine stockpiles—those are global investments in global CGH.

You can invest at the regional level—for example, investing in the Africa Centres for Disease Control and Prevention or in regional malaria elimination.

Moreover, you can invest in global common goods at the country level—if, for example, you invest in malaria elimination or in tackling drug-resistant tuberculosis—those have transnational benefits.

How much are we spending on global CGH?

I have coauthored a paper led by Marco Schäferhoff that will also be coming out in

September in the special issue of *Health Systems and Reform*, in which we quantified donor spending on global CGH in the years 2013, 2015, and 2017 (<https://www.tandfonline.com/doi/full/10.1080/23288604.2019.1663646>).

We showed that in 2013, out of the USD 25.7 billion in total ODA for health, less than a quarter was spent on global CGH. That proportion has changed; it went up to 29 percent in 2015 but then went down again to 24 percent in 2017. In the wake of Ebola (the west Africa Ebola epidemic of 2014–2016), there was a temporary increase in spending on global CGH, which then fell post-Ebola.

The large financing gap for global CGH

How much funding do we need for global CGH? We estimate, based on the work of the Commission on Investing in Health, and on the upcoming study done for the Lancet Commission on Malaria Eradication (<https://www.thelancet.com/commissions/malaria-eradication>), that an additional USD 11.5 billion is needed annually to invest in global CGH. This is a conservative estimate.

What does this USD 11.5 billion entail? It is funding for product development, pandemic preparedness, polio eradication, malaria eradication, funding of the WHO's core activities (the global public goods that the WHO supports), a pooled procurement mechanism for noncommunicable diseases, and population, policy, and implementation research.

As mentioned earlier, the costs of inaction are enormous—many hundreds of billion dollars a year—and that puts this figure into perspective—USD 11.5 billion compared to many hundreds of billion dollars. It is a very important and feasible investment.

Mechanisms to close the gap

We summarize the approaches that you could adopt to close this financing gap. You could do it in three broad ways:

- **Mobilizing resources.** One way this can be done is through compulsory mechanisms such as global taxation. There is a growing appetite for global taxation, e.g., a financial transaction tax and a carbon tax. For example, the nonprofit organization Unitaid is funded from a tax on airline tickets. Another way to mobilize resources is through voluntary earmarked mechanisms, such as CEPI mobilizing funding for pandemic vaccine development. This is clearly a way to raise money, however, this does risk the proliferation and fragmentation of the global health architecture. With voluntary earmarked mechanisms, you would still need an overarching governance structure, which is best provided by WHO. Mobilizing resources can also be done through the reallocation of ODA. As I argued earlier, the ODA after middle-income countries graduate from direct country support could be invested in global functions.
- **A second approach is through the pooling of funding.** An example of this is the pooling of research and development funding through new coordination platforms like the Group of 20 Global Antimicrobial Resistance Hub or the pooling of multilateral agency funding. The Duke Global Health Institute has recently published an analysis looking at how the four major multilateral agencies in health (i.e., WHO, World Bank, Gavi, and the Global Fund) are very interested in combining forces and collaborating more on funding of global public goods for health (<http://centerforpolicyimpact.org/wp-content/uploads/sites/18/2019/11/JAPAN-Transition-Profile-Final.pdf>).
- **A third approach is the strategic purchasing of global CGH.** There are many examples of such purchasing. We know that Gavi is involved in pooled procurement and market shaping. The Global Fund has allotted USD 194 million for Strategic

Initiatives—many of those are global public goods such as malaria elimination. We know that the International Development Association funds laboratory networks in Sub-Saharan Africa.

Key role of WHO as overarching governance mechanism

The WHO has a very key role as an overarching governance mechanism. We say in our paper that the most radical shift to close this financing gap for global CGH would be shifting the way the WHO itself is financed. If you look at WHO's core functions, those reflect its role as the global health governance body; and if you look at the general

program of work for 2019–2023, global public goods are absolutely at the heart of that program of work. Yet, voluntary contributions or extrabudgetary funds now make up almost 80 percent of WHO's funding, and those are heavily earmarked.

We argue in the Commission on Investing in Health that, as a result of earmarking, WHO is struggling to fund its core functions, undermining its capacity to supply global public goods and other global functions. Thus, we have to address this dilemma if we are going to address the critical funding gap for common goods for health.

I hope that has been a useful overview of the landscape of the financing of global CGH. Thank you for your time.

Presentation 2

110 Million Solutions to Health

Susan Pineda-Mercado | Special Envoy of the President for Global Health Initiatives

SUMMARY: All talk about global public health must begin with this uncomfortable truth: the world is wealthier than ever before, but it is by no means healthier. There is a myriad of problems in public health. What is needed is to link these problems to solutions that already exist in order to create health equity. Strategic partnerships create the bridge to link solutions to problems related to climate, environment, and health—noncommunicable diseases and injuries, mental health, adolescent health, communicable diseases (HIV, dengue, tuberculosis), and vaccine-preventable diseases, among others.

Despite the challenges to health, there are brilliant opportunities to overcome health inequity: Universal Health Care, provincial leadership in health, information technology, health regulations (including taxation of harmful products), strong epidemiology, health promotion, and strategic communication. A focus on strategic partnerships can result in increased health literacy. Governance dialogues between and among different sectors are key. There is a two-fold task: (1) to empower people with information and skills to take their health and their lives into their own hands and (2) to enable healthier environments and promote healthy settings. The Philippines can be a nation of 110 million solutions, instead of 110 million problems. With a clear vision, strategic partnerships, and a strong focus on health literacy, what is needed is to act together and to start today.

Introduction

All talk about global public health must begin with this uncomfortable truth: The world is wealthier than ever before, but it is by no means healthier.

In conference halls across the globe, it seems that too much of our time is spent keeping track of and describing the myriad of problems in public health. However, it is not necessary to speak at length describing each of these issues. What people—health leaders, professionals, and the public alike—need to do is link problems to solutions that already exist.

There is a range of solutions in front of us: the fundamentals—safe water, vaccines, breastfeeding, health-promoting schools, among others—and the more complex but highly effective—Universal Health Care, tobacco taxation, green and climate-resilient hospitals. We may not need an inordinate amount of resources to link the solutions to the problems. But we can become better at making these linkages happen through strategic partnerships.

Public health is not a zero-sum game. Addressing one health issue does not have to come at the expense of another, and neither should it

cause misery to a particular subset of people or professions. In fact, to address major issues, there is a straightforward, efficient, and, ultimately, simple approach: we must do it together, and we must do it today.

The strength of strategic partnerships to link solutions to problems

The web of influence of public health is expanding, but so is the extent of its responsibilities. The only way to extend the reach of public health is to work with other sectors.

Our problems may be national in scope, but the systems to address them are smaller, diverse, and require the engagement of other sectors, if not all citizens.

Overcoming health inequity is a battle that is fought everywhere at all times.

Let us consider some examples:

Climate, environment, and health

Increasing surface temperature in the world is impacting on the balance of the world's ecological system. From melting icebergs to forest fires—the changing environment has become the backdrop of all discussions on health. For the Philippines, this means higher unpredictability, greater intensity, and increased frequency of storms, such as Yolanda, which result in unspeakable devastation.

Heat and drought will destroy food sources. At the same time, unprecedented low temperatures have been reported in high altitude areas like Baguio City and other towns in Benguet province. When homes are not designed for cold weather, older persons and very young children are at risk.

In more than half of all homes, mothers have no access to safe energy, and thus, cook with firewood, increasing their families' risk of respiratory illnesses.

Traffic is a major source of stress and lost productivity. Prolonged exposure to traffic-related air pollution increases the risks for cardiovascular

diseases and cancers as well as injuries, which are among the leading causes of death in the country.

These are just some examples of the intersections of climate extremes in temperature and environmental degradation that create public health issues that require action between the health sector and environment, housing, agriculture, and transport.

Noncommunicable disease (NCD)

The two leading causes of death—heart attacks and strokes—are occurring in younger ages, resulting in premature deaths before the age of 65.

There are multiple underlying factors. The most important is hypertension. One out of four adult Filipinos is hypertensive, but only half are aware of it. Excessive salt intake in the diet is part of the problem.

Diabetes prevalence is also increasing, again, with more than half unable to detect it. Failure in early detection leads to complications that can result in the need for dialysis or amputations, causing huge financial burdens on families. Again, poor diets underpin this condition.

Cancer is the third leading cause of morbidity and mortality in the country. The Department of Health (DOH) reported that there are 96 deaths from cancer per day. For lung cancer, the spike in the Philippines is caused by heavy smoking of youth in the 1960s and 70s—consistent with global evidence of a 30–40-year lag between the rise in smoking rates and the mortality from lung cancer, particularly among men.

NCD prevention and control requires regulating the content of salt and sugar in food. The health sector must work with trade, manufacturing, and even smaller-scale food outlets that produce commonly consumed products like bread, dried fish, and *bagoong*.

Good tobacco control measures are evidence-based and proven anticancer measures.

To curtail harmful products like tobacco, e-cigarettes, and heated tobacco products, the

health sector needs to work with finance, trade, regulation agencies, local governments, lawmakers, schools, parents, and media.

Mental health

Data on suicide rates are not updated, but mental health practitioners report increases in suicide, particularly among teenagers as well as teachers.

As the population has grown, the huge gap in programs for depression, anxiety, and mental illness has become striking. Many countries have already phased out mental institutions and integrated mental health-related services in general hospitals.

Patients with mental illness are commonly abandoned by their families, hence the institutions with custodial care. In many of these institutions, patients live behind bars. Mental health medication is not covered by the Philippine Health Insurance Corporation (PhilHealth).

Regulations are also needed to curtail video gaming that is causing all sorts of behavioral issues, such as delinquency, if not outright addiction among minors.

No less than a social movement is needed to overcome stigma and create a more caring and inclusive society. The education sector, faith-based groups, social workers, psychologists, civic organizations, workplaces, and media have important roles to play.

Adolescent health

The recent report that 576 teenagers give birth each day is a reason to cause outrage.

More often than not, teenage pregnancies occur in the most deprived parts of the community. It is possible to map the parts of a barangay with the least street lights at night, high crime rate, rampant drug use, unemployment, etc. These are likely to be the places where a ten-year-old girl can get pregnant. The ten-year-old pregnant girl is not the problem. The problem is the environment that makes the ten-year-old girl the most vulnerable in a locality.

Geographic information system mapping has been used by other countries to map “hot zones” or areas of high risk for children. This is used as the basis for the delivery of specific interventions that address social determinants.

Vulnerability of the adolescent has been consistently well documented through the years through the regular Global School Health Survey, the most recent was in 2015. Despite these reports, the health of youth falls under the policy radar. The report, which covers 13–15-year-old boys and girls in school, shows that 67 percent reported alcohol use before the age of 14, 10 percent reported drug use, 17 percent reported attempting suicide within the last 6 months (18.7% for girls, 15% for boys), and 14 percent reported use of tobacco products, with more than 80 percent also attempting to quit.

It is becoming increasingly clear that youth health is ignored, if not neglected.

Again, this is not about health programs and services for adolescents, but changing the entire social environment for youth.

The health sector needs to work with other sectors—education, sports, culture, art, life skills, camping, nature-exploring, and other types of activities that promote the overall wellness of young people.

Communicable diseases

When it comes to communicable diseases, the Philippines is considered a low-prevalence country for HIV with less than 0.1 percent of the population affected. However, compared to other parts of Asia where rates are declining or stagnating, the DOH reports a 140-percent increase in prevalence over the past 10 years. From 1984 to 2019, a total of 65,463 cases had been registered. In 2018, 50 percent of new cases were from the age-group of 25–34 year olds (4,344 cases) and 30 percent were among the 15–24 year olds (2,505 cases).

As of August 24, 2019, there were 1,021 deaths from dengue, 64 percent higher than the

number for the same period in 2018, and 249,332 cases, which is 109 percent higher than the cases for the same period in 2018. Highest death rates are in Region 6, Region 4A, Region 7, and Region 9.

Tuberculosis (TB) is also a cause for concern. There are 324,000 new cases each year. Currently, there are 17,000 multidrug-resistant cases that cost hundreds of thousands of pesos to treat. One person with untreated TB can infect at least 100 others in a year. Partnership with labor and workplaces, as well as aggressive community-based programs are needed.

It is a sad commentary on our country that vaccination coverage or the fully immunized child rate has been declining over the past decade. It dropped to about 40 percent this year from a high of 98 percent in the early 1990s. Measles, being the most contagious of all the vaccine-preventable diseases, was the first crisis. Diphtheria and polio may not be far behind. Again, a serious partnership to raise fully immunized child rate to 90–95 percent requires working with volunteers in communities, barangays leaders, churches, and daycare and kindergarten centers. This requires microplanning to include all children.

The list could go on and is by no means exhaustive but illustrates the scope of public health concerns.

110 million solutions: The way forward

It is easy for us to think that we are a nation of 110 million health problems, but perhaps, we can imagine a nation of 110 million health solutions.

The following are some examples of opportunities we can seize to turn our public health concerns around.

Universal Health Care

The Universal Health Care (UHC) Law, provides the “mother of all policies” to address the nagging problem of health inequity. This landmark legislation

is a demonstration of our firm commitment to the Sustainable Development Goals. The role of PhilHealth will become increasingly important.

However, beyond the rhetoric, UHC needs to be operational and properly financed. Serious reforms are needed in PhilHealth to shift from being a sickness fund to a wellness-promoting fund.

Provincial leadership

Among the 33 pilot areas for implementation of the UHC Law, there is a need for a sense of urgency in problem-solving that is unprecedented.

Governors of the province will now become major decisionmakers in health. “Learning by doing” will be the order of the day, as the key is to build on existing capability.

Institutions of higher learning for public health, medicine, nursing, midwifery, and the allied medical sciences must revise and update their curriculum and training packages to meet the needs of UHC. Schools of public administration should start working with schools of business and with public health professionals to develop the much-needed managerial skills for health systems with areas covering a million people or less.

At the level of provinces, the equivalent of a Provincial Health Assembly might be useful. Hospitals within a province might need to create their own networks for quality and self-regulation, or the equivalent of a Local and Provincial Hospital Authority.

Provincial Health Promotion Boards might also be powerful ways of reducing behavioral risks to health and promoting sports, arts, culture, as well as educating the public on parenting, health literacy, and the like.

Investments need to go into human resources at the primary level.

Taguig City has good practices of primary health care centers that operate 24 hours a day and are linked to ambulance systems to immediately refer patients who need hospital care.

Information technology

For UHC to work, its backbone needs to be information technology. Shifting to electronic medical records is easier said than done, but it is of critical importance to develop provider-friendly systems to bring us into a health system that is faster and more responsive to the needs in this era of real-time monitoring.

The future of access will be in the successful deployment of telemedicine programs. This requires investments in universal WiFi access.

The millions of health workers in communities, primary health facilities, hospitals, research centers, and regulatory agencies can be linked up through their mobile phones using programs that provide real-time updates on health events, disasters, and outbreaks.

Health regulations

In a globalized economy and in the face of strong commercial determinants of health, stronger regulatory agencies for food, drugs, and technology are needed.

Implementation of the World Health Organization Framework Convention on Tobacco Control is critical to addressing the heavy burden of NCDs from tobacco use and regulating new tobacco products. Serious consideration must be taken to ratify the Protocol on Illicit Trade in Tobacco Products to address smuggling of cigarettes. Efforts to regulate harmful and dangerous e-cigarettes and heated tobacco products are in order.

Strengthening epidemiology

The DOH has always led the development of health policy in our country, and for it to do so in the context of UHC, it is imperative that professional development in the field of epidemiology be taken to the next level.

With the implementation of programs at the level of provinces, disease surveillance will

remain a core business of the DOH. It is high time that the Philippine Centers for Disease Prevention and Control is established with the necessary laboratory support to implement the International Health Regulations and ensure protection against pandemics.

Health promotion and strategic communication

Behavioral risks to health need special attention. Balanga, Bataan, for example, has established a local Health Promotion Board and is considering a Provincial Health Promotion Board. These initiatives make it possible to focus on prevention. There are examples of how this has worked in Australia, Thailand, Malaysia, and Switzerland.

Women are disproportionately affected by all health issues. An initiative to consolidate programs for women through a National Women's Health Movement involving all civic organizations, grassroots groups, and professional associations for midwives and nurses could be a powerful force for change in the health of grandmothers, mothers, and girls.

Health literacy is power

More and more, being in public health means forming strategic partnerships with other sectors. But these should not exist for the sake of partnership. Strategic partnerships must be directed at linking solutions to problems. This means tackling multifaceted issues with expertise in multiple disciplines and coherent vision, backed up by evidence-based targets and information systems to monitor problems and outcomes in real time.

Governance dialogues are needed on health and energy, housing, agriculture, trade, transport, sports, arts, and culture simply because the cost of taking a business-as-usual approach to institutional governance of this scale can now be measured in terms of the untimely loss of human life.

More importantly, health literacy, or inculcating information and skills to understand and seek solutions for health problems, constitutes real power for health.

To achieve better health outcomes, public health mechanisms need to evolve in settings where people live, work, learn, and play.

People create health. Informed people are better guardians of their own health and the health of their families.

There is a two-fold task: (1) to empower people with information and skills to take their health and their lives into their own hands and (2) to enable healthier environments and promote healthy settings.

We can be a nation of 110 million solutions. With a clear vision, strategic partnerships, and a strong focus on health literacy, we just need to act together and to start today.

Presentation 3

The National Climate Change Action Plan and Global Public Goods: Leveraging National Opportunities for Sustainable Development

Jerome Ilagan | Policy Research and Development Division Chief, Climate Change Commission – Philippines

SUMMARY: Amid climate change, global public goods (GPGs) have been the subject of recent global agreements that feature sustainable development—striking a balance between poverty eradication, economic development, and environmental protection. The Philippines is a Party to the United Nations Framework Convention on Climate Change adopted in 1992, the Kyoto Protocol in 2004, and the recent Paris Agreement in 2015. National laws have also been enacted in the country as a strong signification of commitment and support to the Convention’s goal of stabilizing greenhouse gas concentrations. Republic Act (RA) 9729 or the Climate Change Act of 2009, which was amended through RA 10174, outlined the necessary institutional arrangements to mainstream climate change in the policymaking, planning, and monitoring and evaluation processes of the government, and also mandated the formulation of a National Framework Strategy on Climate Change and its operational plan, the National Climate Change Action Plan.

Climate change, in pursuit of common global sustainable development outcomes, presents a number of opportunities ranging from policy (re)development, mobilization and access to climate finance and carbon markets, and multistakeholder partnerships and engagement for program implementation. Climate actions, in whichever form (financially, technology transfer, or participation to markets) or scope (domestic or international) are expected to largely contribute to the circulation and mobilization of GPGs.

Introduction

As cited by Seo (2017, p. 34), Nordhaus defines “global public good” as a “public good concerned at the level of the entire globe called the global commons”. In the context of climate change, global public goods (GPGs) have been the subject of recent global agreements that feature sustainable development—striking a balance between poverty

eradication, economic development, and environmental protection. This discussion will focus on two forms of GPGs—those that are domestically produced but contribute to the global outcomes and those international initiatives, products, and services that contribute to the Philippines’ national priorities—all concerning climate change and sustainable development.

Climate change as a global public concern

In 1979, during the first World Climate Conference, scientists recognized the emerging problem of climate change. In response to this, an Intergovernmental Panel on Climate Change (IPCC) was established in 1988 composed of experts from different disciplines tasked to examine this global phenomenon and provide recommendations for policymakers across the globe. The first assessment report of the IPCC was launched in 1990 at the second World Climate Conference. In 1992, under the Rio Summit, the United Nations Framework Convention on Climate Change (UNFCCC) was signed by 154 countries, with the ultimate objective of “stabilizing GHG [greenhouse gas] concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”. Said objective should be “achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change and to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”.

The UNFCCC was signed by countries along with two other Conventions—the Convention on Biological Diversity and the United Nations Convention to Combat Desertification.

In 1995, the Kyoto Protocol was launched as a legally binding agreement aimed to reduce GHG emissions, which likewise mobilized exchanges between and among Parties in terms of climate mitigation actions. However, with only 192 ratifying countries, noting the retreat of the United States, it was then realized that more ambitious targets shall be imposed among the Parties given the urgency of actions needed in reducing GHG concentrations, as well as considering the vulnerability of developing countries and their corresponding adaptation needs. The year 2015 has been a landmark era not only for climate change but also for sustainable development, as three important frameworks were

agreed upon by countries: the Sendai Framework for Disaster Risk Reduction 2015–2030, the 2030 Sustainable Development Agenda, and the 2015 Paris Agreement on Climate Change.

The Paris Agreement took a more compelling route in terms of tracking progress by requiring the regular reporting of all countries on their emissions and implementation efforts and also mandating a global stocktake on the progress of the Nationally Determined Contributions (NDCs) every five years starting in 2023 (see UN 2015). The Philippines is one of the countries that called for the target of warming below 1.5-degree Celsius, more ambitious than the initial 2-degree Celsius warming. With this goal, global net carbon dioxide emissions would need to fall by about 45 percent by 2030. Moreover, developed countries are more compelled to undertake climate change mitigation measures given the insignificant share in the global emissions of developing countries, thus, the heightened call for developed countries to lead in reducing GHG emissions.

The Philippines has taken an active stance in climate negotiations, having been a Party to the UNFCCC in 1992, Kyoto Protocol in 2004, and the Paris Agreement in 2015. It has likewise submitted its Intended Nationally Determined Contributions, with a very ambitious target of 70-percent emissions reduction from 2010 levels, contingent upon support—in terms of financial resources, technology transfer, and capacity building by developing countries and international institutions.

Enablers of global public goods: National priorities and commitments

National laws have been enacted in the Philippines as a signal of the strong commitment and support to the Convention’s goal of stabilizing GHG concentrations. Republic Act (RA) 9729 or the Climate Change Act of 2009, which was amended by RA 10174, outlined the necessary institutional arrangements to mainstream climate change in

the policymaking, planning, and monitoring and evaluation processes of the government. It created the Climate Change Commission (CCC) to lead the government, and subsequently mandated the formulation of a National Strategic Framework on Climate Change (NFSCC) and its operational plan, the National Climate Change Action Plan (NCCAP).

The NFSCC and NCCAP were approved in 2010 and 2011, respectively. They contained the guiding principles to climate action, key climate drivers, impacts and vulnerabilities, general adaptation and mitigation strategies, and means of implementation to achieve the ultimate goal of building the adaptive capacity of communities, increasing the resilience of natural ecosystems, and optimizing mitigation opportunities toward sustainable development. The NCCAP has seven thematic priorities, namely, food security, water sufficiency/security, ecological and environmental stability, human security, sustainable energy, climate-smart industries and services, and knowledge and capacity development.

Adaptation is the anchor strategy for climate action, and mitigation is seen as a function of adaptation. In this sense, government initiatives are geared toward adaptation, strengthening prevention, preparedness, and response measures given the slow and sudden impacts of climate change. With this, the mainstreaming of climate and disaster risk assessments has been prioritized in the mandates of local government units with respect to land use and development planning more than requiring the establishment of GHG inventories. The country is making considerable progress in investing in climate and disaster-resilient infrastructure, but not overlooking climate mitigation with the co-benefits from greening initiatives that go with these infrastructures. These products and services that are provided domestically promote climate resiliency and help in achieving low-carbon development.

The NDC, as one of the mechanisms under the 2015 Paris Agreement which aims to “embody efforts to reduce national emissions and adapt to the impacts of climate change”, is also

being prepared for submission. For a developing country like the Philippines, the NDC enumerates committed adaptation and mitigation sectoral strategies toward the achievement of sustainable development and poverty alleviation. GPGs, thus, pertain to concrete actions, in the form of policies, programs, or projects, undertaken by each country that contribute to the ultimate objective of the UNFCCC to reduce GHG emissions. In this context, the country implements adaptation as an anchor strategy, which is why efforts to mitigate GHGs should respond first to the needs to adapt to the impacts and with mitigation actions only serving as co-benefits of adaptation.

The NDC is not a stand-alone plan. Anchored on plans and policy levers, it may be in the form of laws, legislation, executive issuances, joint venture agreements, and the like. The country has enacted various policies in aid of NDC, one of which is RA 10771 or the Green Jobs Act. The Green Jobs Act provides a policy framework that fosters low-carbon, resilient sustainable growth, and decent job creation by providing incentives to enterprises that generate green jobs, as well as developing human capital and technology research to enable and support the transition to a greener economy. It is expected to create an enabling environment for businesses in shifting to “greener”, low-emission provision of goods and services, which in essence, is a GPG. At the same time, it will create markets for “green” products, services, processes, and industries, which are aligned with global outcomes on climate mitigation and add to the delivery of GPGs.

Similar to this, the recently issued RA 11285 or the Energy Efficiency and Conservation Act aims to institutionalize energy efficiency and conservation as a national way of life that is geared toward building the country’s capacity to improve productivity and energy savings for consumers. The law promotes the development and utilization of efficient renewable energy technologies and systems to ensure optimal use and sustainability of the country’s energy resources and ensures a market-driven approach to

energy efficiency, conservation, sufficiency, and sustainability in the country.

At the center of these mitigation efforts, the concepts of sustainable consumption and production (SCP) and circular economy are likewise elaborated. The Green Jobs Act will be among the enablers, and the private sector will play a huge role in this given that the country also capitalizes on public-private partnerships. The National Economic and Development Authority, as the lead agency, together with relevant public and private institutions including the CCC, is also working toward a National Action Plan on SCP that further strengthens the implementation and monitoring of all relevant policies and programs in promoting circular economy.

The CCC has also undertaken a technology needs assessment for both adaptation and mitigation, which would guide technology transfer and/or development for demonstration and application. In this way, investments, either externally or domestically funded, are directed to technologies suited for the Philippine context.

International support provided to the country as GPGs

Climate finance enables the delivery of GPGs. With the principle of common but differentiated responsibilities and respective capabilities, there is recognition of the advancement of developed countries (Annex 1 of the Paris Agreement) in terms of technology development and financial resources to reduce GHG emissions. With this, development assistance to provide GPGs, in the form of climate finance, technology demonstration and development, capacity development, and research, is sought from developed countries to supplement the efforts already implemented by developing countries in their national action plans and NDCs. The Paris Agreement and its provisions provide an enabling environment for exchanges and movement of GPGs, from Annex 1 to non-Annex 1 Parties of the Paris Agreement.

International support for the delivery of GPGs relates to market mechanisms under Article 6 of the Paris Agreement. The country is in its initial phase of determining the appropriate and suitable carbon pricing instrument to operationalize, with support from the World Bank through the Partnership for Market Readiness. Among the options being discussed is the imposition of a carbon tax or the establishment of emissions trading schemes. Internal discussions with the Environmental Management Bureau are being conducted to ascertain how existing systems, such as the Clean Development Mechanism and the Joint Crediting Mechanism can be utilized for Article 6 of the Paris Agreement. Once there are clear modalities and procedures for these market mechanisms, the delivery of GPGs in this aspect will be mobilized and further enhanced.

With all of these enablers, it is anticipated that the country will contribute significantly to the global agenda of stabilizing GHG concentrations. SCP patterns, including trading, when implemented among a wide range of stakeholders, will be an asset to the country, especially in contributing to the growth of its gross domestic product. This will eventually be translated to economic gains if these “green products and services” compete in the global market. This does not only target economic growth but further supports the shift to low-carbon development.

Challenges in the provision and mobilization of GPGs

Given all these domestic and international interventions, there are still challenges that hinder provision and/or mobilization of GPGs such as:

- fragmented initiatives and implementation efforts (both international and domestic);
- fragmented focus and prioritization on the mobilization of international support for adaptation, which comes along with the vast range of climate financing opportunities being made available in recent years;

- difficulties in accessing climate finance, i.e., justifying “climate rationale” as proof of project “additionality”;
- ongoing hurdles on the climate negotiations for market mechanisms of the Paris Agreement; and
- monitoring, reporting, and verification systems and transparency mechanisms on the NDC implementation.

Ways forward for the country

The circular economy and SCP approaches will put forward climate-smart consumption and production, and trading of public goods that will enhance competitiveness, as well as mobilization of domestically produced GPGs. This is likewise consistent with the country’s goal of transitioning and eventually shifting to low-carbon development.

Climate change also presents opportunities for revisiting our planning processes. In this case, climate change, in pursuit of a common global outcome, calls for stronger horizontal and vertical convergence among agencies and institutions. Convergence planning also contributes to efficiency, in which investments carefully undergo a stringent evaluation process where every agency seeks responsiveness to climate change and disaster risks depending on their thrusts and mandates. The evaluation process ensures that financial resources are not put to waste since these are carefully allocated to projects that are appropriate in scope and coverage. This is when and where baselining systems and risk assessments will matter most, not

only in the planning and decisionmaking process but also in monitoring and evaluating progress. The Climate Change Expenditure Tagging program is the start for monitoring and evaluation but is recommended to go beyond tagging to further ensure that there is information as to whether a climate investment was able to effectively deliver its intended results. Likewise, monitoring and evaluation shall manifest in the Voluntary National Review to align the accomplishments with the 2030 Sustainable Development Agenda.

The country should also adopt a climate finance strategy and roadmap for climate investments that would guide international development partners, multilateral and other financing institutions, and the private sector in channeling their resources in pursuit of the global climate outcomes as well as in achieving climate adaptation and resilience for the country.

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Presentation 4

Regional Public Goods and the Blue Economy¹

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SUMMARY: The “blue economy” is a version of the “green economy” made relevant to our seas and oceans. It is a model of economic development that focuses on the sustainable management and use of natural and other resources in the maritime sector. Given the Philippines’ archipelagic nature and distinct resources and comparative advantages in this sector, this paper examines the challenges and opportunities toward growing the Philippines’ blue economy. It argues for the development of an integrated development plan, as well as the institution to catalyze and carry it out, for the entire blue economy. These should recognize and adequately manage rising risks (e.g., geopolitical risks in the West Philippine Sea and risks due to climate change) and utilize opportunities to leverage the marine economy for rapid and inclusive growth (e.g., tourism sector development, sustainable fisheries management, and manufacturing and rehabilitation of ships and naval assets). Ultimately, such a strategy not only helps promote inclusive development, but also strengthens the country’s national security.

Introduction

The term “blue economy” refers to the sustainable management of natural resources in the marine economy. It implies an approach to natural resource management that is guided by improved human well-being and social equity, while also promoting sustainability, mitigating environmental risks, and minimizing ecological damage (UNEP 2012). Markets often fail to price the externalities produced from activities that deplete natural resources like fish stocks and coral reefs, and markets alone are also typically inadequate in promoting social objectives like equity and inclusive economic development. A regional public goods framework

could prove useful in operationalizing the blue economy policies.

This paper turns to a regional public good lens to identify possible common elements that help ensure more successful, sustained, and broadly beneficial outcomes for all stakeholders concerned. Based on this brief review, the main lessons include the use of financing and burden-sharing mechanisms, and the importance of joint research and producing credible data and information for conducting collaborative policymaking and, if necessary, settling disputes. The solutions sometimes benefit from clear delineation of territories, but need not hinge on this element alone.

¹ This draft excerpts from Mendoza and Siriban (2013).

Regional public goods

The textbook definition of public good points to its nonrivalrous and nonexcludable characteristics. An extensive policy literature has further elaborated on this basic definition of public goods, and the key innovation seems to point to the variable nature of the nonrivalry and nonexcludability characteristics, thanks to advances in technology and policy measures, among other factors that could make a good “public” in its characteristics (e.g., Kaul and Mendoza 2013).

Regional public goods (RPGs), like most public goods, represent collective action challenges. The technologies for the provision of RPGs depend critically on their context and type. Arce and Sandler (2002) attempt to summarize the production or aggregation technology for producing different regional public goods based on a synthesis of the policy and academic literature (see Table 1).¹ The examples of RPGs are grouped according to “pure public goods” (nonrival and nonexcludable), “impure public goods” (only either nonrival or nonexcludable), “club goods” (involving some degree of excludability, benefiting only club members), and “joint products” (involving different outcomes with their respective impacts or benefits). Without reiterating information already reflected in Table 1, the main point here is that production technologies for RPGs vary, depending on how different contributions matter in the final outcome.

Weighted sum RPG implies that some contributions could be more important in producing the RPG. For example, in limiting the spread of diseases like HIV-AIDS, the final outcome will depend critically on the actions of countries with already high disease loads. On the other hand, weakest link RPGs depend on the contributor with the smallest (or weakest) effort. As is the case for inhibiting the spread of a pest, or eradicating a disease—the country with the weakest input, or the highest vulnerability to regress, is likely going to determine the success of

the entire initiative. For RPGs of this type, some form of incentive or assistance (such as from a richer contributor) may be necessary to ensure that the weakest contributor does not jeopardize the full provision of the RPG. “Best shot” RPGs, on the other hand, are typically dependent on the provider most capable to provide the RPG. This often occurs in research, which relies heavily on the contributor with the strongest research capability. Finally, RPGs involving joint products—such as preserving rainforests that helps in climate change mitigation while at the same time provides bioprospecting opportunities—offer several benefits that may help incentivize more actors to support its provision.

For RPGs related to marine resources and ecosystems, it is possible that the necessary technologies may imply “best shot” (such as in research on marine ecosystems and development of clean technologies to generate energy from the blue economy), “weakest link” (such as in combating smuggling and human trafficking or preventing environmental damage from energy and resource extraction activities), and weighted sum (such as in managing fisheries stocks and in implementing trade and investment agreements) technologies. The production of different RPGs, therefore, requires a context-specific analysis of the key features in their provision, as well as the necessary cooperation arrangements that might work better under those conditions.

Lessons from 14 cases of RPGs provision

The RPG cooperation initiatives featured in this paper appear to have several common characteristics that might comprise the beginnings of an operational approach to RPGs in the blue economy.

Cooperation framework of concerned countries

Cooperation initiatives with well-defined cooperation frameworks—embodied in legal framework agreements and treaties—include the Barents Sea

¹ Most RPGs are likely to involve various production technologies at the same time. However, for purposes of illustration, the discussion only focuses on the main technology required.

Table 1. Types of RPGs and their aggregation/production technologies

Aggregation/Production Technology	Examples			
	Pure Public	Impure Public	Club	Joint Product
Summation: Overall level of public good equals sum of country contributions	Limiting air pollution; preventing desertification	Providing public health infrastructure; market boards for commodities	Satellite communication network; transnational parks	Deterrence through peacekeeping; preservation of rain forests
Weighted sum: Each agent's contribution can have a different additive impact on the overall level	Reducing ambient pollutants; limiting the spread of HIV-AIDS	Limiting runoff pollution; curbing acid rain	Free trade agreements; power grid	Eliminating threat of terrorism; eliminating threat of revolutions
Weakest link: The smallest effort determines the public good level	Inhibiting the spread of a pest; eliminating a disease; labor standards	Surveillance of a disease outbreak; drug interdiction	Transportation network; Basel Accord among G-10 countries	Family planning; security intelligence
Best shot: The largest effort determines the public good level	Cure for orphan diseases; monitoring technologies	Agricultural research findings; genetically engineered crops	Crisis management squad; satellite launch site	Quelling of flare-up by peacekeepers; bioprospecting

Source: Arce and Sandler (2002) with some adaptations based on the authors' analyses

Fisheries Management (i.e., several quota and zonal agreements between Norway and Russian Federation, and also with third parties), the Pelagos Sanctuary for Mediterranean Marine Mammals (i.e., an agreement to create a marine sanctuary signed by France, Italy, and Monaco), Danube River Basin Preservation (i.e., the Danube River Protection Convention signed by the riparian countries), Western and Central Pacific Tuna Management (i.e., several agreements to regulate quotas and catch areas signed by Pacific Island countries), and bilateral joint development initiatives pursued by countries involved in maritime disputes, as in the case of Thailand and Malaysia (i.e., 1979 Memorandum of Understanding and the agreement that established the Malaysia-Thailand Joint Authority) and of Guinea Bissau and Senegal (i.e., 1993 Management and Cooperation Agreement that established the joint development zone).

The agreements aim to address a variety of issues, such as the equitable allocation and conservation of fish resources for cooperation initiatives that aim to manage shared and straddling fish stocks; proper allocation of water resource, pollution mitigation, and ecosystem conservation for cooperation initiatives that aim to manage shared water basins (as in the case of Danube River);

and mechanisms to tap the resources found in the disputed area and benefit-sharing arrangements, as in the case of joint development agreements. These agreements help to articulate shared objectives and, at the same time, help to specify the commitments of all countries involved. In some cases, these agreements help to clarify aspects related to disputed territories (as in the case of the joint development agreement between Thailand and Malaysia in which it was explicitly stated that the countries would continue to negotiate maritime delimitation in the Gulf of Thailand); but this is not always necessary to facilitate cooperation. Indeed, in cases where marine resources, such as fish stocks moving through different countries' marine boundaries so that boundaries matter less (as in the case of cod stocks in Barents Sea), coordinated quota management across borders becomes more useful.

Cooperation in research

In many cases, the generation of credible and unbiased data and evidence proves critical in spurring and sustaining collective action. For instance, research on marine ecosystems and fish stocks plays a key role in motivating sustainability and preservation concerns. As Gulland (1980)

noted, cooperation in research would enable countries to have a more complete account of events (such as changes in the migration pattern of fish stock) as compared to merely depending on national assessments. This, in turn, would allow them to have a more complete set of information that they can utilize to come up with more equitable quota management and benefit-sharing arrangements.²

In the case of the Pelagos Marine Sanctuary, research initiatives have played an important role in increasing the awareness of governments and citizens of the countries concerned (Italy, France, and Monaco) on the threats to the cetacean population in the area, which in turn, motivated the three countries to establish a sanctuary zone for marine mammals and collaborate in harmonizing their monitoring efforts and implementing policies to minimize the adverse impact of human activities on the marine mammals. On the other hand, in the cases of the Barents Sea Fisheries Management and the Conservation of Southern Blue Fin Tuna, research initiatives continue to play a key role in guiding the progress of these cooperation initiatives.³ As marine ecosystems are ultimately interconnected across countries' territorial boundaries, collaborative research across countries is itself a type of RPG since the knowledge and information produced could be useful across countries and over generations. This type of RPG also helps to underpin other RPGs including those that actually preserve and manage resources in the blue economy.

Clarification of burden-sharing arrangements

Just as benefit-sharing is often clarified (e.g., in fisheries, through clear catch allowances vis-à-vis overall sustainable quotas established), so too are burden-sharing arrangements in the provision of

the RPG. Essentially, each country that takes part in international cooperation measures its respective net benefits from the cooperation initiative. Ultimately, cooperation must make sense for all parties involved in order for it to be sustainable.⁴ An example of a specially designed burden-sharing arrangement is the way countries finance the Commission for the Conservation of Southern Blue Fin Tuna. The member countries of the Commission share equally in their contribution to the 30 percent of the Commission's budget. Presumably, this reflects a logic that follows the summation aggregation technology. Nevertheless, each member also contributes to the remaining 70 percent of the budget based on the share of its nominal catch to the total nominal catch of southern bluefin tuna. This adjustment allows for countries with larger catches (and therefore larger economic benefits) to appropriately pay more for the cooperation initiative (since they are extracting more benefits from it).

A similar burden-sharing scheme is utilized in the case of the West and Central Pacific Fisheries Commission (WCPFC). In addition to the base fee (10% of the total contribution which is shared equally among member countries) and the fish production components (70% of the total contribution which is based on the total catch taken within the Convention area), the contribution of each member state also includes a national wealth component (20% of the total contribution which is based on the gross national income per capita of the member countries) to account for the state of development of the member countries and their ability to pay (WCPFC 2003).

The use of side payments

Some cooperation initiatives have utilized side payment schemes in which transfers are made (either monetary or nonmonetary) by one member country to another. Examples include

² See also Caddy (1997)

³ Munro et al. (2003) cited the cases of South Africa, Namibia, and Angola, and of Argentina and Uruguay in emphasizing the importance of cooperation in research on the stability of cooperative arrangements. For the first case, the lack of scientific knowledge served as a hindrance for countries to cooperate in managing their shared hake stocks, and for the second case, a decrease in the level of scientific cooperation between Argentina and Uruguay (due to financial reasons) posed detrimental impact on the joint management of their shared fish stocks.

⁴ As Munro et al. (2003) noted, in the case of fisheries agreements, a necessary condition for them to be stable is the satisfaction of the Individual Rationality Constraint, which states that each country should be at least as better off in cooperation as compared to not engaging in a cooperation initiative.

the Cooperation in the Management of Pacific Salmon (provision of the United States of a significant proportion of the initial funding to the endowment funds established to support scientific research and conservation initiatives), Cooperation in Management of West and Central Pacific Tuna (recent move by some Pacific Island countries such as Micronesia, Marshall Islands, Nauru, and Papua New Guinea to allow other countries' fishing fleets to operate within their territorial waters in exchange for the latter's commitment not to fish in the high seas in between the former's exclusive economic zones [EEZs]), and Barents Sea Fisheries Management (mutual access agreement between Norway and Russia on the shared fish stock found on each other's EEZ, and a similar agreement between the two countries and third parties as in the case of Iceland).

A side payment scheme provides flexibilities on the part of each country that shares a common marine resource (fish stock for instance), as it makes a country's harvest share only one of the sources of economic returns that the latter attains from the said resource. This, in turn, enables all countries that are part of a cooperative resource arrangement to attain higher economic returns relative to the case where they merely depend on their respective harvest shares.

Further, as Munro et al. (2003) noted, it is possible that a cooperative outcome will not exist if the benefits that a country will receive from cooperation are less than what it will attain if it decides not to cooperate. In this case, side payments, through the increased scope for bargaining that it induces among countries concerned, will increase the likelihood that countries will come up with a more stable cooperative arrangement.⁵ Some empirical studies found evidence supporting this point, such as the study by Arnason et al. (2001) in the case of the migratory Norwegian Spring Spawning Herring stock. Through their simulations, it was found that despite the potential of a grand coalition among the parties that share the resource (i.e., Norway, Faroe Islands, Iceland, Russia, and the

European Union) to produce the highest overall benefit among the different possible coalitions (e.g., coalition only between two countries), there is no assurance for the coalition to become stable unless side payments are introduced.

Role of external parties, private groups, and the public

External parties also played a major role in some agreements (e.g., Asian Development Bank [ADB] and the Global Environmental Facility [GEF] in the Coral Triangle Initiative, and to some extent, the European Union in the preservation of the Danube River Basin). This type of involvement may be necessary in cases where there are challenges in the ability of countries to adequately provide the RPG. In the case of the Coral Triangle Initiative, the GEF provided a significant proportion of the initial funding of the project. The ADB, on the other hand, has been involved in capacity-building efforts of the relevant government agencies of some signatory countries in terms of knowledge management and information sharing, and of training with regards to utilizing an ecosystem-based approach in managing the shared resources. In this case, capacity-building efforts underscore the importance of building institutional capacities of the government of each member country in the provision of RPGs, as states with weak capacities can contribute less and can even induce negative externalities with regards to the production of RPGs (Nogueira 2004).

Private groups have also played an important role in the provision of RPGs in some cases. In the case of Pelagos Marine Sanctuary, the lobbying efforts of the private groups have led one of the leaders of the three countries (Prince Rainier of Monaco) to seek the cooperation of the other two countries in the conservation of marine mammals. The private groups have also taken the lead in ensuring the momentum of the conservation initiative. Similarly, in the absence of a formal agreement among the governments of Greece, Macedonia, and Albania, environmental

⁵ See Box 1 of Mendoza and Siriban (2013) for a graphical illustration.

nongovernment organizations have played an important role in coordinating efforts of various stakeholders to implement necessary measures for the conservation of the Prespa Lake.

The Philippine blue economy: Challenges and opportunities

The Philippines is geographically located at the apex of the Coral Triangle where 76 percent of the world's coral species live and home to at least 2,228 species of reef fish. Because of this, the country was regarded by marine scientists as the “center of the center” of marine biodiversity in the world (Carpenter and Springer 2005). Including its EEZ, the Philippines' offshore area occupies an estimated 2.2 million square kilometers, which is over seven times larger than its land area of 300,000 square kilometers. Despite the Philippines' advantage in terms of its vast marine resources and favorable geographical location, it has not been able to fully realize its maritime potential. The latest preliminary estimates of the maritime sector's contribution to the national economy showed that it accounted for only 2.62 percent of the total GDP in 2012 (Azanza et al. 2017). There are several underlying reasons for the underutilization of the country's maritime potential, including the absence of an overarching development plan for the entire maritime economy and an institution such as the Department of Marine Resources (or Department of Marine Affairs⁶) that will help catalyze and manage the collective action necessary to boost the Philippines' maritime sector in a sustainable way (Mendoza and Valenzuela 2017).

⁶ Since the 1990s, there have been discussions to create a separate agency dealing solely with maritime-related affairs. The most recent legislative proposals on the creation of a Department of Maritime Affairs are House Bill 949, filed by Magdalo Party-list representatives Gary Alejano and Francisco Ashley Acedillo, and Senate Bill 493, filed by Senator Antonio Trillanes in 2013. These proposals aim to converge the different agencies, such as the Maritime Industry Development Authority, Philippine Ports Authority, National Seafarers Administration, Philippine Merchant Marine Academy, National Maritime Polytechnic, Maritime Research Institute, and Philippine Coast Guard, into a single department.

Neighboring countries such as Indonesia and Viet Nam have committed to sustainably build their maritime sectors to boost economic development and strengthen national defense. Indonesia's Global Maritime Fulcrum vision aims to transform the country into a “global maritime axis” and assert itself as a force between the Indian Ocean and the Pacific Ocean (*The Jakarta Post* 2014). Viet Nam's Sea Strategy envisions the country as a powerful maritime country by 2045, with the maritime economy making significant contributions to its national economy (the economy of 28 coastal provinces and cities will make up 70% of the Viet Nam's GDP). The country also vowed to proactively and responsibly cooperate in addressing international and regional maritime issues (Vietnamese Ministry of National Defence 2019).

In addition to the Philippines' involvement with the Coral Triangle Initiative and West and Central Pacific Fisheries Commission, the country is also a part of a regional cooperation with Indonesia and Malaysia called the Sulu Sea Initiative. The three countries agreed to undertake trilateral patrols in the Sulu-Sulawesi Seas where more than 100,000 ships pass through carrying 55 million metric tons of cargo and 18 million passengers annually according to the Indonesian Foreign Ministry. This initiative aims to combat terrorism, piracy, kidnapping, and other crimes in the area (*The Philippine Star* 2017).

Conclusion

The blue economy is a term used recently to emphasize the sustainable utilization of marine resources, spanning fisheries, energy, and international trade, among other aspects. As a contribution to the policy discussions, this paper uses a regional public goods framework to analyze several cases of international cooperation to ensure more successful and sustained outcomes in the blue economy. Key characteristics of the initiatives include, among other aspects, well-defined legal

frameworks underpinning the international cooperation initiative, as well as financing mechanisms to support the contribution of different partners, including low-income countries that are part of the cooperation agreement. The cases also help emphasize the importance of conducting research or joint research and producing credible data and information for collaborative policymaking and, if necessary, settling disputes.

These different features reflect different production technologies for regional public goods, suggesting that the modalities for cooperation could be adapted to reflect key features that seem to work in other international cases. These offer useful lessons for regions that are yet addressing the challenge of managing natural resource wealth in areas with high externalities, typically characterizing marine ecosystems. Some international cases benefit from clear delineation of territories, but cooperation need not hinge on this element alone. The analysis herein offers possible avenues for exploring arrangements that promote a “blue economy” approach to the management of natural resource wealth, through win-win international cooperation strategies.

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Presentation 5

Between Norms and Whims: International Law as a Global Public Good

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SUMMARY: In the 21st-century international order, state actors, including great powers, rationalize their behavior through legal rules and accepted norms of diplomacy. Be it unilateral assertions of power, however counterintuitive that may sound, or willingness to cooperate with others to address a pressing international concern, international law is often the basis through which states conduct foreign relations. But international law is important because it produces global public goods, such as maritime safety and security, nonproliferation of weapons of mass destruction, climate change mitigation and adaptation, and the stability of the global financial system, among others. Through international law, peace is maintained, interstate cooperation can be deepened, and global prosperity is advanced. However, the notion of a more rules-based international order as the ultimate goal of contemporary international relations is being increasingly challenged. The rise of China, which has been resulting in the most consequential redistribution of wealth and power in modern history, has introduced new peculiarities in the conduct of interstate affairs, which downplay the role of law and regionally distort existing international legal instruments. Take, for instance, the international maritime regime, whose stability is critical to the global economy. Though the 1982 UN Convention on the Law of the Sea (UNCLOS) seemed to have stabilized global maritime interactions, the age-old concepts of *mare liberum* and *mare clausum* in the West seemed to have been resurrected in Asia's maritime commons. These new peculiarities mean that smaller states like the Philippines become vulnerable to the whims of other, more powerful states. This presentation focuses on the international maritime regime, and addresses three important issues—the role of international law in international relations, the impact of great power politics to contemporary regional order, and the place of the rule of law in Philippine foreign policy and national interest. It discusses how smaller powers, like the Philippines, should put the rule of law front and center in the conduct of their foreign policy.

International law in international relations

The international relations literature provides various perspectives on the role of international law in the conduct of interstate relations. Realists would view the law in the same manner as they

view international organizations, that is, as mere reflections of the distribution of power in the international system (Waltz 1979). The anarchic and self-help system compels states to pursue dominance and national interest, and as there is no higher authority, there is no real international law that states must abide by. “Rules are for the

weak.” Or so they say. States only appear to abide by international law when through it, they can gain more than others. Hence, realism has a grim prediction of the future.

Liberalists, on the other hand, believe that international law can and does shape state behaviors, which compel actors to cooperate and avoid the use of coercion and force. International institutions created by and through international law function to bridge the gaps in intentions in an otherwise completely anarchic international system, and can also be international actors themselves on par with, and at times, above the states (Keohane 1984). A dominant liberalist perspective posits that the more countries trade with each other, the less likely they are to engage in a violent conflict.

For constructivists, global governance takes place when states and other actors achieve a collectively shared understanding of “appropriate behavior” (Wendt 1999). In essence, international law is established when ideas and identities get socialized through international organizations and groups, and become collective interests.

Regardless of the theoretical debates surrounding international law, the fact remains that in the 21st century, most states follow international law most of the time.

In Asia, in recent years, there has been a growing recognition of the need for a stronger and more forcefully applied rule of law in the Indo-Pacific. When the Trump Administration laid down its regional priorities early last year, Secretary of State Mike Pompeo said, “We want a free and open Indo-Pacific that’s marked by the ... rule of law, openness, transparency, good governance, respect for sovereignty of each and every nation, and true partnerships” (VOA News 2019). In 2014, Chinese President Xi Jinping said, “We should jointly promote the rule of law in international relations (国际关系法治化). We should urge all parties to abide by international law and well-recognized basic principles governing

international relations... There should not be double standards when applying the law. We should jointly uphold the authority and sanctity of international law and the international order” (Nieuwenhuizen 2018). Here in our own region, in relation to the South China Sea dispute, the Chairman’s Statement of the 34th Association of Southeast Asian Nations (ASEAN) Summit stated, “We reaffirmed our shared commitment to the peaceful resolution of disputes, including full respect for legal and diplomatic processes, without resorting to the threat or use of force, in accordance with the universally recognized principles of international law, including the 1982 United Nations Convention on the Law of the Sea (UNCLOS)” (ASEAN 2019).

Clearly, in Washington and Beijing, as well as in the capitals of ASEAN states, leaders and policymakers have been emphasizing the importance of “resolving disputes in accordance with international law”. Unfortunately, such statement can easily be reduced to mere diplomatic talking points devoid of substance. Unlike domestic law, there is no international police force to oversee obedience to the international legal standards. In general, international law is enforced through modalities such as diplomatic negotiation or public pressure, mediation, conciliation, and arbitration or judicial settlement.

UNCLOS, great power politics, and the rule of law in maritime Asia

The notion of a more rules-based international order as the ultimate goal of modern international relations is being increasingly challenged. The rise of China, which has been resulting in the most consequential redistribution of wealth and power in modern history, has introduced new peculiarities in the conduct of interstate affairs, those that downplay the role of law and regionally distort existing international legal instruments. Such is despite the rhetoric of its leaders. This has been

most apparent with the international maritime regime, the stability of which is critical to the global economy. Though UNCLOS seemed to have stabilized global maritime interactions, the age-old concepts of *mare liberum* and *mare clausum* in the West seemed to have been resurrected in Asia's maritime commons. This makes smaller maritime states like the Philippines vulnerable to the whims of other, more powerful states.

But why is UNCLOS and the rule of law, in general, so important for a maritime region like ours?

Water is the dominant geographic feature in East Asia, covering nearly 60 percent of its area. From the Yellow Sea to the South China Sea, and from the Strait of Malacca and the Gulf of Thailand to the Bering Sea and the Korea Strait, the maritime realm is central to the economic, political, and security affairs of the region.

Economic significance

First, maritime security is of paramount importance to the economies of littoral states in East Asia and beyond. It is estimated that nearly half of all commercial sea trade is delivered through the region's waterways. Some 25 percent of the world's commercial shipping pass through the Malacca Strait. Based on a study by the Center for Strategic and International Studies, over three trillion dollars of trade goods traverse the sea lanes of the South China Sea, alone, mostly cargos to and from China (USD 1.5 trillion), Japan (USD 240 billion), South Korea (USD 423 billion), and ASEAN (at least USD 600 billion) (ChinaPower 2017). All the world's major economies have stakes in ensuring the safe passage of shipping through the seas of East Asia and any interruption would have devastating consequences for the global economy.

Maritime East Asia is also rich in natural resources. For instance, the East and South China Seas contain significant proven and probable hydrocarbon reserves, and countries in the region are keen to tap them. In the East China Sea, within

the maritime zones claimed by China, South Korea, and Japan, experts estimate the presence of around 200 million barrels of oil, and between 30 and 60 billion cubic feet of natural gas. In the South China Sea, the US Energy Information Agency estimates that about 190 trillion cubic feet of natural gas and 11 billion barrels of oil exist in proved and probable reserves. In the Reed Bank alone, known in the Philippines as Recto Bank, experts estimate that around 5.4 billion barrels of oil and 55.1 trillion cubic feet of natural gas could be present.

The maritime domain also provides livelihoods for millions of fishermen. The South China Sea alone accounts for 12 percent of the world's annual fish catch and provides protein for the people of ASEAN and beyond. But challenges like illegal, unregulated and unreported fishing, coral bleaching, rising sea levels, and marine pollution continue to put the region's fishing industries, including the livelihood of millions of Filipinos, at risk. They require international cooperation, one that the international maritime regime can and should be facilitating.

Political significance

Second, this region is characterized by the large number of enclosed or semi-enclosed water regions, which Article 122 of the 1982 UNCLOS defines as "a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States". This fact has significant geopolitical implications vis-à-vis the rules-based international order that every political leader in the region has been talking about. Indeed, disputes over maritime entitlements are a common feature of almost every bilateral relationship in East Asia. South Korea and Japan remain at odds with each other on their overlapping maritime zones in the Sea of Japan. Even the name of the body of water that separates

the two countries is contested. South Korea and China have periodic tensions in the Yellow Sea largely because of violent incidents involving fishermen and law enforcement agencies. China and Japan signed a Joint Development Area in the East China Sea in 2008 spanning 2,700 square kilometers along the disputed maritime zones. Yet, until now, both parties still interpret the deal in different ways preventing practical cooperation. In the past several years, both Beijing and Tokyo have been ramping up their military and paramilitary presence in the East China Sea.

In Southeast Asia, China, Viet Nam, Philippines, Malaysia, and Indonesia continue to have overlapping maritime claims in the South China Sea. Despite all but one littoral states in the region being parties to UNCLOS, varying interpretations of the treaty's provisions and their reluctance to accept third-party dispute settlement mechanism have made the claims impossible to reconcile peacefully. The space for reasonable compromise continues to shrink.

Security significance

Great power rivalries have made the situation even more complex in the region. Indeed, compounding the maritime security challenges in Asia is the perceived great power rivalry between China and the United States (US). The latter is the mutual defense treaty ally of three of China's maritime neighbors—Japan, South Korea, and the Philippines. Washington's expressed interest has been the freedom of navigation, something that Beijing believes is a threat to its own security. While UNCLOS provides definitive guidelines on this issue, there is no uniform interpretation. For instance, Japan, South Korea, and the Philippines all believe that military vessels are afforded innocent passage rights and freedom of navigation in coastal state territorial waters and exclusive economic zone, respectively. China thinks otherwise. The government in Beijing believes that those rights provided for by international

law do not cover military ships and activities. The international maritime regime also governs submarine cables that carry 99 percent of internet data. The locations where these cables land are not a classified information yet another important security concern for a country like the Philippines.

These maritime-related economic, political, and security challenges demand more rule of law, not less. And sometimes, it becomes convenient to forget that the current maritime regime is a product of many serious compromises. For instance, when 160 countries were bargaining, arguing, and trading rights and obligations regarding the waters around them and beyond, disagreements between the industrialized maritime nations and the countries of the Global South/Third World (developing countries) resulted in major setbacks and delays. One of the biggest disagreements centered on the principle of the "freedom of the seas". On the one hand, developing countries (including the Philippines), led by China, insisted on granting coastal states maximum entitlements, especially to access resources contiguous to their shores. They feared that the freedom of the seas concept would allow developed nations to exercise dominance throughout the seas and oceans of the world to exploit and deplete marine resources even those very close to others' shores. On the other hand, maritime powers led by the US and the United Kingdom insisted that freedom of the seas must be preserved, and that all states must enjoy freedom of movements outside of any country's territorial seas. While the opposing positions appeared difficult to reconcile, a compromise was reached—the Exclusive Economic Zone (EEZ) regime—a new legal arrangement that allows for both expansive freedom of navigation for all states, but still safeguards the rights of coastal states to resources up to 200 nautical miles from their shores. That was just one of the many other compromises that the international community reached during the almost 10 years of difficult negotiation.

Conclusion and policy recommendations

International rule of law and the Philippine national interest

Before the July 2016 arbitration ruling, when it comes to the resources and other maritime entitlements in the South China Sea, it was China's words versus the Philippines' words. What made the difference was that China's words were backed by the capability to turn them into reality. Beijing has a formidable military force. When the ruling was rendered largely in favor of the Philippines, the tides have suddenly turned. The Philippines' words are now backed by a decision of a competent international legal institution. Those of China are only backed by the potential to use aggression.

For secondary powers like the Philippines, the rule of law is imperative. It is important, therefore, for the country to put the rule of law back into its foreign policy agenda. After all, we rely on UNCLOS for the security of our maritime zones, and on international law for many of our international priorities like protection of migrant workers, fair trade, and many more. Manila should not only be the first to comply with UNCLOS but be a leading voice in Southeast Asia advocating for the preservation of the hard-earned compromises reached during UNCLOS III (1973–1982). The following are the suggested policy prescriptions that Manila should pursue:

- **Pass the pending UNCLOS-compliant Archipelagic Sea Lanes Passage bill.** The bill has been pending in Congress for many years now. The Philippines should take advantage of this entitlement exclusive to archipelagic states granted by UNCLOS that designates the sea lanes where foreign vessels, including warships, can pass. The law can require these vessels to turn on their Automatic Identification System. Other countries that may be island-nations like Japan and the United Kingdom do not have this privilege.
- **Support the Freedom of Navigation in the South China Sea and beyond.** The Vienna Convention on the Law of Treaties states that “subsequent practice” shall be considered in interpreting treaties. If countries fail to consistently assert their maritime rights under international law, these might be lost over time. As a maritime state disadvantaged by China's nine-dash lines, the Philippines' access to sea lines of communications, maritime resources, and trading routes can be vulnerable to the whims of another state. Manila should join Washington, Tokyo, Ha Noi, and other like-minded states in preserving freedom of navigation. If done right, freedom-of-navigation exercises could help counter China's efforts to assert de facto control over the South China Sea and all its economic resources.
- **Leverage the July 2016 arbitration ruling.** While there is nothing wrong in jointly exploring and exploiting the oil and gas resources in the South China Sea with Beijing, Manila should leverage the 2016 ruling, not set it aside, to extract a better deal that can be compliant with both the Philippine Constitution and international law. The ruling can also be a good bottom line through which to pursue international cooperation with neighboring maritime states.
- **Pursue joint exploration with China but comply with the Philippine Constitution and UNCLOS.** Any deal with China within the Philippines' EEZ cannot circumvent the Philippine Constitution's Article XII, Section 2, which mandates that the exploration, development, and utilization of natural resources “be under the full control and supervision of the State” and that at least 60 percent of the final profit goes to Filipinos. But the Philippines has the so-called service-contract mechanism for large-scale exploration that allows for the participation of foreign entities as contractors governed

by Philippine law and thus exempt from the 60-40 rule. A face-saving compromise would be to repackage service-contracting as “joint development” for Xi Jinping’s domestic audience, especially if operationalized on West Calamian Oil Block (Block 58), inside the nine-dash line, with China National Offshore Oil Corporation as service contractor. Moreover, China is a party to UNCLOS. Manila should hold Beijing to its words.

- **Invest in the navy and coast guard.** The Philippines should continue to invest in its navy and coast guard for better maritime domain awareness, more effective protection of its economic rights and resources, better security for its people, and greater ability to not just comply with international law but also enforce international law.

Certainly, accommodating the whims and policy preferences of a rising power can benefit some Filipino industries. But sacrificing national security is shortsighted. While accommodation may result in a better atmosphere for economic ties to improve through increased bilateral trade, development assistance, and tourism, the foundation of those ties is fragile. Those benefits can be withdrawn easily should political and security relations worsen. Manila’s continued dependence on a rising, threatening power to deliver economic growth is akin to providing that power with yet more levers through which to coerce the Philippines in the future.

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Open Forum

Question 1

Rosario Manasan (former PIDS senior research fellow): I have two questions related to the presentation of Dr. Mercado. It is perhaps out of topic in the sense that I would like to ask some national public good questions. The question is—and this comes out perhaps of ignorance—what is the place of health prevention in the Universal Health Care (UHC) Law? How big a chunk of financing does prevention have in the UHC?

The second question—which is related—is: Does UHC compete with financing of health prevention in the more global sense in the Philippines? Because now the talk is we need to finance universal health care but we still lack so many billions.

Susan Pineda-Mercado: The law is explicit that universal health care is not just about curative care, but also includes protective, promotive, preventive, and rehabilitation components of health. I think the challenge is that most of the previous investments in health are on the facilities when, in fact, what we need are interventions that would keep our population healthy. For instance, in the case of teenage pregnancies, what we need are not contraceptives, but to map out and focus on the areas where the teens would be most vulnerable such as exposure to drugs and drinking. The problems in prevention and promotion are

not about the individual, but the environment that creates vulnerability.

The other factor to this is that the Philippine Health Insurance Corporation (PhilHealth) is focused mainly on reimbursements for hospitalization. It is not a fund for health; it is a fund for the sick. If it continues in that direction, there will not be enough resources for the healthy population and we will never create better outcomes for the people. If I can be candid, PhilHealth is so fraught with all kinds of systemic issues and problems or institutional and administrative problems that it cannot get its head above the water to strategically fund prevention and promotion.

Keeping the population healthy requires not just money, but cooperation with other sectors such as housing, energy, and transportation that would give people a better life and a better health. It is about prevention, promotion, protection, treatment, and rehabilitation.

Rosario Manasan: My question really is, sure, it is part of the law, but does the law somehow secure funds for prevention and promotion? Because, as you have said, a lot of it—especially when you listen to the media and what they discuss—they talk about the benefits, number of dialysis, treatments—so it is a sickness fund. At least that is how it is being promoted at present. How do we get money for prevention out of the UHC?

Susan Pineda-Mercado: Currently, the only model that I have seen that might be scalable and usable throughout the provinces is the health promotion board in the City of Balanga, Bataan, which is based on the [Thai] Health Promotion Foundation, Victoria Health Promotion Foundation, and so on. There are a number of institutional arrangements in other parts of the world where you separate health promotion and prevention; for example, public health in England does only promotion and prevention which is very different from the health sector or the health providers in the UK. The Philippines has to catch up in terms of having the autonomous and sustainable infrastructure for prevention. We do not have it. Right now, that is all bundled into those doing curative care.

What they do in other countries is they have institutions that separate the functions, and the City of Balanga has that. The City of Balanga is the first one to do it, and they utilize a part of their tobacco taxation to fund it. When I was in WHO, we were trying to get the Philippines to utilize 2 percent of its tobacco tax in prevention. But to the legislators, they do not understand that. “Let us put it in health,” they would say, “because there are sick people.” This conversation about prevention is of critical importance. Because even with UHC, if we do not have the proper institutional arrangements to promote and prevent diseases, then our resources will all be drained into hospital care, dialysis, and so on.

Question 2

Miguel Ventura (Philippine Climate Change Commission): This is a question for Dr. Jeffrey. You mentioned that the Philippines has not yet passed the UNCLOS-compliant Archipelagic Sea Lanes Passage bill. Why is that particularly important? Also, this is in relation to what you mentioned that Japan and the United Kingdom are also not archipelagic states, even if they are archipelagos.

Jeffrey Ordaniel: Yes, that is an important legal distinction or framework because during the negotiation phase, the Philippines did not want foreign vessels to just traverse the waters between islands. A compromise was we will be allowed to designate specific sea lanes, which will be called archipelagic sea lanes and these are the sea lanes that foreign vessels, including foreign war ships, are supposed to use when they traverse the waters between islands. Japan cannot do that. In other words, if you pass through the waters in between Japan, you can pass through anywhere in exercising an innocent passage.

The reason why Japan is not an archipelagic state even though it is an archipelago is because, under UNCLOS, for one to be an archipelagic state, the ratio of water to land must be at least one is to one. Meaning, at the very least, you must have an equal surface area inside your base lines, surface area between your water and your land—that is the minimum—or you have more surface area of water than land. Then you are an archipelagic state. Japan has more land than water. The UK has more land than water. Thus, they do not qualify as archipelagic states under international law.

Question 3

Marian de los Angeles (Former PIDS senior research fellow): My question is for the Climate Change Commission. I was curious about your slide that said that adaptation is the anchor, but mitigation is a function of adaptation. You talk about two different sets of actors here and two different objectives. Mitigation is about contributing less to emissions and to the degradation of ecosystems while adaptation is about addressing the impacts of, let’s say, deforestation, or reducing people’s vulnerabilities to climate change.

Jerome Ilagan: To simply put it, any amount you utilize for the adoption of renewable energy that can be translated into lower electricity expenses at

the household level means more money for food and health. So that is one adaptation co-benefit when we say of mitigation. Other examples are better land use and forestry recovery which protect the ecosystem and preserve the integrity of our lands for sustainable use.

Because the country needs more adaptation, we focus more on that for climate financing purposes. For instance, we created the People's Survival Fund because we want to concentrate on how our local government units (LGUs) can leverage on funding certain programs that they need in light of their low capacity to fund their own programs because of their low-income generation. In this case, we want to inspire them to be creative in developing proposals with climate rationale that are suited to their areas.

Well, not all areas have the same adaptation challenge. Our civil society organizations, our National Panel of Technical Experts are going down to LGUs to make sure they are able to understand the climate impacts in their areas. In simple terms, whenever we gain mitigation benefit, there is an automatic adaptation implication that it is also very necessary in our circumstances.

Question 4

Michael Ralph Abrigo (PIDS): We have swine flu virus in the Philippines and smog from Indonesia's forest fires. Are we doing enough? What should we be doing more?

Ronald Mendoza: We need to be doing more. I think part of our contribution as technical experts would be to also study the political economy of sustaining the response. This room is filled with people who know what needs to get done, but our political system is not getting it done. We need to be smart enough to figure out what will motivate our political system and our politicians to consistently get it done. I think, on swine flu and other cooperation concerns, there are international cooperation mechanisms to get some of these done, but I do think one of the big contributions is evidence-based discussions such as the one that is translated to the popular media, so that they understand where we are failing in terms of cooperation.

Moreover, before we think about regional and global public goods, we have to think about national public good first. National public good is the basis for stronger regional and global public good cooperation. We also need to talk to our citizens more as much as we, the experts, talk to each other. The pressure on the political economy likely comes from our citizens, and I think opening this discourse with them is one of the steps we can take.

SESSION D

**WEAKENING SOCIAL
COHESION AND TRUST**

SESSION OPENER

*Winfred Villamil | Associate Professorial Lecturer, School of Economics,
De La Salle University-Manila*

Allow me to begin by explaining to you what this session is about. The explanation is based on a paper of the program committee entitled “Understanding the New Globalization: Implications for the Philippines”.¹ According to the paper, one major feature of the New Globalization is the weakening of social cohesion and trust among private individuals, and between private individuals and public institutions.

In the past, globalization was always thought to enhance trust by forcing communities to work together and cooperate in harmony with each other to reap the benefits from economic liberalization and integration. However, globalization is also a disruptive process that often brings with it the unequal distribution of wealth and power, leading to disenchantment, pessimism, cynicism, and the erosion of trust in institutions.

The lack of social cohesion and trust, in turn, makes it difficult for governments to implement reforms needed to restructure the economy and to enable it to adapt to the changing environment. Many of these reforms have painful, short-term effects, and governments are unlikely to implement these reforms under conditions where a major social upheaval is the likely response to the policy.

On the other hand, the failure to implement much-needed reforms may deepen social division, especially if some of these reforms are meant to address important issues, such as the growing inequality. This will lead to more social conflicts that will dampen economic growth and development further by generating uncertainty in the economic environment.

Reforms, no matter how painful, are more likely to be accepted when citizens trust their government, perceive it to be genuinely interested in promoting their welfare, and believe that their short-run sacrifices will bring them substantial benefits in the long run.

Numerous studies have shown that societies that rank high in trust and social cohesion achieve better economic performance. They are likely to be more resilient in the face of external shocks, and to pursue pro-poor growth strategies.

The reason is obvious. Trust and social cohesion are essential to the implementation of reforms needed to address the challenges brought about by globalization. Moreover, as Kenneth Arrow pointed out in a widely cited paper published in 1972: “Virtually, every commercial transaction has within itself an element of trust... it can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence.”

In this regard, the PIDS paper presented the results of a cross-country correlation of gross domestic product (GDP) per capita and the share of people in each country who agreed with the statement “most people can be trusted.” The results of the correlation analysis revealed that countries with higher trust also had higher per capita GDP. Interestingly enough, the Philippines, which has a GDP per capita of only USD 6,000, had the lowest share of people that agreed that most people could be trusted. This puts us in the same league with countries such as Ghana, Zimbabwe, Ecuador, and Colombia.

This reminds me of a response that I got when I asked a Chinese-Filipino friend of mine many years ago: “Why are the Chinese in the Philippines so successful in business?” His answer was that mutual

¹ A copy of the paper may be downloaded from <https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsep2018-2019.pdf> (pp. 69–99).

trust was deeply ingrained among them. They are confident that debts will be repaid and that everyone will abide by agreements and informal contracts.

As the PIDS paper points out, where there is trust, less resources are needed for the enforcement of contracts, the prevention of properties from being expropriated, and the resolution of conflicts. Where there is trust, there are stronger incentives for innovation and investments in physical and human capital. When there is trust, good governance follows.

However, trust has to be earned. It works both ways. A cultural trust can only grow and thrive in a culture of honor where most people, especially political leaders and policymakers, have developed a reputation for making good on their promises and abiding by agreements and contracts.

Government officials who have earned the reputation of honoring their policy pronouncements and commitments reduce business uncertainty, encourage domestic and foreign investments, and enable corporations and other businesses to adopt a long-term planning horizon.

A big factor in the erosion of public trust in institutions is the increasing use of social media platforms as a vehicle for propaganda with the intent of influencing social outcomes. Social media has increasingly become a platform for the proliferation of misinformation, disinformation, and “malinformation”, sharpening the sociopolitical divide in the process.

The process also works both ways. On one hand, you have disgruntled sectors and the political opposition using social media to undermine trust in government and its institutions. On the other hand, you also have the government or its institutions propagating fake news to undermine the credibility and intentions of its critics.

The inevitable outcome is the erosion of public trust in both and the deepening of most social discord. Given the power and influence of social media in shaping sociopolitical narratives and outcomes, it is vital for us to educate the public on how exactly these alternative media platforms are used to manipulate public opinion and propagate disinformation. We also need to know what can be done to safeguard media platforms from being exploited as a vehicle of disinformation.

Presentation 1

Disinformation Producers as Ordinary Digital Workers: Behind the Scenes of the Philippines' Fake News Industry

Jonathan Corpus Ong | Associate Professor of Global Digital Media, University of Massachusetts-Amherst

SUMMARY: Drawing from a study that gained unprecedented access to the shadowy political trolling industry in the Philippines, this presentation discusses the work arrangements and social identities of paid trolls hired for networked disinformation campaigns. It conceptualizes networked disinformation as the distributed labor of political deception to a hierarchy of digital workers. Digital workers fluent in popular vernaculars (i.e., “gutter language”, snarky gay humor, celebrity fan cultures) become important as invisible players translating campaign strategy to the street—with volatile and violent consequences to political and public life. Against the backdrop of President Rodrigo Duterte’s bloody drug war and political cultures of “permanent campaigning”, disinformation producers silence dissent, seed historical revisionist narratives, and orchestrate new futures for their clients. This paper uses an ethnographically inspired approach that illustrates the motivations, competitive relationships, and moral justifications of workers. Crucially, it argues that the chief architects of networked disinformation are themselves architects of precarious labor arrangements in the creative industries.

The Philippines represents a national context where disinformation is becoming ever more entrenched into the political system, in spite of global attention and investment in the fight against fake news. As the Digital Disinformation Tracker project found from its monitoring of the 2019 midterm election (Ong et al. 2019), influence operations in the Philippines have only intensified and diversified: both administration and opposition candidates mobilized their click armies, and national and local races in 2019 were affected by fake scandals insinuated by conspiratorial YouTube channels

and seeded in Facebook closed groups. Even Instagram celebrities promoted politicians in between posts endorsing clothing brands or holiday destinations. This is a more diversified landscape of fake news production than what we initially saw in the 2016 presidential election.

As the Philippines is at the forefront of digital innovation for political trolling in today’s polarized and contentious political environment, it is crucial to reflect on lessons gleaned from that experience to help us anticipate, and possibly mitigate, the continued evolution and expansion

of disinformation in other democracies. As one Facebook executive said, the Philippines is “patient zero” in the global disinformation epidemic, and many election integrity interventions have been tested here with the aim of exporting them to other countries. This paper synthesizes findings based on over three years of ethnographic research, during which we gained unprecedented access to authors of fake news and producers of disinformation campaigns who provided long-form interviews. This is elaborated further in a separate article “When Disinformation Studies Meets Production Studies”, coauthored with Jason Cabanes (Ong and Cabanes 2019), where we argue that we need to understand fake news as an industry composed of hierarchies of workers, business contracts, and nontransparent regulatory frameworks (and loopholes) only aiming to maximize profit while evading discussion of professional ethics or political accountability.

The argument we advance is that fake news debates in the Philippines have been narrowly focused on bloggers and influencers, and using heroes-versus-villains binaries between heroic fact-checkers and exceptionally evil trolls. Our ethnographic research instead explores fake news not as products of exceptional individuals but as results of the complicity and collusion of ordinary, creative workers—many of whom are leaders in advertising and public relations (PR) or even in the media who do consulting for politicians on the side. Political consultancies, particularly digital campaigning for political clients, is a very lucrative industry and it will only get bigger and more lucrative if we do not sufficiently understand their roots in our economic and political system.

Here some conceptual shifts that we should increasingly think about when studying fake news and disinformation:

- From exceptional villains to ordinary digital workers: We need more studies that apply an ethnographic approach that captures perspectives of workers to understand how fake news operates as an industry—and not just as a novelty of new technology or of

this populist political moment. We argue in our studies (Ong and Cabanes 2019; Ong et al. 2019) that it is important to think about it in terms of its ordinariness. It is part of the campaign practice—black propaganda and black ops. These are deeply entrenched in Philippine political culture. We just need to consider now what is actually new about digital campaigning.

- From analysis of political personalities to understanding economic incentives and industry practice: I bring in my own expertise here to think about political operations not just as a product of charismatic political leaders but as produced and enacted by economic incentives in industry practice. In media and communications, we think about film or television not just as produced by an exceptional director. The humanities have their auteur theory. These are ideas and products of exceptional individuals. But in media studies, we think about productions as collaborations, as well as products of competition. We want to understand fake news as part of work hierarchies—as part of broader organizational structures. By doing this, we are able to identify loopholes in existing industry practice, which can be exploited by the current political movement to enact certain political objectives.
- From regulating fake news as content to creating transparency in the campaign process: Think about ways of regulating fake news not as content. Fake news as content will emphasize censorship, takedowns, banning of actors, and banning of particular kinds of speech that we consider or label as fake news. This is a very fraught practice. I have done research on Thailand where this practice is being weaponized by the government itself to muffle the opposition. This is concerning, and I am worried that this censorship style of approach, which is also antidemocratic, will be the primary way in which we try to solve fake news.

Features of “Networked Disinformation”

Our research explores the behind-the-scenes work of producing networked disinformation—the process of campaigning, the process of putting advertising online, and the process of collaborating with influencers on Instagram and paying them to do political campaigns. Our report *Architects of Networked Disinformation* (Ong and Cabanes 2018) advances a definition for “networked disinformation”, that is, the “organized production of political deception that distributes labor to a hierarchy of digital worker”. It is a collaborative and a competitive team effort that has three distinct features:

- It is very much entrenched in advertising and PR. The people who lead digital campaigns for politicians have existing clients in the corporate world. They are also the campaigners for soft drinks and shampoo brands. They transpose what they have learned from using hashtags for softdrink brands to using hashtags for a politician.
- No one is a full-time troll. We found that trolling is a project-based and sideline job. These are three-month to six-month projects that have very specific objectives and deliverables. The deliverables are measured using advertising and PR metrics of reach and engagement. This is not exceptionally new, but these are entrenched in existing corporate marketing practice. Political campaigning and fake news for politics are much more insidious because they are about seeding historical revisionist narratives. They are about creating divisiveness between different political camps.
- People have very creative ways of justifying themselves. We call it “moral displacement”, where they argue that they are never the biggest villain in the story, that they are not trolls, and that somebody else is a bigger troll.

There is a hierarchy of workers who are involved in advertising and PR-driven digital campaigns most prevalent during elections.

At the top are advertising and PR strategists who are the chief architects of disinformation campaigns. They recruit and lead entire disinformation teams. They assemble the right mix of individuals who can enact political aims. They are the ones who interface with political clients. They manage the overall project budget.

Coming from advertising and PR, having a portfolio of corporate brands, they lend legitimacy to black ops projects. They are able to say: “Well, look at my portfolio. I have been consulting for Smart and Globe in the past, and this is the kind of reach and engagement I can promise you in your own campaign.”

We have heard some manage figures of two million pesos for a three-month project, which sounds big, but is cheaper compared to television advertising. One television ad could cost one million pesos if aired during primetime. This is a three-month project that can go deep into communities and fan communities online. They have a real value for money hiring them for digital campaigns.

At the second level, they will mobilize folks we call “digital influencers”, which is the popular term for online celebrities. There are key opinion leaders or online celebrities who might be equivalent of “celebrity endorsers”: think of Mocha Uson or Ethel Booba. Depending on which political camp you are a part of, there are different kinds of influencers.

There are also lower-level influencers we call “anonymous digital influencers” or “micro-level influencers”. They are less famous than mega-influencers like Mocha or Ethel, but they are nevertheless important when they simultaneously tweet the same hashtag. They can artificially engineer and manipulate trending rankings on Twitter.

Digital influencers are also hired by corporate brands. In the past five years, there is

the emergence of many digital influencer agencies in the Philippines, many in Manila. These agencies act as intermediaries between corporate brands and teams of influencers who have millions of followers or several thousand followers on Facebook, Twitter, and YouTube, among others. Eventually, these agencies were also roped in for political campaigns.

Innovations in the disinformation industry

From our 2019 project, we found an innovation where there is a shift from using mega-influencers (those with millions of followers) to micro- or nano-influencers (those with only tens of thousands or even 10,000 or less followers). Micro- and nano-influencers look more authentic, more organic, and more real. They look more innocent, but they are roped in for campaigns and they evade regulation.

Politicians will never claim that they had actually paid out micro- and nano-influencers. These could be parody accounts like *Malacanang Events and Catering Services*, a fake Miriam Santiago account, pop culture accounts like *Señora Santibañez* on Twitter, or “thirst trap” and sexy celebrities on Instagram who would post attractive photos of themselves and then post-campaign propaganda for politicians at some point. Paying these accounts is not declared to the Commission on Elections (COMELEC) as official campaign spends, and posts by these accounts will likely not be taken down from Facebook because their operations are smaller, and they are not as obvious if they circulate fake news.

At the lowest level of the hierarchy are those we call “community-level fake account operators”. Their aim is not for millions of followers. In fact, their aim is mostly in the comments section. They will be the first to comment on news articles that are favorable to politicians. They will express their fandom for a politician that they are paid for, or

they will also critique or troll politicians of the opposing camp they are trying to target.

The term that we use in our report is “illusions of engagement”. They are important because they are the ones who like and share posts, therefore, boosting the posts of influencers in the algorithm. With continued engagement from fake account operators, posts will appear more in other people’s news feeds. Fake account operators can be paid daily rates of PHP 500 or PHP 1,000 a day, depending on location.

Many fake account operators also operate within politicians’ own staff. We found it common in the 2019 elections where politicians demand and pressure their own staff who do legal and legislative work, but then they say, “Hey, it is campaign season and we should do our best to help our candidate win the election.”

Closed groups and fake account operators

One innovation in 2019 that fake account operators were really operating at, in a very insidious and malicious way, can be found in closed groups on Facebook. Facebook closed groups are real communities. We observed Overseas Filipino Worker groups. For example, there are groups dedicated to nurses in London, nurses in Cambridge, nurses in the United Kingdom. There are even conspiracy theory groups like the Filipino Flat Earth group.

What happens in these groups are organic discussions. These are people sharing a bond with each other and sharing life stories with each other. But, at some point in the group’s feed, there is always suspicious political propaganda being posted. When we traced some of these accounts, the people who are posting these political propagandas are sometimes the moderators of these groups. If they are not moderators, they are participants and they are linked to other sites

related to politicians. Organic communities can be easily infiltrated by fake account operators.

When disinformation reaches the public

Fake news is produced by teams of workers, advertising strategists, influencers, fake account operators, but they also depend on the real fans. We found that the real fans take forward fake news—what was planned by the advertising strategists—and pick them in unpredictable ways. The “memes” and content that influencers and fake account operators craft and create are sometimes taken forward by fans who are really expressing their real support for a politician, but also real vitriol, hate, and violence. A lot of the hate speech sometimes comes from real fans themselves.

At the same time, we argue that because these are project-based operations, there is also a thin line separating what is a paid producer and a real fan expression. I could have been paid three months ago to do this project but I am not being paid right now but I am still a fan of that political client.

Legal loopholes and moral justifications

Summarizing our 2019 research, here are some moral justifications and legal loopholes that we have heard when we talked to campaigners:

1. “COMELEC would only issue guidelines and not really laws. Recommendatory *lang naman sila*.” If COMELEC told campaigners that they are now supposed to declare digital campaign spends, some feel that they do not need to follow because these are just recommendations and guidelines.
2. “*Hindi naman namin nami-meet ‘yung politician mismo. Minsan ‘yung businessman backer lang niya*.” This highlights a loophole in campaign donation, campaign financing, and even

political consultancy. This means political consultants can be in this stead to serve certain politicians without direct interface. There is a level of plausible deniability here that is very convenient. It shields both campaigners and politicians to be truly accountable for the things they create and the expressions they seed on social media.

3. “Politicians are required to sign off on their TV, radio, print ads, but why are they not held responsible for the content of their digital spends?”

Conclusion

If we understand the campaign practice and process, we may be able to address regulatory loopholes. The challenge here is to hold accountable the creative industries and digital influencer agencies involved in the campaign process.

This sequence of events might need to begin with the industry itself, but the industry is not interested in self-regulation. They are earning so much money from this. They think they will not be held liable for the things that they are doing. They think they are invincible. Could we put more pressure on the industry to introduce more transparency and accountability mechanisms?

What if cures are worse than the disease? What if the actual solutions or laws that might be passed (such as Senator Tito Sotto’s antifake news bill, which is modeled after Singapore’s censorship bill) gave government incredible powers to takedown and control online speech? What if that is worse than the disease?

I think the Philippines’ slowness when it comes to regulation comes from our own history of valuing free speech. We take after the United States and its own histories and protections around free speech. That is why the word regulation is such a bad word even to journalists. How can we go around this issue?

The third issue is about fact-checkers and platforms. How can they maintain credibility or how can they regain credibility? There are new fact-checking initiatives, but how can these fact-checking initiatives also be transparent in themselves? How can they be prevented from slipping into political partisanship?

In other countries, such as India, fact-checkers have become politically partisan, where fact-checkers and media organizations say: “We are only going to fact-check the other side.” Do we want that? What are the risks around that? What are the opportunities around that?

In the case of the Philippines, “process-oriented” rather than content-oriented policy responses would be most effective (see Ong et al. 2019, Chapter 5). This means that interventions should not be about speech regulation and censorship, which could potentially inflict myriad harms to free speech. Instead, they should be about ensuring greater transparency and accountability in campaign finance, platform bans, fact-checking, and industry regulation. Policy should also focus on putting social safety nets in place for the many precarious digital workers who are constantly exposed to the risk of being pulled into the digital underground.

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Presentation 2

How Blockchain Applications Can Improve Trust in Public Sector Institutions

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SUMMARY: The internet era has enabled many types of transactions to become digital, such as financial deposits and withdrawals, but records of these transactions are still maintained by a centralized gatekeeping organization, such as a bank. Blockchain is a powerful new technology that creates a distributed digital ledger—a database—that allows multiple parties to engage in secure and trusted transactions with one another without an intermediary. Because all parties can have their own copies of the data, blockchain increases transparency, enables auditing, and eliminates any single point of failure. Therefore, blockchain applications offer a unique opportunity for governments to imbed trust in their programs and services. For example, some governments have adopted blockchain applications to improve the efficiency and trust in public records databases, such as land registry and licensing.

To create this value, policymakers should accelerate the adoption of blockchain by promoting government's use of the technology and ensuring that policies do not hold back positive uses of the technology. This paper explains how blockchains work and the major problems that they can and cannot solve. It explores the benefits and challenges associated with blockchain technologies in the public sector and presents some examples of how governments are adopting this technology to improve trust in their efforts. Finally, it offers recommendations on how policymakers can actively support blockchain adoption and deployment in a way that neither favors nor disadvantages any application or business model.

Introduction

In 2009, Satoshi Nakamoto, the pseudonym for an as yet unidentified individual or group, released the code for the first blockchain system that created the peer-to-peer virtual currency Bitcoin (Nakamoto 2018). Bitcoin's blockchain architecture, for the first time, eliminated a fundamental problem with distributed systems—how

to get a group of actors to reach consensus even if they cannot trust one another. Before Satoshi's blockchain, many processes relied only on a trusted intermediary, such as a business or government agency, to coordinate activities among multiple parties engaged in related transactions. For example, government agencies maintain official records on citizen births and deaths. Blockchain eliminates the need for a trusted intermediary to

maintain an official system of record by creating a distributed ledger where all parties can verify they have access to the same data and no party is able to make unauthorized alterations of existing records.

This technology could change how governments around the world manage their processes and services. It allows actors to move away from depending on a centralized or hierarchical organizational model to a decentralized one. Because all parties on a blockchain—including government organizations and any other users—can have their own copy of the data, blockchain increases trust through transparency, auditability, and the reduction of single points of failure. It also provides efficiency benefits in cases when there is no existing intermediary, the existing intermediaries are costly or unreliable, or those intermediaries need to boost the transparency, security, or reliability of their records. Obviously, this potential for disruption depends on many factors, as intermediaries may provide other important functions beyond a system of record, including verifying details about a transaction in the real world.

Blockchain applications offer a unique opportunity for governments to imbed trust in their programs and services. Therefore, governments can and should do more to support legitimate blockchain innovation and adoption. This paper explores the technology, some of its potential use cases in government, and the steps policymakers can take to bolster its adoption and deployment.

Blockchain technology background

Blockchains are digital ledgers that record information that is distributed among a network of computers that ensure each computer has identical records.

Blockchain technologies consist of three components: cryptographically linked data structures, peer-to-peer networking, and consensus protocols. First, the blockchain consists of a series of digital “blocks” that are securely linked together in sequential

order using cryptography to create a virtual chain of data. These blocks record information such as financial transactions, agreements between parties, and ownership records. Second, blockchain runs on a distributed peer-to-peer network of computers. Each computer in the network, referred to as a node, stores a copy of the blockchain, validates that the blockchain has not been tampered with, and verifies when transactions can be added to a new block. Nodes share and synchronize all updates. Finally, blockchains maintain agreement among all participants using a “consensus protocol”—a set of rules that allows nodes to determine when to add new information to the blockchain. Consensus protocols are designed to make the blockchain resistant to tampering and ensure consistency in the data among all participants in the network. For example, one popular method, known as “proof of work”, requires nodes in the network to compete to solve complex cryptographic puzzles before a new block can be added. Other consensus protocols use different techniques to prevent tampering, each with various benefits and drawbacks (McQuinn and Castro 2019). Importantly, there are public and private blockchains. In a public blockchain, anyone can join and become a node in the network. Public blockchains are set into motion by developers, and then, volunteers join the peer-to-peer network. In a private blockchain, the operator sets up a permissioned network and places restrictions on who can participate and what transactions can be accessed and conducted. Typically, public blockchains can be easier to start, more transparent, and more redundant, while private blockchains can enable more privacy, scalability, and faster transaction clearing.

Since blockchains are a database, almost any database application could be run on a blockchain. However, operating a blockchain comes at a cost, as the technology involves many different computer systems duplicating the same data and engaging in redundant computing tasks. Therefore, converting most applications to run on a blockchain would not necessarily add any value, and in fact, would

likely be inefficient and costly. In contrast, successful blockchain-based applications generally have a few elements. For example, blockchain applications typically involve multiple parties who need to access and make entries in the database who may not trust one another, such as because they do not know the others' identity or because they have conflicting interests. Because blockchain establishes a permanent record of transactions, it is also used in cases where auditability is important. And since blockchain involves a distributed database, it is also useful in cases where different stakeholders need to have an authoritative set of records.

Government blockchain use cases for building trust

Government applications of blockchain technology can improve trust in government services. Because public blockchains enable permanent, time-stamped records of transactions that are auditable by anyone and cannot be unilaterally altered, this type of database allows individuals and businesses to access and obtain a complete copy of all government data. Some governments use blockchain technology to increase access to government information, while others use blockchain to empower users interacting with government services. There are four primary types

of applications where blockchain will play a role in advancing public trust in those applications.

The first are applications that use blockchain ledgers to create a repository of data that users can access, add to, and extract insights from. These shared data services are used for supply chain and logistics, asset tracking, real estate and title registry, and much more. For example, Dubai, in conjunction with the private sector, has launched a blockchain-based project called “the Digital Silk Road” to provide transparency in supply chains (Buntix 2018). Another shared government service that requires tracking inputs and transparency is voting, and some companies have started testing the viability of voting on the blockchain. For example, the South Korean government announced it would test using blockchain technology its electronic voting system (Yakubowski 2018). To be sure, blockchain is not a mature enough solution to be widely used for electronic voting, but it is reasonable for election officials to pilot the technology and evaluate its benefits and risks (McQuinn and Castro 2019).

Second, smart contract applications use blockchain to automate functions. Because blockchains are programmable, developers can encode certain conditions and outcomes, so that transactions over the network happen automatically. This type of applications could have profound

Case study: Public records

One major shared data service are public records. Public records are those available for everyone to access, including birth certificates, death records, land and deed registrations, and corporate registrations. Public records databases tend to be centralized within a government agency, requiring citizens to place trust that the government will keep an accurate and reliable record. Unfortunately, records are often inaccurate, unreliable, or do not have the proper redundancy in the event of an emergency—particularly in the developing world. For example, in Haiti, an earthquake in 2010 destroyed municipal buildings that held documents proving ownership over land, and as a result, many individuals are still fighting over land to this day (Reese 2017). Similarly, the government agency keeping them can be inefficient or corrupt. For example, in Honduras, government officials have altered ownership databases and stolen property (Chavez-Dreyfuss 2015). Using blockchain allows the government to publish not just a copy of the official records, but the official records themselves—since the official records are on the public blockchain, there is no potential gap between the government's information and what it makes public. For example, blockchain applications can promote trust in land records systems by enabling users to track asset ownership themselves, providing an audit trail, and reducing information asymmetry. This type of blockchain application is especially useful for countries with high rates of corruption, where there are fewer paper documents that show property ownership and corruption often allows property officials to change documents for the right price (Haridas 2018).

impacts on government-required intermediary services, such as escrow and notaries (McQuinn and Castro 2019). It will also have an impact on how government receives reporting requirements from companies, such as those required when goods cross borders in supply chains.

Third, governments can use the distributed ledger and its tokens to create an easily verifiable audit trail to establish the authenticity of goods or data. Tokens can either represent goods or data located directly on the blockchain, such as cryptocurrencies, or real-world assets, such as pharmaceuticals. Blockchains secure the provenance and ownership of these tokens through registration and recording events and changes that impact them—such as an item’s value and when it changes hands. For example, several companies and nonprofits are working with regulators to test the potential of blockchain technology to eliminate counterfeit drugs from pharmaceutical supply chains (Mbogo 2019). Finally, some governments are experimenting with using blockchain applications to establish digital identity—which is information individuals, organizations, or devices use to represent themselves to others in a digital environment (McQuinn and Castro 2019). Some organizations have adopted blockchain-based applications to establish digital identities or give users the ability to control or obfuscate their identity online. These applications of blockchain strive to improve the efficiency and security of authenticating online identities, especially in cases when an application does not rely on third parties, such as the government, to verify an identity. For example, the city of Dubai has launched a blockchain national digital identity project (Smart Dubai 2018). Many projects in this category, however, are in very nascent stages, suffer from scalability issues, and have not yet proven their value (McQuinn and Castro 2019).

In each of these government applications, it is important to distinguish between the benefits of digitization versus the benefits of using blockchain. For example, digitizing property records enables buyers and sellers to radically improve the efficiency

of title search and insurance. Similarly, providing citizens with electronic identification enables more efficient e-commerce transactions and facilitates e-government services. While blockchain can be used for these applications, many of the most important benefits arise from digitization rather than from blockchain. Policymakers should therefore strongly support efforts to increase digitization but be neutral as to what technology is best suited for any particular application. Policymakers will need additional evaluation to determine if blockchain-based systems are better than other digital solutions.

How policymakers can advance public sector blockchain applications

The blockchain projects and research initiatives reviewed in this paper show that blockchains are a promising technology for a wide area of services and use cases to promote trust in government services. There are primarily three ways that policymakers can improve the efficiency and effectiveness of blockchain-based government applications, doing so in a way that neither favors nor disadvantages any particular application or business model.

First, policymakers should actively support government adoption and deployment of blockchain. This should take place primarily in two ways: reforming processes to better understand blockchain applications and adopting those applications. For one, government agencies should reform their internal processes to be able to gather information, better educate themselves, and work directly with companies offering nascent products or services. For example, many companies are starting to use technologies like blockchain for regulatory compliance (McQuinn et al. 2016). These solutions improve the quality and efficiency of supervision by giving regulators access to modern reporting and analytics infrastructure that they can use to find and correct misuse. Moreover, government agencies should adopt blockchain

applications for their own services, doing so in a technology-neutral way. By becoming early adopters, governments can promote broader adoption of blockchain, while also reducing risks associated with blockchain applications. These efforts should include adopting solutions from blockchain companies to improve government operational reporting, transactions, asset tracking, supply chain, management, procurement, and budgetary decisions. To accomplish this, governments may need to reform their procurement processes to allow for blockchain purchasing (McQuinn and Castro 2019).

Second, governments should become more involved in supporting blockchain research and development (R&D). Government investment played a key role in developing various other technologies, such as smartphones and the internet (Singer 2014). Because early-phase technology research often proves concepts rather than creates commercially viable products and can exhibit significant spillovers, firms are likely to underinvest. Therefore, national governments should fund R&D for blockchain applications, focusing on underlying technological challenges, such as creating better and more efficient consensus mechanisms, identifying security threats, improving cryptography, scalability, editability, and more. R&D can also help advance related technologies that could improve blockchain applications. Moreover, certain problems, such as intellectual property control management over public blockchains, will require additional research and cooperation from the public and private sector to ensure viable enforcement.

Finally, national and supranational governments (e.g., European Commission) should promote data interoperability—the ability of different IT systems to communicate, exchange data, and cooperatively use data—especially between different types of blockchain technologies, traditional industry frameworks, and regulators. This interoperability may depend on the industry sector and the degree of data standardization therein. For example, streamlining interoperability

in data sets for importing and exporting food can help reduce costs for businesses and help regulators easily share that information across borders. Though industry should lead standards development, national governments can bring together disparate market players across different industry sectors and standards bodies, and encourage and promote interoperability across different types of data.

Conclusion

Blockchain offers a wealth of opportunity for improving trust in government services and processes. Policymakers should help build this trust by actively supporting R&D and deployment of the technology when it makes sense—through early adoption, supporting research in decentralized applications, and pushing for data interoperability.

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Open Forum

Question 1

Vicente Paqueo (PIDS): Can you unring a bell? Can you can go back to a culture where truth-telling was much appreciated, and spreading lies is a death toll to influencers, politicians, and celebrities, among others? Can you go back to that culture which I think is becoming a thing of the past?

The answer to this question is kind of difficult. Because now, I do not trust the industry that you want to regulate; I do not trust the regulators; I do not trust the government that appoints those regulators; and I do not even trust the voters anymore. So, what should we do? Is it reasonable then to say, “Maybe we need to be less trustful”? Should we go for what President Reagan said about the Russians: “Trust but verify. Be skeptical, be critical, and be strict with evidence”?

Alan McQuinn: I was literally about to say, “trust but verify.” That was very prescient of you. In both fake news and adoption of blockchain technologies, if you can tie those two things together, the through line would be to establish auditability and transparency.

The entire presentation and what I found very useful from the other gentleman was that he was looking at it from a point of “how do we create more transparency in the system so you can break apart some of those black ops—some of the

misunderstandings—and help people understand how the system works, where they are in it, and what they can and cannot control?” The same thing is true about blockchain technologies, although it is significantly less important. In blockchains, you are able to create an auditability factor, so that you know if someone is messing with you.

For example, you know if you are part of that public record that exchanges the land registry deeds if suddenly your record is mismatched from the government’s official record because of that audit chain. That is the only thing I do not know if you can unring a bell culturally, but you can help people better understand the system in which they are living.

Question 2

Ted Dulay (ASCEND Inc.): Based on what you said, a blockchain is essentially a record that everybody in a certain system has access to at the same time, and whenever any change is made to that record, everybody would know that a change was made. If that is the case for a blockchain, are security and transparency essentially the same thing? Do I understand that correctly?

Alan McQuinn: It depends on the blockchain model. Fundamentally, the way that blockchains are designed is that every block has to simultaneously agree to any change. The process is incredibly

redundant and secure in that sense. There are a number of ways you can break a blockchain, so I am not trying to say it is more protective on the cybersecurity front because you have applications sitting on top and people are bad at codes. There are a number of very famous ways that people have broken blockchain systems. I am not saying blockchains are more secure; I am saying that they are more transparent in how they run and operate.

Ted Dulay: I guess I should define security or, at least, my definition of security for the purpose of this discussion. When I was talking about security, I was thinking in reference to our public records, for example. I was talking to Mr. Calum Cameron a while ago and he was talking about Estonia's public record system. I know we are all aware that the national ID system is in the process of implementation. One of my questions was: "How do you protect everyone?"

Interestingly, there is a lot of convergence here between the way the Estonians do it and the way a blockchain works. In Estonia, it is not that your information is secure where nobody can access your data, but rather the security comes from the fact that if something makes changes to your data, or if somebody accesses your data, you are immediately made aware of this. In this case, the transparency provides security because you know if somebody accessed your data, you know who did it, you know what for, and you know when it happened. And you can pinpoint the person.

According to a point by Mr. Cameron, there was a case like this in Estonia where some of these public records were accessed and the people responsible were arrested within two days. Why? For the simple reason that we know who did it. In this case, it is the transparency that leads to the security. This is why I was asking whether he could conflate the two, at least in this situation.

Alan McQuinn: As a cybersecurity person, I would be very wary of conflating those two because, oftentimes, the threat is that someone is accessing

that information. Sure, you can find out who it is, but if they have misused information in some way, then it is not secure. It is not necessarily about that and that is why I went to great depths to say, "public records are information that are public." They are something that everyone should have access to. Whereas your personal information—your digital identity—you do not want it to be stored in a way that everyone can access it.

Ted Dulay: This is not to say that I do not think we should secure our data. My point is that we are in a forum about trust and, sometimes, the only way to build trust is through transparency. Maybe, the security I am referring to here is your internal security: that I can trust who has access to my documents and data. Cybersecurity is another thing altogether. Obviously, we do not want our data flying around the web any time.

Question 3

Ted Dulay: **The other question, which I think is more pertinent to all of us, is this. You said a blockchain system, in itself, can be incredibly inefficient and redundant because it accesses so many nodes at the same time. So, what criteria can be considered when we think about trying to apply blockchain?**

Alan McQuinn: Successful blockchain implementations have a number of different traits. One of them is that there are multiple parties participating in a network who do not necessarily know each other or trust each other. That is the fundamental underpinning of a blockchain.

The second trait, it is a permanent record. Any application that has an auditability and transparency component is good to implement in a blockchain. Oftentimes, if there are multiple parties and they want auditability in their transactions, a blockchain is what you go with.

The third trait, multiple parties in a system want an authoritative record so that they can make

decisions, especially if they do not want to rely on someone else's centralized record and they want to have their own.

I think those are the three major criteria.

I would also say that it depends on how many entities are participating. If there are two or three people, you would not want to operate a blockchain. If it is a hundred, it might be a good idea for certain applications. But, I often find the sweet spot is a collaboration of a few dozen entities that know each other. Those are often the most efficient, most scalable models.

Question 4

Jose Ramon Albert (PIDS): I found both papers very fascinating but the whole context is boiling down to a chicken and egg thing when building trust. In the case of Estonia and maybe in the US, it might be, to some extent, easier to think of building trust with technology. But in the case of the Philippines, I understand the point being raised by Vicente that there is the sense of mistrust by some citizens. For instance, the COMELEC's voters' list was hacked. I think it became the second largest in the world's history of voters' lists being hacked. Now, the company that developed that system has won legally the bid for the national ID project. It was a fully transparent mechanism, but some of us now are wondering: "Is this a warning signal?"

I am not sure if the institution that is supposed to implement this is the Philippine Statistics Authority. I would understand that this project might be something beyond them, and they may need to subcontract some of the work. But now my question is: "What if the institutions themselves are like some blockchain applications, like some digital currency that have come out but are creating something false and scamming people?"

In the same way, if regulators or the institutions are starting to build on ideas of

services on blockchain, but they do not know what is going on or it is too technical for them, how do we build capacities so that people can get a better sense? I am glad that you are here to sort of give us some ideas but still I am getting worried more and more.

Alan McQuinn: How do you regulate against fraud? It is a tough topic because the more technical something becomes, the easier it becomes to scam people. I think another tough part is because you have to put your faith in the regulatory system to some degree to help crack down misuse and consumer protection issues.

In the United States, we have a backstop with the Federal Trade Commission that enforces what is called "Unfair and Corrupt Practices". When a company lies to you or tries to defraud you, there is this mechanism by which the government can go after that company. If you do not have faith in the government's mechanism to do that, then you could turn to third-party warning systems.

Often, you see this with nonprofits that have sprung up. I could think of a couple of nonprofits in the United States primarily working around consumer misuse, and this happens a lot because the United States does not have an adequate privacy framework. Often, it is nonprofits or other consumer rights organizations raising the alarms about misuse of people's data.

If you cannot put faith in the government to enact consumer protection, then you have to start relying on third parties to help boost the transparency. There will always be fraud. If it is not on blockchain, people would gravitate to another technology. So, you have to create regulatory frameworks or have a third party.

I cannot really answer the question about the voters' list and the National ID program. That is scary. But I can say that if you create a system that obfuscates people's identity, you can design it so that no one entity has access to everyone's data, but it does not sound like that is happening.

Question 5

Jessmond Elvina (Philippine Competition Commission): You were talking about how the public sector or the government can use the blockchain technology. Are you aware of any public office in the world where it has successfully migrated from an old technology to a blockchain one? Can you tell us how they did it?

Because the Genesis Block, the first one, is crucial. For example, in the Philippines, mid-size organizations should be at least be 30 years old. That is 30 years' worth of information that you have to verify, double-check, and multiple-check. So those 30 years' worth of information should be correct before adding on new ones onto it, given how blockchain works. Do you have any examples on how they did it and where?

Alan McQuinn: I would look to Singapore's implementation of blockchain around its ID program. I would also look to Dubai. They have a good digital identity program that they created. Illinois created a blockchain system for birth certificates. There are a lot of successful public sector implementations of the technology with various applications.

The biggest burden is the actual digitization of records because any government, no matter what, if you create a digital framework, you are going to reap benefits from it, whether that is in terms of efficiencies or reduced costs or whatnot. It will enable you to adopt other applications. But if you do not have a digitized system, a blockchain system would not work.

You see systems springing up out of a system that does not exist. It could happen in a developing country that has no identity system and they are immediately jumping into this, which is often the benefit of having cloud-first policies where they are able to immediately leapfrog over developed countries who have ancient technology that they

cannot get rid of. So, a developing country may be able to immediately jump at the forefront. We are going to continue to see that, especially around blockchains and digital identity solutions.

It really comes from digitization, and you might have to start from scratch.

Question 6

Oliver Reyes (UP Law Center): I was also going to ask about successful or examples of governments adopting distributed ledger technology (DLT), but my questions are related to the privacy architecture that may have been considered in adopting these technologies. In the Philippines, I think we have a more aggressive data privacy regime than in the United States. This is also true in Europe and several other jurisdictions. DLT, as with any other digitization enterprise, is able to facilitate the mass memorialization of data even just for memorialization sake, without there being any conscious effort whether or not this particular data field or information should even be recorded or digitized at all.

I am curious where DLT technology has been adopted. How conscious have the government regulators been in designing a privacy architecture?

Relatedly as well, there is this growing recognition around the world of the right to be forgotten, which is a legal right and a legally enforceable right, where citizens may demand that data about them that are outdated or not relevant for public purposes can be taken offline and rendered inaccessible. Is totally erasing data or information a virtual impossibility?

Alan McQuinn: This is something I talk about a lot in the report. If you go and look at the *Policymaker's Guide to Blockchain*, available on ITIF.org, I talk about privacy a lot, especially the right to be forgotten.

Did governments consider privacy when they are adopting this technology? I am fairly sure that Dubai did not. I talked to some of their government folks when they were adopting the technology, they did not consider it at all. Singapore definitely considered privacy because they are very robust in their data privacy framework.

A lot of the providers that are creating blockchain systems design them in a way that they are privacy-protective, in the sense that it is the best practice to never store personal information on a blockchain. Imagine creating a permanent record of something forever. You do not want to take a healthcare record on a system that everyone immediately has access to. It is just not smart.

When we are talking about certain types of content that you are trying to take off a blockchain, the public blockchains are a no-go. If you put personal information on the bitcoin blockchain, you are not going to be able to take it off. For example, there are instances of child pornography on the bitcoin blockchain today. There are certain types of content that need to be taken off that cannot be removed. The private blockchains are permissible and often are able to obfuscate or remove certain information. Those are useful for complying with laws like the right to be forgotten.

What it boils down to with a lot of these privacy laws, as opposed to content regulation laws, is the definition of personal information, or any information that could be traced to you in any conceivable way like the General Data Protection Regulation (GDPR). Every single transaction on the Bitcoin network or the Ethereum network, they all fundamentally violate the right to be forgotten or the right to deletion because you cannot take that information off. It just cannot be deleted.

I do not think that GDPR was well thought out. It directly conflicts with other European laws around, for example, antimoney laundering protections. If you look at it, you have one law that says, “every bank has to keep a personal record of every transaction,” and then another law that says, “every transaction should be deleted on request.” It becomes a question of definitions.

Content regulation—such as removal of copyrighted material, harmful content, hate speech, or pornography—becomes a challenge when it comes to some of these applications. This is why you want to have a tailored blockchain application, whether it is a financial application or a content application. If it is for content, then it should have editability feature, which is a challenge that governments will still have to tackle. But we have not addressed those questions still to this day.

Question 7

Vicente Paqueo (PIDS): This is actually addressed to our colleague in the UP Law. We just passed the Data Privacy Law, after we passed the Freedom of Information Law. The two are just conflicting. Where do you draw the line between the right to public information, which is crucial to a functioning democracy, and the need to protect your private data?

As an example, we are researchers and, before, it was easier to get information (to do surveys, and even get information about students and teachers that you want to study). And yet, they are now using the privacy law to hide and not to release information.

Alan McQuinn: Freedom of information acts are incredibly important to the health of any democracy, but they are targeted specifically at the public sector. If you have given your information to the government, barring personally identifiable information in certain contexts (such as employment or grant writing), it should be applicable to the Freedom of Information Act. It is fundamental to a democracy. Any privacy protection is granular and context specific. Not only should privacy protections be about what information is being exchanged, it should also be about what is the context of that information.

Even with health information, it depends on what it is, whether it is sensitive or not. For example, you can take my step count for today, but

if you want to learn about my health history—both of which are health data points—it is a different story because knowing that information has different privacy effects.

Oliver Reyes: Concerning the Philippine Data Privacy Act, there is a relatively broad exception to the applicability of the act when it comes to the collection of data for a public purpose. If the public purpose has been established by prior law, then it would be construed in favor of accommodating the public purpose.

One example would be the law that requires the recording of Statements of Assets and Liabilities and Net Worth (SALN) and allowing these to be made publicly available. The Data Privacy Act, even if enacted much later than the SALN Law, cannot be invoked to prevent the disclosure of the SALN.

Because the Data Privacy Act was enacted only in 2012, it may have given an excuse to avoid having to disclose information. Some may try to invoke it, but it would not necessarily mean that the refusal to disclose would be proper; although, it may require a complaint filed or some litigation to reveal that information.

I understand that the specific question of research has been invoked. I am not entirely sure about the context, but I know that it is a pending question because there is also a research exception. Under the law, activities of researchers are exempt from the coverage of the Data Privacy Act. I understand that the regulator has interpreted this to include that there must be a public purpose benefit in order for the exemption to apply, and that has caused some controversy.

The thing with the Data Privacy Act, because it is quite new, is that there has not yet been any Supreme Court decision interpreting the provisions of the act. We can expect that over the next few years, there may be further clarification from the courts on proper interpretation of these provisions. In the meantime, most of the activities are with the National Privacy Commission (NPC) and the interaction it has with various players of the industry. Perhaps, in the future, there will be greater interchange between the NPC, the private sector, and the academe, leading to further clarity on what these exceptions would mean.

AFTERNOON PLENARY

WAYS FORWARD

SESSION OPENER

Calixto Chikiamco | President, Foundation for Economic Freedom

In this session, we will have six speakers. Each speaker will have about 10 to 15 minutes each to make a presentation.

In this concluding session, we will discuss how various stakeholders can work together to navigate the turbulent seas of the New Globalization, reflecting on the four major features discussed in the parallel sessions: (1) global trade restructuring, (2) worsening inequality, (3) challenges to the provision of global public goods, and (4) weakening social cohesion and trust.

The panel will present strategic and practical steps to ensure that the Philippines is able to achieve sustained, accelerated, and broad-based economic growth. Panelists and participants will share views on how to manage the challenges and opportunities in the areas of equality, competitiveness, employment, privacy, and trust through sound regulatory and legal frameworks, and strong institutions.

The panelists may be guided by the following general questions to be addressed from specific sectoral perspective, namely, trade and industry, labor, competition policy, finance, the private sector, and the research community:

1. What recent global developments are creating new challenges? What are the effects of these developments?
2. Can the Philippines navigate through these challenges? What are the country's strengths and weaknesses?
3. What actions can be taken to enhance adaptation to the increasingly integrated yet volatile global economy?

Views and Reactions

*Ciriaco Lagunzad III | Undersecretary for Workers Protection and Internal Auditing,
Department of Labor and Employment*

Thank you for the introduction.

On behalf of Secretary Silvestre Bello and the Department of Labor and Employment (DOLE), congratulations to the PIDS for a successful annual conference.

Reshaping the world of work

We are witnessing a transformation of globalization from its traditional definition to being shaped by a combination of governance decisions and technological advancements. Interrelated challenges are brought by technologies—such as artificial intelligence (AI), robotics, and the Internet of Things. All of these, combined with global trade restructuring, social inequality, and political tensions, give rise to its complexity. If not managed well, it can undermine the country's development vision encapsulated in *AmBisyon Natin 2040* and our targets under the Sustainable Development Goals.

Globalization will surely reshape the world of work. The world has gotten bigger and smaller: bigger because companies continue to move into emerging markets and smaller because of increased connectivity.

One simple way to think of the New Globalization in the world of work is about digitally enabled and transformed workplaces. While work organizations will greatly improve because of technology, this also puts into question how the

workforce will face the challenges, especially the ones brought by technological advancements.

The risk of automation depends on one's occupation. Young Filipinos are facing high risks due to the automation of jobs, study shows. In the *Future of Jobs 2018 Report* by the World Economic Forum, most companies in the Philippines are likely to hire new staff with skills relevant to new technologies. Eighty percent are likely to retain their current employees; however, 74 percent are expecting their employees to pick up necessary skills and knowledge of the job.

Amid the growing influence of automation and AI, there are rising skills that are most sought after by employers from applicants. These include social media marketing, front-end web development, and human-centered design.

Many discussions revolve on how the workforce can maximize opportunities, while mitigating the risks on the future of labor market. For DOLE, all endeavors have been geared toward the achievement of inclusive growth—to which the promotion and realization of decent work is at the forefront.

Labor market information

DOLE recognizes the importance of updated labor market information (LMI). It released the *Labor Market Information Report 2022* enumerating

the industries that will create jobs and skills. A good LMI will enable us to effectively link skills demand and supply, leading to good decisions, which will benefit the individual, the businesses, and the economy.

According to the International Labour Organization, 13 percent of the ASEAN's labor force will be aged 15 to 24 in 2030. Providing our youth with timely and accurate labor market signals would enable them to prepare and harness their potential to its fullest by establishing strong foundations during their education.

The DOLE's facilitation of Career Guidance Advocacy Program works in both ways. A responsive LMI will empower students in making informed career decisions; while career advocates, career counselors, and training institutions are able to come up with strategies to further increase the potentials of the current and future members of the labor force.

Investments in youth is a proactive response to current labor trends and demographic shifts. To make our youth more competitive in the future, labor market education is crucial in laying the foundation of 21st century skills. While reading, writing, and numeracy used to be the foundational skills, they have grown to encompass social and emotional skills and digital literacy.

The JobStart Philippines, DOLE's flagship program to address youth unemployment, has a component on life skills training to become more responsive to the demands of the job market and for better integration of opportunities into productive employment.

Aside from automation, there are drastic changes in the overall business landscape, such as new work arrangements and emerging jobs. These may require upskilling, reskilling, and retooling of the workforce, especially the technical, vocational, and educational training programs.

Updated educational and training tools and approaches that utilize new technologies are essential to equip workers with the skills that they need to succeed in an ever-changing economy.

It seems that the new world of work is about skills. The demand for higher-level skills is strong. The opportunities afforded by technology should be used to reimagine 21st century education and training.

Affirming human incomparability

During the 108th session of the International Labour Conference, we stressed that the main task at hand is to craft policies that affirm human incomparability, as well as assert the importance of "tripartism" and social dialogue amid transformations in the world of work brought about by automation and digital technology. Even before, DOLE has institutionalized tripartism in policy development.

The shift in the world of work is surely creating winners and losers. Continuous collaboration and the tripartite partnership between government workers and employers, supported with our social partners, can make us adaptive to the changing world of work.

Aside from the passage of numerous landmark laws, protecting rights, and promotion of the welfare of Filipino workers and their families, DOLE is committed to achieve the targets embodied in the Sustainable Development Goals, particularly on decent work, and will ensure that no one will be displaced.

While we recognize the rapidly changing world of work and welcome pioneering technologies, new jobs, and opportunities, this phase is an opportune time for us policymakers to ask tough questions. We must bear in mind that those who will be affected by the transition are the least equipped; they are the vulnerable workers that need our support. They must be equipped with proper skills and be provided with social protection to address market imperfections.

On the other hand, we must remain vigilant if new technologies will serve their purpose of making work efficient, rather than creating controls or further widening the gap of social inequalities and poverty.

Thank you and good afternoon.

Views and Reactions

*Lourdes Yparraguirre | Undersecretary for International Economic Relations,
Department of Foreign Affairs*

Good afternoon, everyone.

It is really a great pleasure to be with you here at the Annual Public Policy Conference of the Philippine Institute for Development Studies (PIDS), and I would like to congratulate PIDS for another well-thought-out event this year. Thank you for inviting the Department of Foreign Affairs (DFA), and for your invitation to me to be part of this plenary discussion. I am truly honored to be in this panel with eminent policymakers, movers, and shakers.

The challenge of globalization

As a government panelist, and as Senior Official of the Philippines to the Asia-Pacific Economic Cooperation (APEC) forum and to the Asia Cooperation Dialogue, I would say that among our foremost challenges is crafting both policy responses and strategic policy initiatives, as we navigate through the complexities of globalization in a multilateral, cooperative setting.

It is challenging enough that globalization has become associated with something that is polarizing as to cause anxiety and pushback and sweeping judgment and discontent from different sectors in society.

In the end, it is drawing attention to how economies, people, and enterprises have become increasingly interlinked and interconnected internationally. After all, this is what globalization

is essentially about: regional and global economic integration that leverages efficiencies and value propositions found among and across the far reaches in every region around the globe.

Globalization itself has never been, and will never be, static. Experts have defined eras and iterations of globalization—and, yes, even to arguably include the time when the Galleon Trade between Manila and Acapulco was at its heyday. At its most transformative stages, globalization has delivered significant progress.

In the period up to the turn of the century, globalization enabled the world economy to experience one of its most dynamic expansions of growth. During such period, international trade and investment flows have boosted interdependence and allowed developing countries to connect better to the global economy, lifting millions of people out of poverty. As determined by the World Bank, the trade-liberalizing impact of globalization would have global trade account for more than 70 percent of global gross domestic product in 2017, in contrast to a mere 25 percent in 1960.

Online platforms, one of the main tools of the recent iteration of globalization, have opened opportunities for billions of people, generating an unprecedented global exchange of information, knowledge, and ideas.

This brings me to the crux of what drives and defines globalization—it is connectivity and all the attendant innovations and advances associated with it.

International cooperation vis-à-vis globalization

We are in the midst of witnessing a profound change in globalization. Some even would characterize it as scaling back—some form of “slowbalization” or, at times, deglobalization. A change propelled in no small part by rising protectionism, reversal of standstill commitments, and the diverging growth paths of emerging markets.

This pushback is also having an impact on the underlying premise of multilateralism. For instance, the multilateral trading system, as exemplified by the World Trade Organization (WTO), is the very platform that enables economies to engage bigger economies in a binding rules-based regime.

Yet, the WTO is, at this very moment, under an existential threat, and calls are being made across various global forums, calling for an affirmation of an open, nondiscriminatory, and rules-based trading system.

Rather than working together, some countries have resorted to a unilateral advancement of policy goals, in response to—or perhaps playing to—the discontent with globalization.

Over the years, multilateralism has lent itself to realities and rationales that serve the common wider good. It has afforded avenues to resolve differences peacefully; platforms to agree on common rules of the game; mechanisms to better manage international flows; and channels for exchanging ideas, experiences, and practices, so that countries learn from each other.

Beyond these longstanding rationales, there are new and additional reasons to seek multilateral solutions, especially at addressing new and emergent economic challenges.

Globalization 4.0 for connectivity and Industry 4.0 for manufacturing go hand-in-hand. This twin phenomenon now melds with a combination of economic nationalism, digital integration, and consumer behavior that is ushering in what we call the “New Globalization”—the

concept that we have been discussing about today at this annual forum.

But globalization, as I have mentioned earlier, is never the same at any given time. Moreover, digital integration is accelerating at an unstoppable pace. So much so that the irony presents itself that for every seeming argument against globalization, a catalyst emerges that spurs on a new kind of connectivity that is driving the new and evolving form of globalization.

Such digital transformations span national borders. The World Economic Forum holds that digital companies are “born global”, and the largest of them dominate their market not only domestically but globally. These facts add another dimension to the growing interconnectedness between different national economies. This suggests that uncoordinated national rules and policies will not be effective in achieving their goals.

International cooperation as a response to the New Globalization is more crucial now than ever. However, we must all the more be sensitive to address real criticisms and people’s current frustrations and concerns.

Key areas of policy actions

At this juncture, allow me to offer some key areas of policy actions, on which President Rodrigo Duterte had first endeavored to draw attention to at various international conferences to discuss global developments:

1. **Human resource enhancement.** He said that we should focus more on investing in human capital development through the enhancement of our basic education systems and skills matching to seamlessly converge with the requirements of our businesses and the demands of our labor markets. This should be complemented with the promotion of science, technology, and research to promote innovation.
2. **Boosting innovation.** In this modern age, innovation is the critical factor of production.

The ability to innovate will become—more than ever—an important element of economic development. Let us support our micro, small, and medium enterprises or MSMEs to improve their productivity and enhance the quality of their products and services.

3. **Infrastructure development.** In 2017, the Asian Development Bank posited that Asia needs to invest USD 1.7 trillion every year in infrastructure development until the year 2030 to be able to maintain regional economic growth, address poverty, and respond to the growing threat of climate change. The Philippines supports cooperative projects in the region that have seen the construction of international ports, cross-country rail linkages, highways, and bridges that connect not only provinces and islands but also entire countries.

Empowerment and inclusion

The DFA, both here at our home office and in our 88 Foreign Service Posts, is stepping up efforts to increase awareness of the challenges and opportunities posed by the New Globalization. Under the One Country Team Approach,

where the DFA takes the lead in the conduct of economic diplomacy, a critical pillar of Philippine foreign policy, we are working hand-in-hand with our partners in government, other government agencies, and the private sector, as well as the academe and the business sector, in facilitating the necessary policy shifts and adjustments. We leverage our engagement in bilateral, regional, and multilateral platforms—such as the Association of Southeast Asian Nations, the Asia-Pacific Economic Cooperation, and the United Nations—to realize what is important to the Filipino people: empowerment and inclusion.

I truly believe that this Annual Public Policy Conference will further inspire more ideas and solutions that will keep the global market community open and innovative—a system that not only contributes but also leads to global prosperity.

Nobel Laureate Joseph Stiglitz succinctly observed that the problem was not globalization but how the process was being managed. We must be able to present to our people—our stakeholders—a more positive and hopeful narrative. We must inform them of a future that does not delve on a strategy that calls for retreat, but a way forward that does not overlook the opportunities that present themselves over the horizon.

Views and Reactions

Alfredo Pascual | President, Institute of Corporate Directors

My assignment this afternoon is to address the questions: What opportunities do private sector players see in an evolving global economy? What are the risks?

Businesses now operate in an environment characterized by accelerating technological innovations and unprecedented disruptions across sectors. While the changes often represent risks, they can be opportunities. To stay ahead in the game, companies must be agile. Pursuing digital transformation is vital in achieving the needed agility. As experience has shown, businesses that can evolve and reinvent themselves fast in response to advances in technology will endure and flourish.

Digital transformation

The evolving global economy is increasingly driven by digitalization—the use of data to create value and achieve competitiveness. Several big companies in the Philippines have already moved or are moving toward digital transformation. Those that do business with consumers and other customers, for example, capture and organize their accumulated and new data into dynamic digital databases. Datafication and analytics enable such companies to harness the power of data to support more targeted marketing, improve operating efficiencies, detect frauds, measure performance, and develop new products and services, among others.

Another purpose of digital transformation and harnessing of data is to achieve agility in areas of business vulnerable to disruptions. A data-driven company will be agile enough to adapt and adjust to a constantly changing business environment. In the digital economy, success depends on the ability to evolve and execute correspondingly changing strategy and not so much about brilliant strategy (Brown 2019).

Small and medium enterprises (SMEs) in the country are catching up with digital transformation. While they do not have the resources of big corporations for funding capital-intensive digitization projects, SMEs manage with subscriptions to cloud services and other affordable alternatives made possible by the accelerated development of the internet.

Based on the assessment of The Economist Intelligence Unit in 2018, the Philippines stepped out of the blue and appeared as an Asian country prepared to embrace technological advancement. It was ranked 55th among the 82 countries listed. It has been deemed that the Philippines is welcoming to technological domains steadily.

Still, the country is far from reaching the technological capabilities of its neighbors, i.e., Singapore and Malaysia. But the potential is tremendous. A global survey in early 2019 showed that Filipinos are the most users of social media and stay the longest online (*CNN Philippines* 2019). Businesses should embrace digital strategies at the

same high level of internet use by the population. We are seeing signs that local companies, along with techno-entrepreneurs, are converting this consumer trend into products and services that integrate digital technology in people's everyday lives.

Techno-entrepreneurial ventures

Young, tech-savvy entrepreneurs use digital technology to power their start-ups. Such techno-entrepreneurial ventures are growing in number, not just in Metro Manila but in other major cities in the provincial areas. With the growing digital economy in the country, they exert efforts to create new ways to connect residents with payment, healthcare, and transport services.

Financial innovations that allow SMEs to take part in the growing e-commerce activities in the Philippines are becoming available. One such service is PayMaya, a Philippine-based mobile service developed by Smart Communications that allows Filipinos to pay without having to use cash or credit card.

Aside from financial innovations, techno-entrepreneurs develop their own mobile applications to offer curated services to a wide customer base. Zennya is an artificial intelligence (AI)-based on-demand mobile platform that offers smart health and wellness services to clients in the Philippines. These services are ordered and booked through mobile devices and are provided by highly skilled and carefully vetted practitioners. According to its website, Zennya is building out a personalized mobile digital health network that connects you to a range of health and wellness services, laboratories, and online AI-backed diagnostic services.

As mobile e-commerce expands in the Philippines, services are going digital. Even grocery-delivery services are now being offered online. One such company is Pushkart.ph. The company has initially partnered with Lalamove, a Hong Kong-based on-demand logistics start-up, to deliver goods in the best condition to customers'

doorsteps. Pushkart.ph is serving Metro Manila but is planning to expand elsewhere outside the country.

One last mobile service that I wish to highlight is *Angkas*. Familiar to those of you who are on the road every work day, going to office and coming home, you see the *Angkas* helmet with the driver and the passenger on a two-wheeler. The company has also a delivery service called *Angkas Padala*. The transport service, as with other e-commerce services, has become more popular among users who have an increasing demand for speedier commute in Metro Manila's congested traffic.

The growing digital economy in the Philippines will impact business and lifestyle. While benefitting big and agile businesses, the digital economy will also empower SMEs.

International e-commerce platforms

Global e-commerce giants, such as Amazon and Alibaba, are expanding into emerging markets like the Philippines. In addition, there are Singapore-based platforms, e.g., Zalora, Shopee, and Lazada, that have become successful in the region. SMEs that produce goods can use these regional and global players to sell products internationally.

Before going on a big scale internationally, local start-ups must first build enough momentum to assure survival and validate their product or business model. This can best be done in the domestic market where they have the advantage of time and space (Moed 2019).

Barriers to ways forward

Government and private businesses themselves must resolve the barriers that have been identified by World Bank and others to realizing "the full potential of technology as a driver of private sector growth" (*Development Asia* 2018).

1. **Availability of affordable, high-speed internet.** In the Philippines, two telecom firms dominate the domestic broadband

market. A third player has been licensed and is expected to be in business soon. More intense competition among providers should improve access at lower subscription rates and with faster bandwidth speed.

2. **The need to strengthen the population's digital skills.** Early next month (October 2019), the National Literacy Council of the Department of Education will hold a national conference to aligning our basic education curriculum to demands for literacies and other advanced skills by the digital economy. I will be a plenary speaker at this conference.
3. **The need to expand digital payments.** They are an essential part of the digital economy. I am glad that the *Bangko Sentral ng Pilipinas* is taking the lead in promoting an efficient digital payment system by providing the infrastructure through the Philippine Payment and Settlement System, and the pertinent policy and regulatory framework for a National Retail Payment System.
4. **The need for affordable and reliable logistics.** This is essential for e-commerce. I know that the private sector is responding to the growing opportunities in the Philippine logistics industry. The major business groups, such as SM Investments Corporation, Ayala Corporation, and JG Summit Inc., have already entered the sector.
5. **The need for policies that promote trust.** The participants in the digital economy must be sure that data merchants and payment platforms will safeguard the privacy of the data entrusted. Our data privacy law as enforced by the National Privacy Commission is surely a source of assurance.

6. **Government needs to lead by example and become more digital itself.** The Department of Information and Communications Technology (DICT) is taking the lead in digitizing government services. In June 2019, the DICT launched the e-Government Masterplan (EGMP) 2022—a blueprint of its plans for integrating an interoperable government ICT network and systems with the aim of promoting open governance through digital transformation of basic services.

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Views and Reactions

Arsenio Balisacan | Chairman, Philippine Competition Commission

I was so pleased to learn new things today on this topic. These new things, for me, are summarized in VUCA—the challenges arising from this so-called “New Globalization”—vulnerability, uncertainty, complexity, and ambiguity. Meeting these challenges also requires VUCA. In the words of PIDS President Celia Reyes: vision, unity, consultation, and adaptability.

Aggressive and robust competition policy

During the parallel sessions, there were discussions about inequality, poverty, globalization, and technological disruptions. One of the policy suggestions arising from these discussions is the need for a more aggressive, more robust competition policy.

Joseph Stiglitz, in his *New York Times* opinion piece early this year, said: “The weakening of antitrust enforcement, and the failure of regulation to keep up with changes in our [US] economy and the innovations in creating and leveraging market power, meant that markets became more concentrated and less competitive.”

He went on to say that: “Markets don’t exist in a vacuum; they have to be structured by rules and regulations, and those rules and regulations must be enforced.”

Let me take you back to some of the narratives we heard earlier today.

Sustainability of growth in the Philippines

Since 2000, the Philippine economy has been one of the fastest-growing emerging economies in Asia. But there have been some serious concerns about the sustainability of the growth because as lessons of recent economic history show, when growth is not inclusive, that growth is not likely to be sustainable. Many countries in the past half century experienced economic stagnation after episodes of growth partly because growth was not inclusive.

If we look at the Philippine economy, there are indeed some disturbing trends. For example, real wages hardly changed since the late 1990s, whereas average labor productivity has risen along with the expansion of the economic pie.

If we look at the most basic metric of progress (i.e., reduction in absolute poverty), we find that, given the level of growth that we have seen in the last 10 to 15 years, the rate of poverty reduction, especially in terms of absolute poverty reduction, has been so slow compared to what other countries in Asia, particularly our neighbors Thailand, Viet Nam, Indonesia, and China have experienced at similar stages in their development. But we see a ray of hope in the last 5 to 8 years. For example, we find that between 2012 and 2015, we see quite a robust reduction in poverty. It is very encouraging.

When the 2018 poverty figures come out, they will likely show significant reductions in poverty, despite high inflation in the late 1980s. I would be very surprised if the numbers would show otherwise.

So there are some rays of hope that this time, it is going to be different. We must ensure that it will really be different and competition policy is one tool to help ensure that.

The patterns of inequality and poverty that we have seen are caused by so many factors. Competition policy, or the lack of it, is just one of them. But what is disturbing (and I would like to point out why competition policy commands high attention in our case) is that if you look at the indicators of market concentration, you will find that markets are highly concentrated in the Philippines, more so than in many other countries in our region. You will find that more markets are ruled by monopolies, duopolies, and oligopolies in the Philippines than you will find in our neighbors like Indonesia, Malaysia, and Cambodia, according to World Bank estimates. You will also find the Philippines being portrayed as a country where markets are highly concentrated compared to other countries.

If you look at how regulations and various instruments of policy, including those that you will see in the charters or statutes of agencies and sector regulators, you will find that the product market regulation or competition is quite restrictive in the Philippines compared to our neighboring countries. There are indications, very serious indications, that we certainly need more competition in this country.

But obviously, any student of Economics would know what competition policy is all about. Competition policy is not about being antimarket; it is about enhancing the ability of markets to deliver economic welfare. Economic welfare will only be assured if markets deliver goods and services at lower prices, with more choices, and with better qualities. Competition also leads to faster and greater innovation.

The Philippines is one of the countries where competition policy has been inscribed in the national development plan. Our competition policy is part and parcel of the country's development strategy, aimed at achieving and sustaining rapid and inclusive growth. To be effective, competition policy should not be seen in isolation but in conjunction with other development policies.

Market power

Markets are so highly concentrated in the Philippines. Highly concentrated markets bring about market power. This market power, as experienced by countries comprising the Organisation for Economic Co-operation and Development, has led to further increases in wealth concentration. Nearly a fifth of the wealth inequality that you will find in these countries is associated with market power.

The Philippine Competition Commission (PCC) is mandated to enforce prohibitions against anticompetitive practices (e.g., cartels, abuses of dominant position, anticompetitive mergers). We also do a lot of advocacy work for the government.

The priorities for enforcement and advocacy that we have set for ourselves are precisely those sectors that are challenging from the point of view of concentration and market power, especially those that do not face competitive pressures from imports, such as telecommunications, electricity, transportation, construction, retail and e-commerce, food and food manufacturing, and health and pharmaceuticals. As you know, food and pharmaceutical products are very expensive in this country compared to those of our neighbors. We would want to understand or to see whether those have to do with anticompetitive practices or something else.

We have chosen these sectors based on their potential impacts on consumers, the probability of enforcement success, and the legislative priorities identified by the government.

Given the VUCA, we certainly need to rethink, refine, and reframe our economics and our competition policy. Identifying the role of competition policy in markets characterized increasingly by big data, digital platforms, and AI requires a more nuanced understanding of the economic underpinnings of disruptive technologies and the Fourth Industrial Revolution. For example, in many of these markets, the marginal cost is zero. The price one pays for using the Google platform is zero. Where is the harm to consumers? Note that this market has many sides, where each side creates externality—network externality—on the other side. Is antitrust enough or the proper tool to address monopolies arising from such externalities?

Apart from understanding fully the complexities introduced by big tech, we also need to work closely with sector regulators and other government agencies. In an effort to speed up our ability to enforce our mandate, we work closely with other competition authorities around the world, particularly in more mature competition jurisdictions.

With that, I assure you that the PCC will also do its mandate to nurture a competition landscape so that the benefits of dynamic markets and the Fourth Industrial Revolution are enhanced toward sustained and inclusive development of the Philippine economy.

Views and Reactions

*Francisco Dakila Jr. | Deputy Governor of the Monetary and Economics Sector,
Bangko Sentral ng Pilipinas*

I would like to thank PIDS for this very kind invitation to serve as a panelist.

Globalization and monetary policy

Let me say a few words on the impact and the challenges posed by the New Globalization on the monetary policy framework. With increasing globalization and the interconnectedness of financial markets, capital flow movements have been a concern to central banks, particularly those from emerging market economies (EMEs).

The inflation targeting framework in EMEs has generally been successful. Inflation targeting, as practiced by EMEs, has often been combined with varying degrees of foreign exchange intervention, contrary to what you see in textbook discussions, together with the active use of macro-prudential tools. This is due mainly to the following reasons:

1. EMEs are more sensitive to capital flows and exchange rate movements, owing to their economic and financial structures.
2. Foreign exchange interventions and macro-prudential measures can ease the burden on monetary policy.

Capital flows and associated exchange rate fluctuations affect macroeconomic and financial stability in EMEs through three main channels:

1. Exchange rate pass-through to inflation
2. Export competitiveness
3. Domestic financial conditions

While exchange rate pass-through has declined, for example, in the Philippines, we see that if you cut the sample to before the introduction of inflation targeting and post-inflation targeting, the sensitivity of inflation to exchange rate movements is only about one-third of what it was pre-inflation targeting. But on the other hand, EMEs are often subject to larger exchange rate swings, so that when you look at the contribution of exchange rate to inflation, it remains significant. Large swings in the exchange rate, especially large depreciations, still have the potential to de-anchor inflation expectations.

There may also be a short-term trade-off between inflation and output stability, two broad indicators of overall welfare. For instance, a capital outflow accompanied by a depreciation could push up inflation through the exchange rate pass-through. On the other hand, the impact on output through the traditional trade channel, including through export competitiveness, can be offset by the structural constraints faced by the economy in the short term.

Likewise, domestic financial conditions could tighten, exerting a contractionary effect on the domestic economy. As a result, the central bank may face the combination of rising inflation and weak economy. Two structural features make EMEs possibly vulnerable:

1. EME borrowers could rely heavily on foreign currency borrowing.
2. Foreign investors have large holdings of EME assets, particularly bonds.

Impact of globalization on inequality

Another important corollary issue arising from globalization is inequality. The conventional view is that globalization benefits society as a whole, but more so the poor. In the early 2000s, a National Bureau of Economic Research paper found that inequality among countries has been on the decline since 1990, reflecting more rapid economic growth in developing countries due in part to trade liberalization.

However, in a later empirical investigation by the International Monetary Fund, it was shown that a key factor in determining how inequality changes in countries over time is technology. To the extent that technological change favors those with higher skills and exacerbates the skills gap, it could adversely affect income distribution in both developing and advanced economies by reducing the demand for lower-skill activities and increasing the premium for high-skill activities and the returns on capital.

The finding of a small net negative impact of globalization on inequality is a result of the opposing influences of the different components of globalization. Globalization through trade has exerted an equalizing impact, whereas financial globalization has been associated with widening income disparities.

Leveraging fintech innovations

Fintech (financial technology) developments present both benefits and risks. These innovations have allowed for lower costs of transactions; greater accessibility to funds; and increased speed, efficiency, and convenience in value transfers and payments.

With some of the innovations, lenders and borrowers have more direct and immediate access to each other. By directly linking lenders with borrowers, alternative lending platforms avoid mismatched maturities and may lead to a more stable credit environment.

Yet, these same platforms that simplify and facilitate transactions also present risks. In particular, there can arise concerns on consumer protection and

financial stability. There is a possibility of fraud and breakdown in the payments for lending platforms that can lead to the loss of funds of consumers and/or the improper use of personal data—as we have seen lately when we look at breaches of information in some social media platforms.

Most of these fintech innovations are outside the regulatory reach of monetary and financial authorities, and there may not be defined rights and obligations for the parties involved, especially with respect to cross-border transactions. With wider usage, the risks will not be limited to the users of the services but can spread and affect the mainstream financial system. Likewise, the ease of use and capacity of transactions may unsuspectingly facilitate money laundering and terrorist financing.

Fintechs are disrupting the financial ecosystem, in the sense that they are able to disband, unbundle, and reassemble financial services. They have been providing intermediary services that provide solutions to many customers, whether households or corporations, which add complexities to the role of regulators.

Most fintech innovations are on the payment system. They allow peer-to-peer value exchange without the involvement of trusted third parties like banks. The evidence, so far, suggests that while fintech companies are very useful, they can also bypass the services of banks and possibly create incentives for shadow banking.

The framework espoused by the *Bangko Sentral ng Pilipinas* (BSP) is to promote synergy between fintech companies and banks, so that the financial transactions between these two entities will still be under the regulatory ambit of the central bank.

In view of the potential benefits and risks, monetary and financial regulators need to have a balanced approach to risks and growth by keeping pace with the latest developments in the financial markets and promoting innovations and healthy competition, while addressing consumer protection issues and managing financial stability risks.

BSP regulatory framework—striking the right balance

In the BSP, we have established a regulatory environment that allows innovations to flourish but—at the same time—ensures that risks are effectively managed. Thus, the approach is three-fold:

1. To ensure that regulations are risk-based, proportionate, and fair
2. To maintain active multistakeholder collaboration
3. To ensure consumer protection

These principles are implemented through a flexible test-and-learn approach or what we usually call “regulatory sandbox”.

Fintech market players include nonfinancial firms, tech companies, and network operators that are not regulated by the BSP. Proper regulation, therefore, requires coordination with other regulators. In this respect, in August 2018, the Financial Sector Forum, which is composed of the Securities and Exchange Commission, the Insurance Commission, the Philippine Deposit Insurance Corporation, and the BSP, formed a Fintech Committee aimed at harmonizing regulatory responses to fintech innovations in the sector.

At the regional level, the BSP has entered into a collaboration with the Monetary Authority of Singapore, conveying information sharing and referral system, specifically focused on fintechs.

Promoting financial inclusion

Fintech also promotes financial inclusion to a large extent due to the wide reach of mobile penetration in the Philippines. Fintech arrangements not only

make financial services accessible to customers in “remote, hard-to-reach areas” but are also able to reduce costs by passing on to customers the lower transaction costs of fintech. Hence, digital solutions promote financial inclusion by reaching the unserved and the underserved markets on a large scale.

The BSP is also undertaking major organizational reforms and initiatives for a more proactive, supervisory, and regulatory stance. We are exploring “regtech” and “suptech” solutions, including the use of artificial intelligence, machine learning, cloud computing, and application programming interface systems to enhance the timeliness and quality of risk-based decisionmaking.

The BSP, together with industry stakeholders, launched the National Retail Payment System (NRPS) to enable more Filipinos to have access to a transaction account to send and to receive payments. The NRPS, with its interoperability objective and the payment ecosystem that is envisioned to arise from it, is positioned to be a platform for more fintech innovations.

In summary, central banks, in general, are responding proactively to fintech by monitoring developments in financial technology, expending resources to get a grasp of technological change, and developing and adopting a regulatory framework to implement fintech in a safe environment.

The key challenge for regulatory agencies is to create the right balance. Regulators should be prepared to appropriately tailor regulatory or supervisory expectations to the extent possible within their respective authorities to facilitate innovations that produce benefits for customers, businesses, and the financial system—but must also appropriately manage corresponding risks.

Panel Discussion

Question 1

Calixto Chikiamco: Undersecretary Lagunzad, how can the public and private sectors work together to ensure skills matching for the Filipino workforce?

Ciriaco Lagunzad III: Unfortunately, there is always a lag between the supply and the actual need. I think the key there is to anticipate, which is becoming a difficult task. You do not know what is going to happen, so a very good way is to be close to the ground, understanding the developments in technology, and the kind of work that will be demanded in the future. Then, feed that back to the educational system.

The Technical Education and Skills Development Authority (TESDA) is now preparing for the Fourth Industrial Revolution by anticipating that the skill requirements are different. Other than that, it is really about predicting what would be in demand. Otherwise, you would have created skills that may never be required in the future. There is a concept of creating skills, as well as destroying skills. Skills that cannot be applied are rendered “destroyed” in that sense, causing a lot of waste in resources.

This is why it is not really just the companies determining what they require but coordinating closely with the educational system—from the Department of Education (DepEd) to the Commission on Higher Education (CHED) to

TESDA. Also, the academe-industry linkage has to be as close as possible, so that we can anticipate the future demand of work.

Question 2

Calixto Chikiamco: Chairman Balisacan, I noticed that most companies here are resistant to change. I think one observation, as you said, is that we have a concentrated market, and that most companies do not feel they have to change. What are the specific policies that we have to push for to force companies to innovate and to be readier for change?

Arsenio Balisacan: I think the most serious constraint to competition here is barriers to entry. These barriers usually result in the creation of market power that I mentioned earlier. Market power, when exercised, leads to concentration of wealth and opportunities.

There is so much evidence already in the literature showing that when big companies use their dominance in the market to abuse their market power by making it difficult for incumbent and potential competitors to compete with them (by forcibly buying or under-pricing them), it will reduce competition. The usual consequences of that include higher prices, poorer quality of services, fewer choices, and less innovation.

Clearly, government in dynamic markets must ensure that the potential benefits of markets are enhanced rather than restricted.

Here, I keep on emphasizing that the barriers to entry are very pernicious in this country. They are either done by firms themselves or, worse, created through government rules, regulations, and policies. Market power also brings with it the power to influence public policy. Public policy, in turn, reinforces market power and the concentration of industry. This link has to be broken.

As Stiglitz rightly noted, you need to have a vigorous and robust competition and regulatory enforcement regime.

Question 3

Calixto Chikiamco: Undersecretary Yparraguirre, you mentioned investing in human resources to cope with rapid technological change. How does DFA, in particular, invest in its own human resources to be able to keep up with the changes that technology is bringing about?

Lourdes Yparraguirre: We are, of course, retooling our diplomats to better understand the challenges and opportunities in the digital economy, so that we can continue to promote and protect the economic interest of the Philippines abroad as well as protect the disinterest.

The changing environment is evident in the way we deal with our partners in terms of trade, investments, and tourism; we have to compete in the digital economy. Our priority interest—our mantra—is to pursue and promote an inclusive globalization. For example, we promote the interest of MSMEs—which account for about 97–99 percent of all enterprises in the Philippines—to ensure their greater participation in the global economy, as well as ensure their access to finance, technology, and the marketplace.

Early next month, we will have a conference with our heads of posts, and one of the major topics that will be discussed in this conference is the digital economy so that our diplomats abroad, as well as Team Philippines, will be able to work together. We need to work harder because we

have ambitious targets under our development plans (i.e., *AmBisyon Natin 2040*). We have to work harder in the digital economy because we have to understand the opportunities and address the challenges for the Filipino people. We need to work harder and better because we have to catch up with our high-achieving ASEAN neighbors and we need to attract more investments for our ambitious projects, such as the Build, Build, Build Infrastructure Project.

In all of these activities, our diplomats abroad play a key role. We use the various platforms (bilateral, regional, and multilateral) to promote and protect our economic interests abroad.

Question 4

Calixto Chikiamco: Deputy Governor Dakila, a number of rural banks have been closed or are closing. They are at the frontlines of extending credits to the countryside. Yet, we say we want to promote financial inclusion. How can rural banks compete with big banks, especially now with the emergence of fintechs?

Francisco Dakila Jr.: Fintech, as a tool, is probably to the advantage of smaller banks because it is less capital-intensive. It is very much suited to the needs of our economy. As you know, we are an archipelagic country, so, in many remote areas, it is not economical to put up traditional bank branches (i.e., the brick-and-mortar type of setup), which have large fixed costs.

Fintech can reduce the cost of bringing banking services to the poorer and more remote sectors of the economy. They can make use of this technology.

We have also embarked on some activities that would make it easier for the public to access the banking system. For example, we have reduced the identification requirements, which will be further enhanced once we have the National ID System. It will just require one document or ID for you to establish your identity.

All of these technologies can be used by our smaller banks. Of course, we have liberalized entry into the banking system. If a bank feels its scale of business is too low, it is free to merge with other banks to achieve the advantage of economies of scale. It can even attract foreign capital because foreign capital can now go into rural banks.

Question 5

Calixto Chikiamco: Dr. Fred Pascual, as you know, Indonesia has three unicorns, and one of them is Gojek, which is in the 10- to 15-billion dollar range. The Philippines has none, zero. What do you account for this disparity?

Alfredo Pascual: I suspect they have more enterprising entrepreneurs.

Why did Gojek succeed in Indonesia? Firstly, Indonesia has a much bigger market. I think the big businesses in Indonesia are much bigger than the

ones in the Philippines. If Gojek has the backing of a big business there, then it is expected to be well able to grow. In fact, it has been acquiring locally established fintech companies, such as coins.ph, for example.

I have not really looked into their operations in detail. But I suspect that their home base being a bigger market is a factor. In business, you must first grow big in your own market. It is still the case for emerging markets. You cannot leapfrog to the global market at once. Gojek was able to grow big in Indonesia before moving outside.

Calixto Chikiamco: Anybody close to being a unicorn?

Alfredo Pascual: I think we are waiting for a black swan. Kidding aside, we have two fintech associations here (i.e., Fintech Philippines and Fintech Alliance), and hopefully, they can guide their member-firms in growing their businesses.

Open Forum

Question 1

Grace Magalzo-Bualat (University of San Carlos in Cebu): I would like to focus on the impact of globalization on education. For example, in the tertiary level, we have a course on globalization; we call it the “Contemporary World”, which is one of the reforms initiated by CHED Memorandum Order 20, series of 2013. But I would like to focus on the K-12 educational reform. One of the promises of the reform is for the K-12 graduates to be hired after they finish the K-12 program.

Do we see in the near future the industry willing to hire the graduates of K-12, even if they did not proceed to the tertiary level? Do we see this paradigm shift on the part of the industry?

Alfredo Pascual: I think our schools have to show a proof of the concept. In concept, K-12 is supposed to produce employable graduates. But industry people have yet to see the proof of that concept.

I was campaigning for this with the Philippine Chamber of Commerce and Industry and other friends in industry to start revising their job descriptions, so those jobs that do not require a college degree can hire high school up to senior year high school graduates. However, it has a slow uptake because of their experience with high school graduates.

I am with the Rotary Club of Makati, and we donated a girls’ dorm in Sumilao, Bukidnon. When we were inaugurating, the mayor was there, and he asked us to further support the school with digital means of delivering lessons. Definitely, he was not convinced about the competence of those who were handling the learning process there because he did a survey of all the high schools in his town, and it turned out that a big percentage of high school students were found to be illiterate.

You can project that to be the case in a number of schools in other places. The more expensive high schools that train students very well produce students who eventually go to college. These are students who will not seek employment after high school. The ones who will seek employment after high school are those coming from less-endowed schools. They are not planning to go to college because of financial and other reasons. Their employability is difficult under the present condition.

That is why I opposed the universal tuition at the tertiary level because that money should have been used to improve basic education in the country—rather than spend for college students from families who can well afford to pay for the tuition of their children in college.

Grace Magalzo-Bualat: I do hope that DepEd, CHED, and the industry can sit down together to address the gap and the mismatch between the skills of the graduates and the needs of the industry.

Question 2

Vicente Paqueo (PIDS): I have one comment and a question. The graph shown by Dr. Balisacan, which came from the World Bank, shows wage stagnation, more or less, with labor productivity rising and poverty rate coming down, which I find intriguing. Why is wage rate stagnating while productivity is rising?

I think you need to look at the nonwage benefits because that wage rate is daily wage rate. When you look at NEDA data, where basically you use compensation divided by the number of workers, you will see that, in fact, there is a parallel trend between labor productivity and total compensation per worker, which is as predicted by standard economics.

My question, however, has to do with this morning's observation about Viet Nam being the biggest beneficiary of the old and the New Globalization, where it is reaping the investment coming from China and the rest of the world. It is also benefiting from disrupted trade. Over the years, despite increasing inequality, the poverty rate has gone down. What did Viet Nam do right? What lessons can we learn from Viet Nam's experience?

Is it because their investment environment is friendly to foreign investment? Is it because their labor regulations, laws, and environment provide greater agility and flexibility to companies, both local and foreign, in making decisions? Is it because of their education system, where they were able to beat average OECD countries, including the US and the UK, in learning achievement tests in science and mathematics?

Arsenio Balisacan: With respect to your first observation on the patterns of wage rate and labor productivity, we can sit down and discuss the details. You can look at other indicators of productivity, such as land productivity, and you will also see a similar story. But, I think, the problem is more complicated than that. There are measurement issues, obviously. There is also

concern on the comparability of the series in labor statistics because of changes in definition over time. You cannot really look at a very long period of time because of difficulties and problems with regard to comparability.

The point is, even if you look at the concept of total income received by households in the last 15 or 30 years, you will see quite respectable growth. If you compare the ability of that growth to reduce poverty in our neighbors, when they were at similar stages of development, you will find that the response to poverty and other indicators of human development is much weaker in the Philippines than in other countries.

This is a puzzle for development economists. What are we doing wrong that our neighbors are doing right?

Regarding your question on Viet Nam, I think everything that you noted applies as well. To begin with, Viet Nam is a socialist country. In the early stages of their industrialization, there was much less inequality than what we had here in the Philippines. When you have a country that is growing rapidly, and it is starting with a low level of inequality, especially when that growth is coming from agriculture, you are bound to have a very rapid poverty reduction.

This is not the story that you will find in the Philippines because the high level of inequality, especially of opportunities, prevents that level of rapid growth to trickle down to the poor.

If you talk about inequity in access to opportunities, you will run across many problems (i.e., health, education, infrastructure, and finance). You have to address each of these dimensions of development. I am so worried about the social sector (i.e., health and education), as the way we are investing there does not give us a reasonably promising future, especially for the poor today.

The data is simply shocking—that one-third of our population (children) is malnourished. What kind of competition can they bring when globalization or the integration of ASEAN economies proceeds? They will simply be wiped out.

CLOSING SESSION

Closing Remarks

Aquilino Pimentel III | Senator of the Republic of the Philippines and Chair of the Senate Committees on Foreign Relations and Trade, Commerce, and Entrepreneurship

At the outset, let us congratulate the Philippine Institute for Development Studies (PIDS) led by its President, Dr. Celia Reyes, for the successful staging of the fifth Annual Public Policy Conference. PIDS is doing its job as the government's primary socioeconomic policy think tank.

Your theme for this conference is an excellent choice because globalization is an important concept for everyone to understand. The increasingly integrated global economy is here to stay. Whatever we think about globalization, the genie is already out of the bottle. In chess parlance, this is "touch move". Globalization is here to stay.

Because I am sure that your speakers focused on "globalization", allow me to focus on the easier word—"new".

The meaning of the word can range from recent, modern, novel, unfamiliar, and having recently come into existence, among others. Whatever meaning we give to the word "new", my point is this: planners and policymakers must always prepare for newness in this world.

This saying is attributed to Heraclitus, who allegedly said: "There is nothing permanent except change."

Even our planners and policymakers will be changed in due time, but, while they or while we are still in office, we must always be open to change,

be conscious that change will definitely come, and, hence, have the attitude and aptitude of always anticipating the future and preparing for change. Prepare for the newness not only in globalization but also in everything.

Your Senate has finally organized a new standing committee named "Committee on Sustainable Development Goals, Innovation, and Futures Thinking", chaired by Senator Pia Cayetano, so that the Senate can anticipate, keep up, and properly react to our fast-changing world, which is caused by the rapidly changing preferences and behaviors of people.

We know that something is happening because we can feel it.

Our world order is changing. The so-called "economic nationalism" is on the rise. Immigration is getting stricter and tougher. Institutions like the World Trade Organization, International Monetary Fund, World Bank, and other international organizations have less influence now. Many nations are looking inward and saying, "Our People First".

If this is the meaning of the "New Globalization" mentioned in your theme, then it is good that PIDS is helping our country prepare for this new world arrangement.

But, however way we prepare for this New Globalization, I submit that we have to improve

the culture of the Philippines if we want, as a nation, to succeed under any new world order:

1. We have to live under a culture of fairness in the Philippines.
2. We have to develop a culture of science in the Philippines.
3. We have to have a culture of honesty in the Philippines.

Even if we are able to cope with the New Globalization, if our society is not fair, if the gap between the rich and the poor is unconscionable, if the justice system is loaded against the poor and always in favor of the rich, then this is a society I would not want my children and grandchildren to be in. And, who knows, the social volcano we step on everyday might even blow up on our faces. PIDS, let us work for a fair society.

What drives most of the changes we see today? It is no other than science and technology. How can we succeed in a highly scientific and technological world if we do not have a culture of science in the Philippines? Without a scientific culture, we will continue to be the consumers that we have always been, even under this New Globalization. Hence, we need to start inventing and producing “original things” that the rest of the world wants. The Philippines should be a nation of scientists, inventors, programmers, and original manufacturers. PIDS, let us work for a scientific society.

Still a serious problem up to this date is corruption.

The recent discovery of massive fraud in PhilHealth, which is now a subject of a senate investigation in aid of legislation, is especially troubling, as it occurs in an institution that delivers basic service to the poorest of the poor and involves people who have taken an oath to “abstain from harming or doing wrong to any man”.

There are also recent revelations of corruption in the Bureau of Corrections. There may be other incidents. This will only destroy our day; hence, I will no longer mention them.

There are corrupt lawyers, doctors, military and police personnel, engineers, and even low-ranking employees in the government. There is even corruption in the private sector. It is obvious that corruption has not been addressed by our formal educational system. But is there really a way to teach people how not to be corrupt? To this question, I do not know the answer. Hence, PIDS, please also pay attention to the problem of corruption, which is not only a criminal issue but also a socioeconomic one.

Modern society has many challenges. This is what makes life exciting, especially for us who want to solve actual and real problems.

On my part, as the chairman of the Senate Committees on Foreign Relations and Trade, Commerce, and Entrepreneurship, I am open to talk about local solutions to modern-day problems, including these so-called “global problems”.

To help address the problems of our OFWs, I have proposed the creation of the Department of Overseas Filipino Workers (Senate Bill 92).

To help address the problems of micro-entrepreneurs, I have proposed the *Pondo para sa Pagbabago at Pag-asenso* (P3) Program Bill (Senate Bill 95). This bill proposes to institutionalize the P3 Program of the Small Business Cooperation to provide microenterprises a cheaper source of financing, thereby addressing the financing concerns of micro-entrepreneurs across the country, especially those in the poorest provinces. This is the so-called “5-6 killer”.

To put an end to “global waste trade” affecting our country, I have proposed a Waste Importation Ban Bill (Senate Bill 98). We will ban the importation of waste under any guise. If we want to convert waste into energy, then let us convert domestic waste into energy. We should not import waste even for the (alleged) purpose of converting it into energy. We should prevent the Philippines from becoming the dumping ground of the world.

To prepare our children for the New Globalization, I have proposed the teaching of

computer codes at the basic education level (Senate Bill 99: Integration of the Computer Science Curriculum in the K-12 Program Bill).

To help develop our science culture, I have proposed the creation of the Research and Development Council of the Philippines Bill (Senate Bill 685). The State should be willing to directly fund research and development programs.

These are just some of the bills I have filed. I hope that the scope of these bills covers most of the areas affected by the New Globalization. But, even if they do not, what is important is

my willingness, as a legislator, to sit down with stakeholders and those affected by change, as well as anticipated changes, so that we can prepare early to meet these changes and upcoming challenges.

At the end of the day, we all have only one primary goal: the fair and sustainable development and progress of our country and our people.

Thank you, PIDS, for this invitation. Senator Koko Pimentel is very much willing to use his “kokote” together with you for the good of our country. Once again, congratulations to PIDS and to all the participants.

Key Takeaways

The conference program was organized into various sessions, namely, understanding the New Globalization, worsening inequality, global trade restructuring, challenges to the provision of global public goods, weakening social cohesion and trust, and ways forward. The following presents the key takeaways from the presentations and discussions, which we cluster around three themes: A global economy in flux; A society that supports; and Building a shared world.

A global economy in flux

- 1. Digital technology is changing many things very rapidly. Together with robotics, it is influencing globalization in a new direction. Globalization is happening faster than most believe and taking place in unexpected ways, creating disruptions in the way societies live and work. The government needs to be agile and prompt in responding to the challenges. It also needs to strike rapidly so that the country and its citizens are prepared to face whatever opportunities turn up.*

“Globotics”, which refers to the combination of globalization and robotics, is affecting service and professional jobs and not just factory jobs. Those who have access to develop the skills or expertise needed in the Fourth Industrial Revolution have an advantage over those who are less skilled. It is imperative to manage the transition. The government’s role is to help the economy adjust by providing social protection for industries and

workers who will be at a disadvantage and by making labor markets flexible. Both the government and the private sector should cooperate in capacitating the current workforce by providing workers’ training and retraining. Human ingenuity and entrepreneurship are crucial for job creation, which needs to be fast-tracked to mitigate the impacts of job displacement from automation.

- 2. The Fourth Industrial Revolution (FIRe) can bring huge benefits, such as empowering small and medium enterprises (SMEs) in creating new ways to connect and provide residents with payment, healthcare, and transport services.*

The opportunities for SMEs are tremendous, but many are constrained by their ability to grow due to lack of access to finance, business services and information, and markets beyond their immediate neighborhood. However, the rise of digital marketplaces and online services can empower SMEs to trade in ways unimaginable even a few years ago, connecting them to large regional markets rather than just local customers. However, there are SMEs that are proactive in embracing digital transformations, and they are mostly led by younger, more dynamic, and tech-savvy entrepreneurs. The Philippine start-up community, not only in Manila but also in other key cities in the country, is expanding. These companies, whose primary business models are dependent on digital technology, prove that digital transformation is critical in the age of FIRe.

3. *Financial technology (fintech) developments present both benefits and risks. Most fintech innovations are outside the regulatory reach of monetary and financial authorities. There may be no defined rights and obligations for the parties involved, especially for cross-border transactions. With wider usage, the risks will not be limited to the users of the services but can spread and affect the mainstream financial system. Likewise, the ease of use and capacity of transactions may unsuspectingly facilitate money laundering and terrorist financing.*

Given the potential benefits and risks of fintech innovations, monetary and financial regulators need to have a balanced approach to risks and growth by keeping pace with the latest developments in the financial markets and promoting innovations and healthy competition, while addressing consumer protection issues and managing financial stability risks. The *Bangko Sentral ng Pilipinas* advocates a framework of promoting synergy between fintech companies and banks, so that the financial transactions between these two entities will still be under the regulatory ambit of the central bank.

4. *Economies are not separate entities but interconnected units within a complex value chain. The United States and China are two of the main hubs in global production. They are the world's largest economies and the two largest traders, accounting for two-fifths of global gross domestic product and a quarter of global trade. Both countries will be the biggest losers in their trade war, while others may gain from trade redirection.*

For developing Asia, the net impact of the trade war is slightly positive. The biggest winners will be Viet Nam, Thailand, and Malaysia because they already produce and export those goods that are similar to what China produces and that are already or may soon be subjected to tariffs. For the Philippines, its manufacturing sector stands to gain the most. The net effect for the Philippines' agricultural sector and services sector is small.

5. *To benefit from the trade redirection, a robust industrialization policy is necessary.*

Part of the policy should be on improving the country's infrastructure and logistics—factors that neighboring countries are very good at; hence, they are likely to benefit more from the trade redirection. Moreover, three industry development initiatives are a must: (1) creating an enabling business environment, (2) intensifying industry promotion strategies, and (3) enhancing local value-added. The Philippines should also tap the free trade agreements (FTAs) that it already has, such as those under the Association of Southeast Asian Nations and its various bilateral FTAs.

6. *To help those who have remained in agriculture, there is a need for a more nuanced understanding of agricultural employment and structural change.*

In the Philippines, the majority of the poor work in agriculture or belong to households headed by agricultural workers. They are mostly male. Most agricultural workers hold a second job or multiple occupations as a coping mechanism. They switch jobs frequently on a three-month or quarterly basis when agricultural work is scarce or when the pay is low. In a PIDS study, about 477 individuals had agriculture as their primary job in the first quarter. By the fourth quarter, 47 percent of them have already shifted to nonagricultural work or have gone into agribusiness. If a worker leaves agriculture, that same worker may return to it within the year, but statistics cannot capture this movement if the reference period is too short.

7. *In creating a digital society, having a problem-solving, not a political mindset, is essential. Good governance is indispensable to grow the digital economy.*

Estonia's experience shows the relevance of the following seven principles that every aspiring digital nation needs to implement: (1) universal access

to the internet, (2) strong digital identity, (3) data interoperability, (4) people's trust in the system, (5) system transparency and understanding by the people on how their privacy is being protected, (6) absence of legacy systems, and (7) continuous engagement with citizens to get their feedback on how to improve the system.

Part of good governance is having a proper regulatory environment in the country that allows digital innovations to flourish and ensures that risks are managed effectively. Adopting the regulatory sandbox approach, or the test-and-learn approach, is a useful way to develop and test innovations. Building trust is crucial; hence, appropriate laws concerning data privacy must be present and effectively implemented. Enhancing compliance with laws may be done by using a carrot-and-stick approach. Incentivizing start-ups is another way to go.

8. Blockchain has various government applications for building trust, such as shared data services, smart contracts, authenticity applications, and digital identity programs.

Policymakers can help advance public sector blockchain applications in several ways. One is by actively supporting blockchain adoption and deployment. Governments should work toward understanding how blockchain works and looking where it can add value in their current programs and then adopt it by embracing new and emerging technologies. Another way is by supporting blockchain research and development. There are still many problems with the current blockchains. Often, they are not scalable, or they are not redundant enough. Putting a lot of interest and investment to address issues of scalability and efficiency can help with the adoption of this technology. Striving for international data interoperability is also needed. Governments can play a huge role in bringing in the private sector to help create data interoperability standards so that people can adopt the technology anywhere and everywhere. Another way is by building trust and certainty.

A society that supports

- 1. The internet and social media were originally hailed as enablers of education and information, but, in fact, it has been co-opted by purveyors of misinformation for political or other ends. Black propaganda and black operations in politics have evolved into "fake news" and manipulation of public opinion in the digital age.*

Over time, with the popularity of the internet and social media, the actors involved in the production and transmission of fake news have expanded to include not only those in advertising and public relations but also celebrities and even ordinary people. A significant change in the political campaign process found in a recent study is the shift from using big or mega-digital influencers (those with millions of followers and are usually celebrities or known personalities) to micro- or nano-digital influencers (those with only tens of thousands or even 10,000 or less followers) as they are cheaper than famous digital influencers. With their anonymity, it is also not too obvious if they circulate fake news. Micro-influencers also look more authentic, more organic, and more real. The fans of politicians also play a big part in spreading fake news by picking them up to support their candidate. To regulate fake news, the marketing and PR industry, and the digital influencers should be held accountable by requiring them to be transparent about their engagements with politicians. Fact-checkers and digital platforms also need to maintain their credibility and be transparent as well. The challenge for them is to keep their objectivity and veer away from political partisanship.

- 2. An open and inclusive society is one that avoids extreme inequality. Inequality is not an inevitable outcome of globalization, trade, or technology per se; its evolution can be strongly determined by policy.*

The United States (US) and Western Europe opened up in relatively similar ways to trade and technologies over the same period but have followed radically divergent pathways. In the 1980s, both regions have the same level of inequality: the top 1 percent share of income was about 10 percent in both the US and Western Europe. Since then, the two have severely diverged. In 2016, while the income share of the top 1 percent in Western Europe was 12 percent, it was 20 percent in the US. The story of China and India is relatively similar. Both countries have similar inequality levels in the 1980s but with opposing pathways over time. The share of the bottom 50 percent of Chinese has grown four times faster than the share of the bottom 50 percent of Indians. The reason has a lot to do with the investments in education, health, and infrastructure made by China. These investments are vital in reducing inequality, and progressive taxation is crucial to finance those investments.

3. *Many factors cause inequality, and the lack of a competition policy is one of them. In the Philippines, markets are ruled by monopolies and duopolies, which are more than one can find in Indonesia, Malaysia, and Cambodia. Highly concentrated markets bring about market power, which leads to further increases in wealth concentration. Product market regulation or competition is also quite restrictive in the Philippines than in its neighbors.*

Competition is not about being antimarket. It is about enhancing the ability of markets to deliver economic welfare. Economic welfare will only be assured if markets provide goods and services at lower prices, with more choices, and with better qualities. Competition also leads to faster and greater innovation.

4. *Extremes of poverty and inequality are often linked with grave deficiencies in human health. The Philippines' demographic*

sweet spot by 2050 may turn out to be a demographic timebomb if the country will not be able to address malnutrition and other health problems.

Stunting has always been a problem in the Philippines. One in every three children or 33.5 percent of Filipino children below five years old is stunted. Stunting has long-term health effects affecting the maximum brain development of a child. The country may have an abundant workforce by 2050, but one out of three Filipinos may be a compromised working class with low productivity. This situation points to the compelling need to address this perennial health issue if the Philippines wants to have a good future in this globalizing world.

5. *Two key areas in reducing poverty and boosting shared prosperity in the Philippines are strengthening peacebuilding in Muslim Mindanao and protecting the county from climate and disaster threats through mitigation and adaptation efforts.*

A closer look at the Philippines reveals that high levels of poverty can be found in areas most affected by conflicts and disasters. These are primarily parts of the Mindanao region, especially the Bangsamoro Autonomous Region in Muslim Mindanao and areas around it; for disasters, most affected is Eastern Visayas. The poor are generally vulnerable to both conflict and natural disasters. Analysis of a scenario with climate change shows that its impact can be quite extreme on economic growth and poverty reduction. By 2050, economic development will come to a halt almost entirely, and most Filipinos will not be part of the global middle class. Other critical areas for poverty reduction are eradicating malnutrition, particularly stunting, improving the quality of schooling, building quality infrastructure, and opening the economy to greater competition.

6. *To improve the health outcomes in the country, the thinking on how health is created should be reversed. It is not created by more doctors and nurses or having more health facilities. It is about creating a health-literate and empowered population—people who know how to achieve better health—and providing healthier environments where people live, learn, work, and play.*

The risks and threats to health are global in nature, and they come from having a highly globalized environment. Various factors need to be considered, including climate change, consumption of processed food, tobacco use, internet use, stress, and mental health. Creating a health-promoting environment requires a holistic approach that recognizes the intersection of health with education, energy, housing, agriculture, trade, transport, culture, sports, and arts. This reflects the need to cultivate strategic partnerships between the health sector and other sectors. Strategic communication and empowering people to take control of their lives and health are likewise key to better health outcomes. People should have the knowledge and skills to take care of themselves better.

7. *The issue of climate change cannot be isolated from sustainable development. Sustainable development should be embraced and should be aligned with the precepts of increasing societal resilience, both in the aspect of having climate change mitigation and adaptation in place and in securing disaster-resilient infrastructure. Measures such as disaster insurance and climate risk insurance should be considered in the discussion.*

The Philippine development pathway to industrialization should include having a sustainable, secure, and reliable energy supply and pushing for decarbonization at the same time. Such decarbonization requires technologies for the manufacturing sector. There should also be

incentives for technology incubation and locally developed strategies that will usher in green jobs. Incentives for firms promoting green jobs and implementing environment-friendly business practices should also be encouraged. Technology assessment and determining which technologies can be incubated at local universities are also recommended. There is also a need to ensure that government departments are performing their climate change adaptation and mitigation commitments. It is essential to know which activities are funded and where the gaps are.

Building a shared world

1. *The bulk of the Philippines' natural resources is not terrestrial; it is maritime—the seas and the oceans—also known as the blue economy. Protecting and promoting the blue economy has both national and international dimensions.*

Mostly untapped, the blue economy could provide the Philippines with the legs to break free from the middle-income trap. The monetary value of the country's marine ecosystem ranges from USD 970 billion to USD 1.5 trillion, including the economic and social benefits generated by the entire ecosystem in its territory. This is a vast amount of resources that, if the country fails to protect, will be to its disadvantage. Recognizing the blue economy as the linchpin of the country's sustained progress is not just about extracting its resources but, more importantly, doing it in a way that sustains and protects the environment. One part of blue economy policies would have to do with the national policy of a country. The other would have to do with foreign policy because protecting marine resources requires the cooperation of countries. The challenge is how to trigger that cooperation. Based on 14 cases of regional public goods provision examined, collective action usually has well-defined cooperation frameworks embodied in legal framework agreements and treaties.

Facilitating cooperating countries' collaborative efforts to carry out the agreements and treaties are international entities and organizations. Evidence has also been found to be extremely important because credible and unbiased data and evidence are essential in crafting cooperation agreements. In practical terms, research provides information on who benefits the most and who can shoulder the most cost. This area is where think tanks can contribute heavily.

2. *International law is crucial in the effective provision of global public goods as it fosters international cooperation. Upholding it is a sine qua non in a country's foreign policy.*

In terms of the international maritime regime, the United Nations Convention on the Law of the Sea (UNCLOS) provides the legal framework for the sustainable development of the marine environment. It defines the rights and responsibilities of nations concerning their use of the world's oceans, establishing guidelines for businesses, the environment, and the management of marine resources. Many different interests are at play in the UNCLOS, including security and safety, economics, and sovereignty over land features. As policy recommendations, it would be in the Philippines' best interest to leverage the July 2016 arbitral ruling on the South China Sea. It should also consider pursuing joint exploration and exploitation activities with China provided that it complies with the Philippine Constitution and UNCLOS and will do away with secret clauses. Policymakers should also advocate the passage of the pending UNCLOS-compliant Archipelagic Sea Lanes Passage bill. Once it becomes a law, the government can designate the sea lanes where foreign merchant ships and warships could pass. It can also require foreign ships exercising the

right to archipelagic sea lane passage to turn on their automatic identification system (AIS) and for submarines to surface and show their flag. This law can potentially resolve the issue of Chinese warships traversing the country's territorial and archipelagic waters without permission. The recent Recto Bank incident is also a wake-up call for the government to empower the fishermen. They should be educated on their rights and responsibilities, so they can comply with international conventions, and be provided with financial aid if they cannot afford an AIS. The country should also invest in its navy and coast guard for better maritime domain awareness, more effective protection of its economic rights and resources, better security for its people, and greater ability to comply with and enforce international law.

3. *Navigating the New Globalization and meeting the objectives of the Philippine Development Plan (PDP) 2017–2022 and eventually the AmBisyon Natin 2040 of a prosperous and predominantly middle-class Philippines where no one is poor require a whole-of-society approach.*

This approach could only work by cultivating a high-trust society. Trust is essential to make people believe in each other and cooperate to achieve the country's goals. In an environment of considerable volatility, uncertainty, complexity, and ambiguity, reaching out to each other and building trust are essential. The result of a high-trust society is *malasakit*, or in Filipino, solidarity, which is the first pillar of *AmBisyon Natin 2040*. Trust and solidarity grease the wheels to make collaboration happen among the different sectors of society in terms of thinking of solutions to navigate the era of the New Globalization.

CONFERENCE PHOTOS

OPENING SESSION



MORNING PLENARY



SESSION A: WORSENING INEQUALITY



SESSION B: GLOBAL TRADE RESTRUCTURING



SESSION C: CHALLENGES TO THE PROVISION OF GLOBAL PUBLIC GOODS



SESSION D: WEAKENING SOCIAL COHESION AND TRUST



AFTERNOON PLENARY



CLOSING SESSION



Profiles

Speakers/Panelists/Authors

Richard Baldwin is Professor of International Economics at the Graduate Institute (Geneva), ex-president of the Centre for Economic Policy Research (London), and founder of VoxEU.org. In addition to his research and teaching, he advises governments and international organizations around the world on globalization and trade policy issues. In 1990–1991, he served as a senior staff economist for President George Bush’s Council of Economic Advisors, having completed his PhD in Economics at the Massachusetts Institute of Technology with Paul Krugman (with whom he has published half a dozen articles).

Arsenio Balisacan serves as the first Chairman of the Philippine Competition Commission. He is an economist with extensive high-level policymaking practice and a well-recognized expert in Asia on economic development, inequality and poverty, competition policy, and political economy of policy reforms. He is a faculty member of the University of the Philippines (UP) School of Economics for over three decades. He was Socioeconomic Planning Secretary and concurrent Director-General of the National Economic and Development Authority in 2012–2016. He was Dean of the UP School of Economics, Director-Chief Executive of the Southeast Asian Regional Centre for Graduate Study and Research in Agriculture, and Undersecretary of the Department of Agriculture.

Kristina Baris has been a research associate at the Asian Development Bank (ADB) since 2018. Her research expertise includes international trade, global value chains, and energy capacity-building. She was project finance manager for Bergs Energy Consulting. For over six years, she held various positions in energy consulting, project management, research, and community engagement. She also worked at the Development Bank of the Philippines and IBM Philippines. She holds a BS in Management from the Ateneo de Manila University and a double Master’s degree (magna cum laude) in International Business and Economics from the University of Pavia in Italy and Strasbourg University in France (with honors).

Roehlano Briones is a Senior Research Fellow at the Philippine Institute for Development Studies (PIDS), where he conducts policy research for the Philippine government, with specialization in agriculture. He has authored numerous published research papers and co-edited four books on the economics of agriculture and natural resources, rural development, food security, international trade, and the macroeconomy. He is a Board Member of the consultancy group Brain Trust Inc., past Board Member of the Philippine Economic Society, and Fellow of the Foundation for Economic Freedom. He obtained his PhD from the UP School of Economics and did postdoctoral research at the WorldFish Center in Penang, Malaysia.

Calum Cameron consults to governments, corporations, and start-up communities to catalyze and accelerate their perpetual digital innovation. He is a digital innovation consultant with Proud Engineers and the architects of e-Estonia. He helped design the Estonian Government innovation program “Accelerate Estonia” where he now acts as a key mentor to entrepreneurs tackling big societal challenges in partnership with the government. Most recently, he helped initiate and organize the “Hack the Crisis” series of hackathons and “The Global Hack”. These events have reached over 200,000 participants across 100+ countries rapidly delivering thousands of solutions to urgent local challenges like COVID-19.

Antonio Carpio was an Associate Justice of the Supreme Court from 2001 to 2019. He obtained his undergraduate degree in Economics from the Ateneo de Manila University and his law degree from the University of the Philippines (UP) College of Law, where he graduated valedictorian in 1975. He founded the Carpio, Villaraza and Cruz Law firm and was also a Professorial Lecturer of the UP College of Law from 1983 until 1992 when he was appointed Chief Presidential Legal Counsel by President Fidel Ramos. He published a book titled, *The South China Sea Dispute: Philippine Sovereign Rights and Jurisdiction in the West Philippine Sea*, in 2017.

Lucas Chancel is Co-Director of the World Inequality Lab and World Inequality Database (WID.world) at the Paris School of Economics. He lectures at Sciences Po in the Master of Public Policy on the economics of inequality and sustainable development. He has been Senior Research Fellow at the Institute for Sustainable Development and International Relations since 2011, where he conducts research on the social dimension of sustainable development. He holds a PhD in Economics from the Ecole des Hautes Etudes en Sciences Sociales, Paris Sciences Lettres Research University, an MS in Economics and Public Policy from Sciences Po and Ecole Polytechnique, an MS in Energy Science from Imperial College London, and a BS in Physics and Social Sciences from Paris VI and Sciences Po. He also studied at the London School of Economics and Jawaharlal Nehru University, New Delhi.

Francisco Dakila Jr. is the Deputy Governor of the Monetary and Economics Sector at the *Bangko Sentral ng Pilipinas* (BSP). Prior to this, he was the Assistant Governor of the Monetary Policy Sub-Sector. Before joining the BSP, he worked at the US Agency for International Development and at the Agricultural Credit Policy Council. He received his PhD and MA in Economics and BS in Economics (magna cum laude) from the University of the Philippines-School of Economics. He is a lifetime member of the Philippine Statistical Association and the Philippine Economics Society. He is also a member of the International Input-Output Association.

Gabriel Demombynes is the World Bank's Program Leader for Human Development for Brunei, Malaysia, Philippines, and Thailand. His work has been published in academic journals, and cited in the *Financial Times*, the *Washington Post*, and *Economist* magazine. He has taught economic development at the Johns Hopkins School of Advanced International Studies and was Economic Policy Advisor to Howard Dean during his 2003–2004 US presidential campaign. He holds a PhD in Economics from the University of California-Berkeley and bachelor's degrees in Civil Engineering and Humanities from the University of Texas at Austin.

Ma. Corazon Dichosa is a career executive with more than 25 years in the Board of Investments (BOI) where she is currently the executive director of the Industry Development Services. She is tasked to handle industry-related matters and policies of the agency. She has handled various assignments in BOI, from industry development to international marketing and international negotiations. She also handles environmental policy matters, the agency's Performance Governance Scorecard, and information and communication. She holds a BS in Chemical Engineering and MS in Environmental Engineering from the Mapua Institute of Technology and Bachelor of Laws from Adamson University.

Cielito Habito served as Secretary of Socioeconomic Planning under President Fidel V. Ramos in 1992–1998. He is currently Professor of Economics at the Ateneo de Manila University, and Senior Fellow and former Director of the Ateneo Center for Economic Research and Development. He is also Chairman of Brain Trust Inc. His op-ed column “No Free Lunch” appears twice weekly in the *Philippine Daily Inquirer*. He holds a PhD and MA in Economics from Harvard University, Master of Economics from the University of New England (Australia), and BS in Agriculture (major in Agricultural Economics) summa cum laude from the University of the Philippines.

Jerome Ilagan is the Chief of the Policy Research and Development Division of the Climate Change Commission. He leads in the updating of the Philippine National Framework Strategy on Climate Change and the National Climate Change Action Plan and facilitates the conduct of researches, studies, and policy review on climate action, including multisectoral consultations to align climate science to appropriate adaptation and mitigation actions to inform and influence national and subnational strategies and programs, especially in the areas of inclusive action and just transition.

Ciriaco Lagunsad III was Undersecretary of the Department of Labor and Employment's Workers Protection and Internal Auditing Cluster. Prior to this role, he served as Executive Director of the National Wages and Productivity Commission. Under his stewardship, he introduced trailblazing reforms, such as the Two-Tiered Wage System, which is a combination of fixed and performance-based compensation scheme. The system also tightened the link between wages and productivity, paving for the issuance of wage advisories in priority growth sectors and key employment generators. He also helped in the rollout of the *Batas Kasambahay* and the development of productivity training programs, which was later packaged as the Productivity Toolbox.

Mahinthan Joseph Mariasingham is a Senior Statistician at the Asian Development Bank (ADB) where he leads statistical capacity-building initiatives in the economic statistics and statistical infrastructure domains. He leads a number of projects spanning more than 20 countries in Asia and the Pacific region. He was responsible for the development of the Asia-focused multiregion input-output database and the statistical business register system suite of the ADB. Mariasingham started his career at Statistics Canada in 1999, specializing in the System of National Accounts and input-output economics. He earned his bachelor's and master's degrees in Economics from Queen's University (Canada).

Alan McQuinn was a Senior Policy Analyst at the Information Technology and Innovation Foundation. He wrote and spoke on a variety of issues related to information technology and internet policy, such as cybersecurity, privacy, blockchain, fintech, e-government, internet governance, intellectual property, and aerospace. He graduated from the University of Texas at Austin with a BS degree in public relations and political communications and a minor in Mandarin Chinese.

Erlinda Medalla was a Senior Research Fellow at PIDS and project director of the Philippine APEC Study Center Network (PASCN) Secretariat before her retirement in March 2018. She led various research at PIDS since joining the Institute in 1981. She conducted research on trade and industrial policy and had written numerous papers on trade and investment, regional integration, and competition policy, among others. She obtained her PhD in Economics from the University of the Philippines School of Economics in 1979 and was a postdoctoral Fellow at Yale University a year later.

Ronald Mendoza is Dean and Associate Professor at the Ateneo School of Government. From 2011 to 2015, he was an Associate Professor of Economics at the Asian Institute of Management (AIM) and the Executive Director of the AIM Rizalino S. Navarro Policy Center for Competitiveness. Prior to that, he was a Senior Economist with the United Nations in New York. His research background includes work with UNICEF, UNDP, the Federal Reserve Bank of Boston, the Economist Intelligence Unit, and several Manila-based nongovernment organizations.

Susan Mercado is Special Envoy of the President on Global Health Initiatives in the Philippines and Board Member, Public Health Expert of the Philippine Health Insurance Corporation. She worked with the World Health Organization (WHO) for 15 years and was WHO Director for NCD and Health through the Life Course in the Western Pacific. She was previously Undersecretary for Health. She was awarded as Distinguished Alumni in Global Health by the University of the Philippines (UP) in 2017. She has an AB Philosophy (*magna cum laude*), Doctor of Medicine, and Master of Public Health from UP.

Jonathan Corpus Ong is Associate Professor of Global Digital Media at the University of Massachusetts at Amherst, USA. He is Co-Editor-in-Chief of the 20-year-old media studies journal *Television & New Media*. He is the author of *The Poverty of Television* (2015, Anthem Press) and recipient of the Philippine Social Science Research Council Award of Excellence in Research.

Jeffrey Ordaniel is nonresident Adjunct Fellow and Director of Maritime Programs at the Honolulu-based Pacific Forum. Concurrently, he is also Assistant Professor of International Security Studies at Tokyo International University in Japan. He holds a PhD in International Relations and specializes in the study of offshore territorial and maritime entitlement disputes in Asia. His teaching and research revolve around maritime security and ocean governance, ASEAN regionalism, and broadly, US alliances and engagements in the Indo-Pacific. From 2016 to 2019, he was the holder of the endowed Admiral Joe Vasey Fellowship at the Pacific Forum.

Donghyun Park is Principal Economist at the Economics Research and Regional Cooperation Department of the Asian Development Bank (ADB), which he joined in April 2007. Prior to joining ADB, he was a tenured Associate Professor at Nanyang Technological University in Singapore. He has a PhD in Economics from University of California, Los Angeles, and his research fields are international finance, international trade, and development economics. He plays a leading role in the production of the *Asian Development Outlook*, ADB's biannual flagship publication on macroeconomic issues, and leads the team that produces *Asia Bond Monitor*, ADB's flagship report on Asian bond markets.

Alfredo Pascual is the President and CEO of the Institute of Corporate Directors (ICD). He is also an Independent Director in publicly listed companies (e.g., SM Investments Corporation, Megawide Construction Corporation, and Concepcion Industrial Corporation). From 2011 to 2017, he led the University of the Philippines (UP) System as President and Co-Chair. Before UP, Mr. Pascual worked at the Asian Development Bank for 19 years in several positions, including Director for Private Sector Operations, Director for Infrastructure Finance, and Advisor for Public-Private Partnership. Mr. Pascual finished MBA and BS Chemistry (cum laude) at the University of the Philippines.

Ernesto Pernia is Secretary of Socioeconomic Planning of the Philippine government. He is also Professor Emeritus of Economics, having served as professor and chairman, at the UP School of Economics. He obtained his PhD in Economic Demography from the University of California Berkeley and received an Outstanding Young Scientist Award in the fields of economics and social sciences from the National Academy of Science and Technology. Pernia was Lead Economist at the Asian Development Bank. His work experience covered investment climate and productivity, economic growth and poverty reduction, education and health, population and development, and regional economic cooperation in Asia.

Aquilino Pimentel is currently serving as a Senator of the Philippines. He was the 28th Senate President from 2016 to 2018. Pimentel received his Law degree from the University of the Philippines (UP) and topped the bar examinations in 1990 with a grade of 89.85 percent. He was awarded Doctor of Humanities (honoris causa) by the Polytechnic University of the Philippines in 2012 and Doctor of Laws (honoris causa) by the UP in 2017. He became senator in August 2011 after he won his election protest and was re-elected in the 2013 and 2019 elections. Pimentel is a founding member and the President of the *Partido Demokratiko Pilipino Lakas ng Bayan* or PDP Laban.

Reizle Platitas is a Research Associate at the Asian Development Bank, working primarily on macroeconomic applications of input-output analysis such as the economic impact of the United States-People's Republic of China trade conflict and the COVID-19 pandemic. She earned her MA in Economics degree from the UP School of Economics and her BS in Applied Mathematics (major in Mathematical Finance) from Ateneo de Manila University. She previously worked as a Subject Matter

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Celia Reyes is the first female President of the PIDS. She specializes in the field of econometrics and has conducted and published numerous research and policy papers on poverty assessments and evaluations of social protection programs. 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.

Jove Tapiador is Co-Founder and past Chairman of Fintech Philippines Association. He brings over 20 years of combined experience in general consulting, electronic payments, rural banking, and microfinance. He has provided project consulting for clients such as the US Agency for International Development, UK Prosperity Fund, and the Shell/Chevron-supported Malampaya Foundation. He has trained over 1,000 rural bankers and cooperative leaders with impact on over 190,000 low-income clients. He has received the Most Valuable Player Award, 2017 Technology for Development Contest, from global development firm Chemonics International. He completed his Masters in Entrepreneurship from the Asian Institute of Management.

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Sheena Valenzuela is Research Assistant III and Program Coordinator for National Security Research Program at the Ateneo Policy Center, a think tank of Ateneo de Manila University School of Government. She is taking her Master in Public Management in the same institution. She holds a BA in Political Science from the University of Santo Tomas. Her publications cover topics such as health governance, blue economy, and political reforms in the Philippines.

Gavin Yamey is a Professor of Global Health in the Duke Global Health Institute (DGHI) and a Professor of Public Policy in the Duke Sanford School of Public Policy, Duke University, where he is the Director of Duke's Center for Policy Impact in Global Health (CPIGH) and the Associate Director of Policy at DGHI. CPIGH is an innovative policy lab that addresses critical challenges in financing and delivering global health. He trained in clinical medicine at Oxford University and University College London, medical journalism and editing at the *BMJ*, and public health at the London School of Hygiene and Tropical Medicine.

Lourdes Yparaguirre is Undersecretary for International Economic Relations at the Department of Foreign Affairs. Prior to this role, she served as the Ambassador and Permanent Representative of the Philippines to the United Nations (UN) from 2015 to 2017. She was the Ambassador Extraordinary and Plenipotentiary of the Philippines to Austria with concurrent jurisdiction over Croatia, Slovenia, and Slovak Republic from 2010 to 2015; Permanent Representative of the Philippines to the UN Office in Vienna, United Nations Industrial Development Organization, United Nations Office on Drugs and Crime, Comprehensive Nuclear-Test-Ban Treaty Organization, and International Anti-Corruption Academy; and Resident Representative of the Philippines to the International Atomic Energy Agency.

Session Chairs/Moderators

Michael Abrigo is a Senior Research Fellow at the PIDS where he coordinates the Institute's research program on population, health, and nutrition policy. He is a member of the National Transfers Account Project, a global network of researchers and academics that constructs and analyzes economic lifecycle accounts that measure how people at each age produce, consume, share resources, and save for the future. Before he returned to PIDS in 2016, he was a post-graduate Research Fellow at the East-West Center in Honolulu. He holds a PhD in Economics from the University of Hawaii at Manoa.

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*.

Marife Ballesteros is the Vice President of the Philippine Institute for Development Studies. She has a PhD in Social Sciences from the Radboud University in Nijmegen, Netherlands, and a Master's Degree in Economics from the UP School of Economics. 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, ADB, Japan International Cooperation Agency, and Australian Agency for International Development.

Calixto Chikiamco is a business process outsourcing and internet entrepreneur, a book author, and a writer on political economy. He published the book, *The Way Forward: The Path to Inclusive Growth*, in 2016, and co-authored the *Momentum: Economic Reforms for Sustaining Growth*. He serves as a property rights consultant to The Asia Foundation and is currently president and co-founder of the Foundation for Economic Freedom, an organization advocating economic and political liberty, good governance, and secure and well-defined property rights. He obtained his AB Economics (summa cum laude) from De La Salle University and his Masters in Professional Studies in Media Administration from Syracuse University, New York.

Francis Mark Quimba is a Senior Research Fellow at the PIDS and Director of the Philippine APEC Study Center Network. He has worked on a number of research topics including agriculture, trade, and rural development. He is currently working on quantifying the impact of external linkages on product innovation of Philippine firms. He obtained his PhD in Development Economics from the National Graduate Institute for Policy Studies, Tokyo, Japan.

Winfred Villamil is a Senior Lecturer at the School of Economics of De La Salle University. He earned his MA and PhD degrees in Economics at the UP School of Economics. He has done research and published in the areas of regional economics and human resource economics particularly on migration, education and training, and child labor. He also worked as consultant for various agencies of the Philippine government and international development agencies such as the Asian Development Bank, United Nations Development Programme, International Labour Organization, and United Nations Children's Fund.

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The New Globalization has reached the Philippine shores. To assist the country in crafting relevant policies on this phenomenon, the fifth Annual Public Policy Conference (APPC) became the stage for a critical analysis of the issues surrounding this new phase of growth. Among others, it emphasized the globalization's impact on Philippine trade, environment, public health, equity, social cohesion, and information sharing.

This volume is a compilation of the studies and papers presented during the fifth APPC. It provides government leaders, policymakers, the academe, and the public a useful reference material on the New Globalization.



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