

DEVELOPMENT RESEARCH NEWS

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Lack of innovation cripples PH COVID-response

POOR INFORMATION SYSTEMS and infrastructure have been crippling the country's response to the coronavirus disease 2019 (COVID-19) pandemic.

Researchers from the Philippine Institute for Development Studies (PIDS) shared this insight during the kickoff forum of the 18th Development Policy Research Month (DPRM) and urged the government to spearhead innovation in these systems.

“The COVID-19 pandemic is by far the most challenging public health global crisis in a century. This highlights the value of governance innovation to improve the country's response to COVID-19, as well as to strengthen the country's resilience systems,” PIDS Research Fellow Aubrey Tabuga, one of the study leads, said.

Speaking during the forum, Assistant Secretary Carlos Abad Santos of the National Economic and Development Authority (NEDA) revealed that the “digital technology has emerged as key enablers of activities this time of pandemic in the country, by minimizing human contact while maintaining communication and engagement.”

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Editor's Notes

Welcome to our last quarterly issue for 2020 featuring key presentations from activities conducted by PIDS and its partners last September in celebration of the Development Policy Research Month (DPRM). With recovery efforts now underway, it is crucial to take stock of the lessons we can learn from this experience. The articles in this issue, which summarize some of the presentations on the DPRM theme, *"Bouncing Back Together: Innovating Governance for the New Normal"*, offer important insights on how to innovate governance to improve our responses to future shocks and bounce back stronger from the coronavirus disease 2019 (COVID-19) pandemic.

A recurring theme among the presentations was the importance of leveraging technologies to sustain the delivery of essential services, assist critical sectors adversely affected by the pandemic, and maintain communication and engagement with the public. This was underscored by our banner story, which also divulged the shortcomings of the government's social amelioration program due to the absence of an integrated and updated information system of beneficiaries.

A related article noted the significant increase in digital financial transactions at the height of the community quarantine. Increased trust in the safety of digital banking by addressing security issues and making internet connection reliable and affordable could help sustain this growing preference for contactless payments and cash transfers. (Page 24)

"The society and the economy now operate in the new normal, veering away from the long-held manual and analog practices of both the private and public sectors," he explained.

Unfortunately, it seems the country is not yet prepared to maximize the fruits of digitization given its "poor, outdated, and fragmented state" information systems.

Citing the results of the 2019 National ICT Household Survey of the Department of Information and Communications Technology, which was conducted in partnership with the Philippine Statistical Research Institute, the NEDA official revealed that at least 63.7 percent of the barangays still do not have a telecommunication tower.

Majority of these barangays are housed in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), Bicol Region, and Eastern Visayas Region.

Close to 9 in 10 barangays in BARMM have yet to see a telecommunication tower installed on their soil, with even less number of barangays having access to fiber optic cable.

A staggering 99.1 percent of the barangays in BARMM have not installed such mechanism.

Overall, 70.2 percent of barangays in the country have yet to install fiber optics.

This somehow sheds light to the reality that roughly 9 in every 10 barangays do not have free internet access. Citing the

said survey, "absence of free Wi-Fi is evident across all regions," according to Abad Santos.

"There should be reach and scope. The absence of these elements will make our efforts suboptimal," he explained.

Citing the recently released World Bank Philippines Digital Economy Report, he revealed that "the Philippine broadband speed ranks as one of the lowest among the member-states in the Association of Southeast Asian Nations."

The country remains behind Singapore, Malaysia, Thailand, Viet Nam, and Indonesia when it comes to internet speed, according to Abad Santos.

Despite this sluggish performance, the country's internet is also one of the most expensive in terms of broadband pricing compared to its peers in the region.

As such, he called for the broadening of participatory governance to enable a whole-of-society approach in national and local planning through the development and utilization of mobile application, media platforms, and geotagging technologies.

Digitization in time of pandemic

Digitization can help not only in improving the delivery of services during this pandemic but also in improving data transparency and sharing and building trust in governance.

Tabuga cited the need to improve the information systems behind the social

amelioration program (SAP), which has been criticized for its delayed implementation.

The PIDS researcher attributed this delay to the lack of reliable lists and databases for SAP validation and accountability.

According to her, the establishment of an integrated information system will improve data collection and information sharing and speed up the distribution of the government's assistance to its intended beneficiaries.

"Learning from previous experiences with epidemics in their own countries, South Korea and Taiwan overcame issues in data privacy by implementing various reforms in data sharing and transparency, as well as information campaigns to build trust," research fellow Justine Diokno-Sicat explained during the event.

Abad Santos said reliable information systems can also facilitate innovation in civil service.

The Civil Service Commission has recently adopted measures promoting the delivery of public service amid the pandemic.

These measures include the work-from-home arrangement, electronic filing of the statement of assets, liabilities, and net worth, online appointment system, and digital learning and development.

Local government units (LGUs) have also embraced information systems to improve their own services.

Davao city has installed digital applications equipped with information to reduce international threats.

On the other hand, Makati City has utilized smart systems to advance its disaster risk reduction and management efforts.

The City also became the first to embrace contactless distribution of financial assistance using the Makatizen Card and the Makatizen App.

It also utilized a COVID-19 tracker created by the University of Makati.

Led by PIDS, DPRM is an annual event held every September to promote awareness and understanding of the importance of policy research in formulating evidence-based policies, programs, and projects.

Aside from Tabuga, Abad Santos, and Diokno-Sicat, other panelists present during the virtual kickoff forum were Assistant Secretary Rolando Toledo of the Department of Budget and Management, *Bangko Sentral ng Pilipinas* Assistant Governor Illuminada Sicat, and Mayor Abigail Binay of Makati City. **RGV**



Some local government units have already been incorporating smart systems to improve service delivery in the new normal.

Innovate governance, forge partnerships to recover from crisis



According to Acting Socioeconomic Planning Secretary Karl Kendrick Chua, the country's road to recovery lies on effective partnerships among the government, the business sector, the academe, and the scientific community.

ACTING SOCIOECONOMIC PLANNING Secretary of the National Economic and Development Authority Karl Kendrick Chua called on the public sector to innovate governance to recover from the coronavirus disease 2019 (COVID-19) pandemic and build resilience against similar crisis. This he emphasized during the 6th Annual Public Policy Conference (APPC) organized by the Philippine Institute for Development Studies (PIDS).

"The task ahead requires innovative and creative solutions that can effectively balance both COVID-19 response and other objectives," Chua said in his keynote address.

According to Chua, "government must set the example by recalibrating its own

systems and processes to suit the needs and demands of the new normal and must provide the direction and impetus for innovation to prosper."

For instance, new technologies are needed to develop tools to make public services delivery more effective and efficient.

Currently, the Philippines ranks 50th among 131 economies in the *Global Innovation Index 2020*.

Partnership crucial

Chua reminded that "innovation thrives best when ideas are shared freely, debated, and refined. Development and diffusion of innovation across the

bureaucracy cannot take place if people are working in silos," he said.

As such, he emphasized the need for the business sector, the academe, and the scientific community to establish dynamic multistakeholder partnerships "to maximize all available resources".

"The reality is that the government does not have all the resources to respond to this pandemic nor all the capabilities to develop digital tools that can support people in this crisis," Chua admitted.

Prior to the pandemic, the country "had a very strong economy" with "low and stable inflation and lowest poverty incidence of 16.7 percent as of 2018," he said.

In fact, the Philippines was "on track to becoming an upper middle-income country by 2022".

However, the various levels of community restrictions implemented by government during the period of the COVID-19 pandemic has seriously affected not only the health sector but also the economy.

It is projected that the country's economy "may lose between PHP 276.3 billion and 2.5 trillion due to COVID-19" according to a PIDS study titled "*Projected disease*

transmission, health system requirements, and macroeconomic impacts of the COVID-19 in the Philippines” written by Michael Ralph Abrigo, Jhanna Uy, Nel Jason Haw, Valerie Gilbert Ulep, and Kris Francisco-Abrigo.

“Given the disruption in economic activities, poverty incidence may temporarily increase to 17.5 percent,” Chua reported.

However, “the goal of bringing down poverty to 14 percent by 2022 is still certainly doable,” he said.

Road to recovery

He highlighted that while health is a priority, “restoring consumer confidence

towards opening up the economy” is equally important.

This is the reason why the government’s response is “a phased and adaptive recovery approach”.

As the economy gradually opens, a significant decline in the unemployment rate from 17 percent to 10 percent between April and July was observed, Chua shared.

He noted that for 2021, the government is working on “a budget that will be more responsive to the needs of the country”.

Chua recognized the importance of policy research in crafting development

strategies and in helping government address the COVID-19 crisis.

“The road ahead of us remains uncertain. Now is the time for us to come together to find solutions, not just on what to do but also on how to do them,” Chua concluded.

The APPC is the culminating activity of the Development Policy Research Month (DPRM), an annual event held every September to promote awareness and understanding of the importance of policy research in formulating evidence-based policies, programs, and projects.

This year’s DPRM theme is “*Bouncing Back Together: Innovating Governance for the New Normal*”. **MJLS**

Work to restore public trust, PH gov’t urged

AMID THE ONGOING crisis, the Philippine government must strive to regain legitimacy and public trust in its activities.

This was according to James Brumby, World Bank Group Singapore Senior Adviser for Governance, Equitable Growth, Finance, and Institutions, during the 6th Annual Public Policy Conference (APPC) organized by state think tank Philippine Institute for Development Studies (PIDS).

Brumby explained that the government serves as the single source of response to this crisis brought about by the spread of coronavirus disease 2019 (COVID-19) worldwide.



Understandably, “citizens look to the government first as a source of potential help during the COVID-19 pandemic. Citizens had to trust the government,” he explained.

However, as the crisis is still far from over, the World Bank expert admitted that the “citizens’ trust in the government is now being batted.”

“Citizens will have an increasing ability to hold the government to account,” Brumby explained, urging the government to respond in an agile way.

For instance, he said the government monopoly of some forms of information is directly challenged these days.

“Nontraditional sources of information have become increasingly important and profoundly influential. Governments need to get used to the idea that big data can mean that citizens not in the chain of command may know more about what is happening than those relying on official information,” he revealed.

Citing a study by Harvard University, Brumby said that big data can place the origin of the virus earlier than official figures by simply tracking the parking traffic in Chinese hospitals and reviewing search terms in internet searches.

“They may not be right, but they can be used to contest the information monopoly usually associated with expert bureaucracy,” he explained.

These nontraditional sources of information can inform more direct action by citizens, empower the challenge to state policy action, and may change the reaction from the state.

“COVID-19 has been desperately difficult for many people, but it is also not being difficult for some. The unevenness requires governments to be especially conscious in addressing the needs of those suffering and not providing a free ride to those who have not suffered at all,” he added.

To regain legitimacy, “governments need to be more expensive in some areas,” according to Brumby. Examples include changing fiscal management and supporting contactless forms of service delivery, and working to make the new world order serve its citizens.

He also urged the government to employ imagination in its approach to the pandemic, arguing that “the past may not be a good guide to the future.”

He questioned the early attempts of governments to merely pattern their

response to the pandemic to disaster risk management.

“We have a temptation to say this has been the worst pandemic since the Spanish flu, the worst global downturn since the Great Depression. But none of us has lived the experience of these events, and the world is in a completely different place,” he explained.

Aside from Brumby, speakers during the event included Panthea Lee, chief executive officer of Reboot, Director Maria Teresa Magno-Garcia of the Department of Information and Communications Technology, and Dr. Gerardo Sicat, professor emeritus at the University of the Philippines School of Economics.

APPC is the main and culminating activity of the Development Policy Research Month (DPRM).

Led by PIDS, the DPRM is an annual event held every September to promote awareness and understanding of the importance of policy research in formulating evidence-based policies, programs, and projects.

This year’s DPRM theme is “*Bouncing Back Together: Innovating Governance for the New Normal*”. **RGV**

Poor public health data stems from low public trust—experts



Despite high adoption rate, the public's response to technologies deployed for COVID-19 response remains low, expert says.

THERE IS A need to boost people's confidence on technology to ensure quality health data.

This is according to Sean McDonald, chief executive officer of FrontlineSMS and senior fellow at the Center for International Governance Innovation, during his presentation at the 6th Annual Public Policy Conference (APPC) organized by state think tank Philippine Institute for Development Studies.

According to McDonald, some technologies deployed for coronavirus disease 2019 (COVID-19) response have not been providing “meaningful” impact on public health.

For instance, contact-tracing applications—a government-required tool to prevent the spread of COVID-19—do not reach a significant number of people.

For COVID-19 response to be effective, “response efforts need to reach as many people as possible, if not everybody,” he said.

However, McDonald noted that “a lot of the technologies are fragmented. Some can only be accessed via Android phones and some through other software systems.”

Citing an article from Ars Technica, McDonald said that about two billion mobile phones are unable to access the COVID-19 contact-tracing applications developed

by tech giants, particularly Google and Apple. The number includes mobile phones released five years ago commonly used by “poorer and older people—who are also among the groups most vulnerable to COVID-19”.

“We often forget that one of the things to consider in rolling out contact-tracing applications is that the goal is not only 100-percent deployment, per se, but also successful public health response,” he added, noting the low public response rate even in places where technology adoption is very high.

There is also a growing concern on the way government use data collected from the public.

“As we adopt an increased amount of technology into our fundamental public systems, we are also seeing a really strong trust and adoption blowback,” he raised.

The *2020 Trust in Technology Survey* of the Edelman Trust Barometer revealed that majority of the public (61%) thinks that their governments do not understand emerging technologies enough to regulate them, McDonald cited in his presentation.

Related to this, he also argued that the lack of trust in data governance happens “when

the public is not brought along with the advancements”.

He noted the often lengthy data privacy clauses associated with digital applications, including contact-tracing technologies, which are unread by the public because, more often than not, the public does not have the time to read and understand such documents.

This affects the users’ decision to adopt a technology, particularly those that require them to provide their personal information.

“When we ask people to take risks, those risks should be calculated and should be based on science and values. There needs to be a higher level of protection for its people in making digital technologies,” McDonald emphasized in his presentation.

The Philippine setting

Meanwhile, in another APPC webinar presentation, Commissioner Raymund Liboro of the National Privacy Commission (NPC) raised the national concern of public health being a threat to data privacy.

NPC is the country’s data privacy regulation and enforcement agency.

“There is always the question of whether we should be announcing the names of those infected by COVID-19 to make contact-tracing initiatives more effective,” Liboro shared.

However, this may lead to discrimination and can also lead to data misuse, such as higher health insurance premiums for COVID-19

patients and survivors, according to Liboro.

Further, there is also a concern on whether the data collected through the various contact-tracing initiatives deployed in the country are being used beneficially.

“The recent [COVID-19] experience in the country has put focus on Philippine data governance and exposed the gaps in overall data management causing missed opportunities and beneficial use of data,” the NPC commissioner raised.

Policy recommendations

With the Philippine Data Privacy Act (DPA) in place, the public is ensured that there is free flow of public health information while upholding data privacy rights, according to Liboro.

“The DPA enables widespread trust in the government’s and businesses’ response to address and defeat COVID-19,” he argued.

To build public trust, Liboro urged both the government and the business sectors to

be transparent in how data is used, who can access it, and how the public can raise concerns over the use of their data.

Globally, data trust technologies are being utilized to ensure beneficial use of data while protecting the digital rights of the people.

“Data trusts create continuity and sustainability to make sure that data cannot be used against the interest of the users in case a management or a project goes bankrupt or busted,” he explained, citing the case of Johns Hopkins Medicine—a medical institution that uses data trust to ensure ethical use of patient records in their applied research work.

Currently, data trusts are also used in addressing public policy issues related to data integrity and security in the digital age.

“We need strong validation infrastructures not only to do quality assurance testing but also to do comparative/contextual testing to make sure that the technology helps solve the larger problem,” McDonald stressed. **CPSD**



The use of data trust technologies can ensure beneficial use of data while protecting the digital rights of the people.

Digital banking transactions surge during pandemic



Existing banking regulations should keep up with the latest developments in digital finance to ensure consumer welfare protection.

THE COUNTRY WITNESSED a significant increase in digital financial transactions made by consumers at the height of COVID-19 restrictions in the past months.

This was imparted by Laura L. Ignacio, director of the Center for Monetary and Financial Policy of the *Bangko Sentral ng Pilipinas* (BSP), in her presentation on “Smart systems for agile governance under the new normal” during the 6th Annual Public Policy Conference (APPC) held recently.

“With the onset of the pandemic and the subsequent quarantine restrictions, data show that there is a growing preference for digital transactions,” she said. “The increased digitalization has enabled consumers and businesses to transfer value

instantaneously as it provides convenience at a lower cost.”

Ignacio noted the public’s heightened preference for contactless payments and digital cash transfers given their convenience and safety. This includes the use of online payment facilities like InstaPay, PESONet, and e-GovPay, which operate under the BSP’s National Retail Payment System.

“More clients of payment service providers have been leveraging on the benefits of PESONet and InstaPay as these are seen as safer and convenient in making payments and transferring funds,” she said.

Highlighting the BSP’s current efforts to strengthen needed infrastructures to better

regulate online financial services in the country, Ignacio said they will continue to adopt more technology-enabled solutions while anticipating the growth of consumer dependence on digital platforms during the transition to the new normal.

“The BSP’s experience with the pandemic showed the critical role of digital platforms in financial transactions and the economy in general,” she said, forecasting that “there will be greater demand for online payment, savings, investment, and other financial services.”

Possible risks

Apart from learning to thrive in the current financial environment, Ignacio stressed that regulators, businesses, and consumers must raise their awareness on the incidences of cyberattacks and frauds, which also rose with the increase in the use of digital financial services.

“Given these potential benefits and risks, monetary and financial regulators need to have a balanced approach to risk and growth by keeping pace with the latest developments in the financial markets, promoting innovations and healthy competitions, and at the same time, addressing consumer protection issues and managing financial stability risk,” Ignacio explained.

She also cited the framework and interventions put in place by the BSP to adequately protect consumers from these risks and threats.

“The BSP remains vigilant against potential risk to allow consumers and businesses

to reap the benefits of innovations with a balanced approach to financial innovation. It strives to create an enabling environment for new technologies and digital transformation,” she said. “Moreover, the regulations shall continue to adjust to these developments so as not to compromise consumer protection standards.”

Financial inclusion

The BSP hopes that more Filipinos will participate in the financial sector through the country’s improved banking systems.

In particular, the BSP aspires to raise the proportion of adult bank account holders in the Philippines to up to 70 percent by 2023.

“The increase in digitization and the public’s acceptance and greater usage of electronic platforms also promote financial inclusion,

which is a major advocacy of the BSP,” Ignacio said.

Data from the BSP’s *2019 Financial Inclusion Survey* showed that the number of Filipinos who own bank accounts increased to 28.6 percent from 22.6 percent in 2017.

This translates to 20.9 million Filipino adults with formal bank accounts during the said year.

Of this number, 5.1 million Filipinos became financially included in a span of two years.

The report added that e-money accounts had the biggest increase at 8 percent from 1.3 percent while bank account openings posted a 12.2-percent increase.

Despite the significant improvement in the number of account owners and overall bank

account penetration, the BSP noted that more than 51 million of the country’s total adult population remain unbanked.

The BSP attributed the huge segment of Filipinos without bank accounts to lack of enough money as the principal reason reported by 45 percent of the unbanked, followed by a perceived lack of need for an account at 27 percent, and lack of documentary requirements at 26 percent.

The surge in online account openings and e-payments during the enhanced community quarantine was not yet included in these figures, the BSP noted.

The APPC is the culminating activity of the Development Policy Research Month that highlights the importance of policy research. Organized by state think tank Philippine Institute for Development Studies, this year’s theme is “*Bouncing Back Together: Innovating Governance for the New Normal*”. **EGR**

PH posts highest job loss in ASEAN amid pandemic

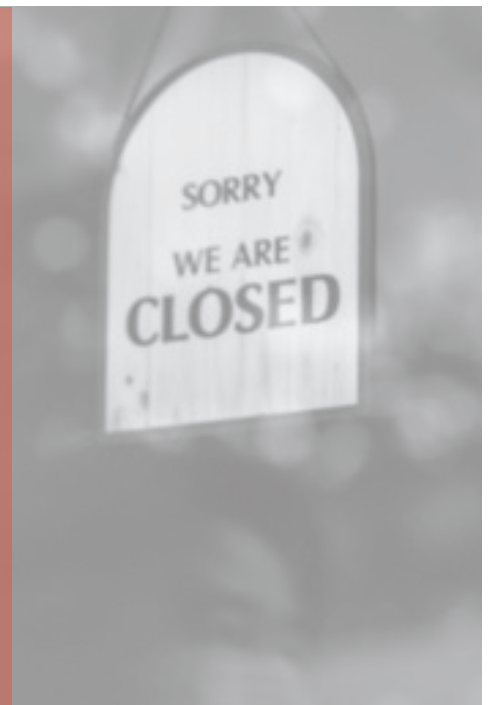
THE PHILIPPINE HAS posted the highest job loss rate in the Association of Southeast Asian Nations (ASEAN) amid the ongoing coronavirus disease 2019 (COVID-19) pandemic.

Speaking during the 6th Mindanao Policy Research Forum, Enrico Basilio, an associate professor at the University of the Philippines National College of Public Administration and Governance, revealed that the country’s job loss rate stands at 73.5 percent, the highest in the region thus far.

This translates to 7 in every 10 Filipino households with at least one member who either lost his or her job or experienced a reduction in workload.

Citing data from the Asian Development Bank Institute (ADBI), Basilio explained this is way beyond the average job loss rate in ASEAN, which stands at 40 percent.

The country’s figure is also more than 20 percent higher than its ASEAN peers, including



Viet Nam at 50.2 percent, Thailand at 48.2 percent, and Malaysia at 44.1 percent.

Understandably, the Philippines also has the highest number of households that experienced financial difficulty at 85 percent, still the highest in ASEAN.

This resulted in the tightening of belts among Filipino families, Basilio explained.

To cope with such difficulty, 34 percent of households applied for government aid, among others.

Against this dismal backdrop, the country's economy also continues to contract.

During her opening speech, Celia Reyes, president of the Philippine Institute for Development Studies (PIDS), disclosed that the country's economy has already shrunk by 16.5 percent during the second quarter of 2020, citing figures from the Philippine Statistics Authority.

Overall, the country's economy is expected to close at negative 7.3 percent this 2020, according to ADBI.

During the pandemic, the Philippine government imposed various levels of community restrictions.

The harshest of these restrictions is the enhanced community quarantine (ECQ) imposed in the entire Luzon island from March to May 2020.

According to Basilio, the socioeconomic cost of these restrictions amounted to a staggering PHP 8.6 billion every day at the minimum.

The socioeconomic cost of the ECQ alone reached as much as PHP 14.6 billion a day, he revealed.

"This means that the stricter the measure is, the higher the cost," he explained.

The National Economic and Development Authority itself estimated that the Philippine economy suffers PHP 1.1-trillion loss per month of lockdown.

"Big bounce back"

Still, the country's economic managers have remained positive about their outlook of the Philippine economy.

During the Bloomberg Emerging and Frontier Forum 2020 webcast late June this year, Finance Secretary Carlos Dominguez III said that country is "ready for a big bounce back next year".

Basilio himself said that the economy will be able to catch up immediately.

"The good news is by next year, the economy will be able to rebound and post a positive growth rate, from a low of 2.7 percent to a high forecast of 7 to 8 percent by the government," he explained.

Despite the pandemic, four sectors also managed to thrive, according to Reyes.

These include public administration and defense, financial and insurance activities, information and communications technology, and agriculture.

Among the country's agricultural products, sugarcane cane grew the largest at 76 percent.

This product was followed by corn, rubber, and *palay*.

Still, other sectors, such as manufacturing, construction, and transportation and storage, suffered a decline.

"With global supply chains being disrupted, we realize the value of agriculture to ensure food security. This highlights the need to continuously innovate and implement reforms in the agriculture sector to build resilience to future shocks and threats," Reyes explained.

While Mindanao only contributes only 14.5 percent to the country's gross domestic product, the PIDS official said it has secured its role in sustaining food security during and after the pandemic.

The island produces over 40 percent of the country's food requirements and contributes to about 30 percent to the national food trade.

"We need to harness this potential by adopting climate-adaptive technologies that are suited for local conditions," she explained.

The PIDS official said the government also needs to strengthen "weather and climate information systems to increase agricultural productivity".

This year's Mindanao Policy Research Forum is organized by PIDS and the Mindanao Development Authority, in partnership with Ateneo de Davao University.

Started in 2015, it is one of the activities of the Development Policy Research Month celebration led by PIDS every September as mandated by Presidential Proclamation 247.

This year's theme, "*Bouncing Back in the New Normal through Countryside Development and Agricultural Resilience*", focused on the importance of innovating the agricultural sector to ensure food security amid the COVID-19 outbreak and to build the sector's resilience to other risks, such as natural and human-induced disasters and climate change. **RGV**

PH gov't advised to hire more experts



The country needs more experts in information technology and disaster risk management to address the ongoing pandemic and future threats, says Asian Development Bank Principal Health Specialist Eduardo Banzon.

THE PHILIPPINE GOVERNMENT needs to hire more experts to better respond to the ongoing pandemic and other similar threats in the future.

Eduardo Banzon, principal health specialist at the Sustainable Development and Climate Change Department of the Asian Development Bank, highlighted this in his presentation on “Strengthening the Civil Service under the New Normal” during the 6th Annual Public Policy Conference (APPC) organized by state think tank Philippine Institute for Development Studies.

The lack of experts, particularly in the areas of disaster risk reduction and management (DRRM), information technology (IT), data analytics, and communications, has affected the government’s ability to respond quickly and effectively to the coronavirus disease 2019 (COVID-19) pandemic.

The varied responses to the crisis showed that risk management expertise is lacking in government. This is despite the fact that there is an existing law strengthening DRRM in the country since 2010,” Banzon explained.

“Risk management is an expertise that the country will be needing for quite some time, particularly in deciding where to put government resources,” he said.

The struggle of the Department of Health (DOH) to capture COVID-related data and the presence of health information systems that are not interoperable highlighted that IT expertise is sorely lacking in the government health sector.

Banzon further commented that data scientists and data analysts are also missing in the public sector workforce. These experts, together with IT specialists, “are needed not

only in the health sector but also in other government offices,” he said.

However, Banzon admitted that it is difficult for the government to hire and retain experts from these fields as they are ‘quite expensive’.

For instance, “IT experts in other countries are paid even more than the ministers in recognition of the market demand for them,” he explained.

Bring experts in

As such, Banzon suggested some strategies on how the government can bring experts in.

Banzon urged the Civil Service Commission (CSC) to “change the way it pays salaries and performance bonuses” so that experts can be enticed to work in government.

However, if the civil service could not afford or find it difficult to recruit and retain experts, it can develop in-house talents and familiarize them with the functions of these experts, he suggested.

It is important “that even if they are not experts themselves, people who are in the civil service should understand the expertise they need,” Banzon explained.

Another option is for government agencies to establish stronger links with the academe through secondment of experts and other arrangements. In other countries, academicians were immediately seconded to their respective governments at the onset of the pandemic, something that has not been done in the Philippines, Banzon shared.

Ensure health and safety of public servants

Meanwhile, he urged the public sector to focus on the health and safety of civil servants by making occupational health and safety policies responsive to their current needs.

“The Philippines [should] build civil servants’ confidence by making them feel that they are being taken care of, that their health is a priority, and that they will not just be sent off fighting COVID-19 while putting themselves in inappropriate levels of risk,” he said.

He also called on the government to provide incentives to health workers who are assigned to COVID-19 hotspots.

“We cannot just force our people to move, [w]e need to figure out how to use incentives and develop appropriate policies

that will enable pulling people out and deploying them to support areas that need immediate response and help,” Banzon pointed out.

Consider remote working

Moreover, he proposed that the CSC should consider adoption of ‘remote working’ or ‘teleworking’ even after the pandemic, citing that it is now the default in Italy.

“Instead of special permission to work from home, employees who are able to work from home should just work from home,” Banzon said.

He urged the academe to conduct studies on the cost and benefit of remote working. “Should there be an empirical evidence that shows it works, it is easy to change. If it does not work, then we go back to what it was before,” Banzon explained.

However, for this to work, the government needs to invest in digital infrastructures and improve its digital capabilities. “Countries that have invested in digital capabilities, such as Estonia, have benefitted greatly from their pre-COVID-19 investments in digital tools like telehealth,” he pointed out.

Meanwhile, CSC Chairperson Alicia Bala shared some of their efforts in response to some issues raised by Banzon.

According to Bala, CSC together with DOH and Department of Labor and Employment, issued a joint circular on occupational safety and health for public sector workers. Other initiatives include guidelines on the establishment of a mental health program in the public sector, a policy to augment

the limited human resources in the frontline services, especially in the health sector, and leave privileges due to quarantine treatment, among others.

Alternative work arrangements for government agencies have also been adopted to ensure the protection of the public workforce and the continuity of service delivery, Bala said.

She shared that their team is “finalizing the data generated from the quick assessment of the alternative work arrangements among 4,000 respondents” from the public service sector.

This is in addition to the studies conducted by the Development Academy of the Philippines and the Center of Organization Research and Development pertaining to alternative work arrangements,

“We need to have evidence. Hopefully, we are able to bring out learnings that would help the Commission determine which alternative work arrangements will be institutionalized,” Bala said.

On secondment, “recently the Career Executive Service Board has revised its policy on secondment for the third level,” Bala reported.

Lastly, Bala also shared that they have conducted focus group discussions with various sectors to come up with the Philippine Talent Management Strategy, which will serve as a framework for the civil service to address the future needs of the government, particularly in times of crises like the COVID-19 pandemic and other risks. **GMM, RTT**

'Whole-of-society' needed to rebound from pandemic



A whole-of-society approach employs cooperation from all relevant stakeholders, including individuals, families and communities, intergovernmental organizations and religious institutions, civil society, academia, the media, voluntary associations, and the private sector to effectively implement national efforts to address the ongoing crisis.

THE COUNTRY SHOULD pursue a 'whole-of-society approach' to bounce back better from the ongoing crisis.

This is according to Panthea Lee, Reboot founder and executive director, in her presentation during the Annual Public Policy Conference (APPC) webinar on "Innovation in public sector governance and resilience under a new normal: Theory and practice" organized by state think tank Philippine Institute for Development Studies (PIDS).

Lee stressed the importance of involving "each and every one" in dealing with the ongoing crisis brought by the coronavirus disease 2019 (COVID-19).

"We need all of us because the government alone cannot solve the problems we are facing now," Lee said.

The World Health Organization describes the whole-of-society approach as a strategy that "acknowledges the contribution of and important role played by all relevant stakeholders, including individuals, families and communities, intergovernmental organizations and religious institutions, civil society, academia, the media, voluntary associations and, where and as appropriate, the private sector and industry, in support of national efforts".

Doing a whole-of-society approach, however, is easier said than done.

Lee, an international social justice advocate, pointed out people's growing disappointment in how their governments have been handling the COVID-19 crisis.

In the United States and across the globe, Lee noted an increasing mistrust between

governments and their citizens, which resulted in their unwillingness to open up and collaborate.

"Mistrust goes both ways. When we mistrust our citizens and civil society, it works as a self-reinforcing loop—they do not trust their government either," she emphasized.

The challenge, therefore, is how to bring together people with different backgrounds to agree and work for a common vision.

Lee suggests that it is important to take into consideration each role played by different groups in society and what they can contribute to this common vision.

"A whole-of-society approach does not mean we are all doing the same things at the same time," Lee explained.

Similarly, PIDS President Celia Reyes promotes the whole-of-society approach in dealing with the COVID-19 pandemic in her speech during the APPC opening.

"Dealing with this pandemic and other crises is the responsibility of everyone. This challenging time calls for a 'whole-of-society approach'. Big or small, our efforts can help the country get back on track," Reyes explained.

However, Lee noted that the status quo will not work.

She stressed that roles commonly understood—artists to imagine, activists to protest, governments to create policies and deliver services, and journalists to monitor institutions and society—are archetypal and no longer fit in the current situation. “They are simply too idealistic, simplistic, and even naive,” Lee added.

Systems change needed

A systems change is needed, which requires the cooperation of all of the actors in society.

She highlighted that the government, without the cooperation of the citizens, will not be able to solve the problems as huge as those spawned by the COVID-19 pandemic. She described these problems

as “too great, too extreme in scale, and too embedded in the systems and structures”.

Lee cited Taiwan’s effort as a leading example of a whole-of-society approach in dealing with the COVID-19 crisis. She noted that the country has an effective intra-government, private sector, and civil society collaborations.

Lee also underscored the importance of “robust public discourse and dialogue about what the future should be”, noting the need for policies given the “massive cultural changes that are happening” as a result of the crisis.

Aside from Lee, speakers during the event included James Brumby, senior adviser at the World Bank Singapore, Director Maria

Teresa Magno-Garcia of the Department of Information and Communications Technology, and Dr. Gerardo Sicat, professor emeritus at the University of the Philippines School of Economics.

APPC is the main and culminating activity of the Development Policy Research Month (DPRM).

Led by PIDS, the DPRM is an annual event held every September to promote awareness and understanding of the importance of policy research in formulating evidence-based policies, programs, and projects.

This year’s DPRM theme is “*Bouncing Back Together: Innovating Governance for the New Normal*”. **GGM, RGV**

Satellite technology to fill connectivity gap in Mindanao

SATELLITE TECHNOLOGY CAN be a viable solution to the Philippines’ connectivity issues, particularly the lack of internet coverage in far-flung areas.

Rogel Mari Sese, chair of the Department of Aerospace Engineering at Ateneo de Davao University, emphasized this during the 6th Mindanao Policy Research Forum organized by state think tank Philippine Institute for Development Studies (PIDS).

Sese explained in his presentation how satellite technology can bring more reliable internet services in the countryside where wired broadband technology is not feasible.

He said that the Philippines should maximize the benefits brought by this alternative technology.

“It can be used in a lot of areas, such as education, healthcare, and even disaster response,” Sese explained.



Photo by Rogel Mari Sese/Facebook

The scientist noted the opportunity to connect remote, rural areas in Mindanao with the rest of the Philippines through community satellite networks.

This is essential for areas like the Bangsamoro region, which posted the highest number of barangays (villages) that remain unconnected, according to the *2019 National ICT Household Survey*. ICT stands for information and communications technology.

Sese acknowledged the importance of providing isolated districts in Mindanao with an alternative mode of connection to help Mindanaoans develop their economic potentials through internet-based tools and enhance cooperation within the region, especially for areas confronted with the challenges of distance due to poor and undeveloped infrastructures.

“Satellites can greatly contribute to economic development and [resolve] digital divide throughout the region,” he said.

With the shift toward e-governance, the government has to reach out to all citizens. As such, “everyone has to be connected,” he added.

Sese claimed that satellite technology promises to bring immediate connection since it can be rapidly deployed “in a matter of months or weeks” and does not require extensive local infrastructure.

“We don’t have to wait for a number of years for the connectivity to happen. There are already existing technologies or satellites right now that have coverage throughout the country,” he explained.

Barriers

However, Sese also noted the barriers that hamper the deployment and utilization of satellites in the country. These include outdated policies and regulations that seem unfit for the digital era.

He stressed that under the Republic Act 7925, also known as the Public Telecommunications Policy Act, and Executive Order 467 issued in 1998, only telecommunication entities with a congressional franchise can have access to satellites and offer satellite connectivity services in the Philippines.

“In a sense, we are living in a world of digital technology yet our laws and regulations are still in the analog period,” he said.

“When we look at the dominant telcos, they are more heavily invested towards the mobile cellular network. There is negligible commercial use for satellite broadband,” he added.

“Even ISPs (internet service providers) are not allowed to access satellite for phone banks,” Sese lamented, pointing out that outdated policies and regulations obstruct competition in the sector.

“This provides a huge barrier for entry especially for newcomers,” he said.

Internet inequality

While it seems that the Philippines has a long way to go in capturing the benefits of

satellite technology, the country is currently faced with greater connectivity problems like internet cost, quality, and availability.

In his presentation, Sese highlighted that 40 percent of the country’s population still do not have internet access. Additionally, 52 percent of 47,013 public schools in the county remain unconnected while 80 percent of state universities and colleges are “not equipped for online classes”.

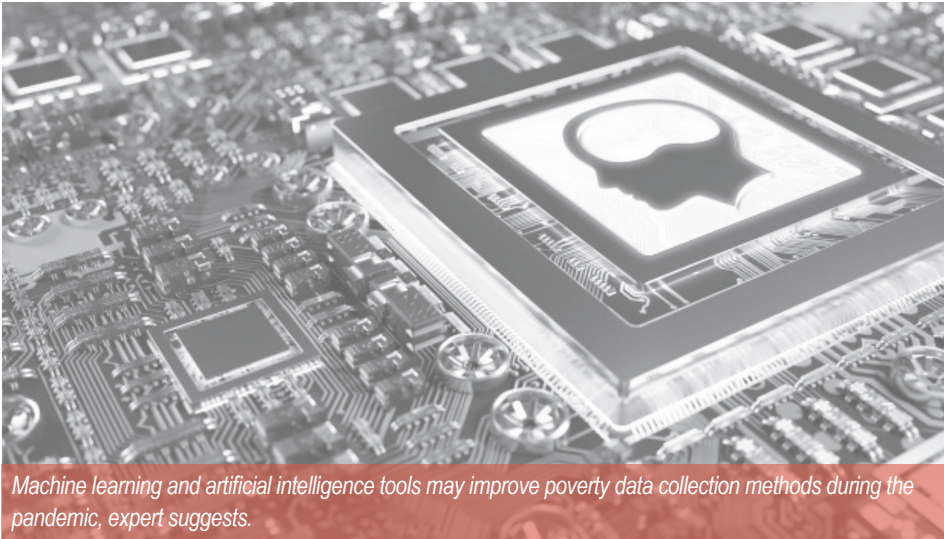
The Philippines also has an average fixed broadband speed of 22.31 megabits per second (Mbps) and an average mobile broadband speed of 14.23 Mbps, based on a report from research firm M-Lab.

This is far lower compared with the global average speed of 76.94 Mbps for fixed broadband and 33.71 Mbps for mobile broadband.

Sese added that most areas served by internet providers are found in Luzon, particularly in Metro Manila, while the least connected areas are located in Mindanao.

The Mindanao Policy Research Forum is part of the Development Policy Research Month (DPRM) celebration. Led by PIDS, the annual DPRM held every September aims to promote awareness and understanding of the importance of policy research in formulating evidence-based policies, programs, and projects. **EGR**

Open access data, machine learning to aid poverty mapping



Machine learning and artificial intelligence tools may improve poverty data collection methods during the pandemic, expert suggests.

THE PHILIPPINE GOVERNMENT can harness machine learning to help predict the socioeconomic status of Filipinos.

This is according to Stephanie Sy, founder and chief executive officer of Thinking Machines Data Science, in her presentation during the webinar on “Smart systems for agile governance under the new normal” at the 6th Annual Public Policy Conference (APPC) organized by state think tank Philippine Institute for Development Studies (PIDS).

“Machine learning is a cost-efficient tool, particularly when traditional data gathering methods are not feasible,” Sy said.

Sy explained that open access geospatial data can infer poverty estimates using machine learning models. Examples include satellite images, social media data, and crowd-sourced information that are free and can be easily accessed by the public.

For instance, satellite images of nighttime lights can be used to infer economic progress in an area, Sy explained. Normally, “wealthier places are brighter at night” because lights that show main commercial areas, suburbs, and highways are strong indicators of economic development, she said.

Data on nighttime lights are publicly available through the National Oceanic and

Atmospheric Administration (NOAA) of the United States Department of Commerce.

Further, she also noted that the results of the satellite imagery analysis were also comparable to the results of the 2017 National Demographic and Health Survey (NDHS).

NDHS is a nationwide survey conducted by the Philippine Statistics Authority every five years to provide basic estimates on the country’s health and socioeconomic status.

“For each of the 1,200+ sampled locations or clusters in the NDHS, there was a positive correlation between nightlight luminosity and average household wealth index,” she explained.

Meanwhile, information from unconventional public datasets, such as the presence of banks (OpenStreetMap database) and number of people with either a 4G or 2G internet connection (Facebook Marketing data) to ascertain an area’s wealth index, also correlated with the NDHS poverty estimates, Sy cited in her presentation.

Sy further noted that these unconventional datasets are more affordable to generate than satellite imagery.

“The first method (satellite imagery) costs about USD 1,000 per run of Cloud compute because of the size of these satellite imagery datasets. But, the second set of models (unconventional datasets) all run in 5 minutes with a per run cost of about USD 20, which enables experimentation and iteration,” the machine learning specialist further clarified.

However, Sy warned that machine learning technologies still cannot replace ground truth surveys, such as the NDHS.

“You need ground truth-validated results to confirm the validity of artificial intelligence models. Machine-learning models and ground-truth surveys should be complementary and should not be treated as replacements for each other,” Sy emphasized.

Machine learning for policy studies

The use of machine learning and open-source data tools may be an effective method to address data-gathering limitations in development studies, Sy suggested.

“The goal here is to support surveyors and decisionmakers by using technology to infer useful data for areas where surveys are not feasible.”

Combining cost-efficient machine learning with freely accessible geospatial datasets can offer a “fast, low-cost, and scalable means of providing poverty estimates,” she added.

Sy, however, cautioned that while the data results using machine learning tools are comparable with the results of ground-truth surveys, these models are more helpful in augmenting data statistics and giving rough estimates.

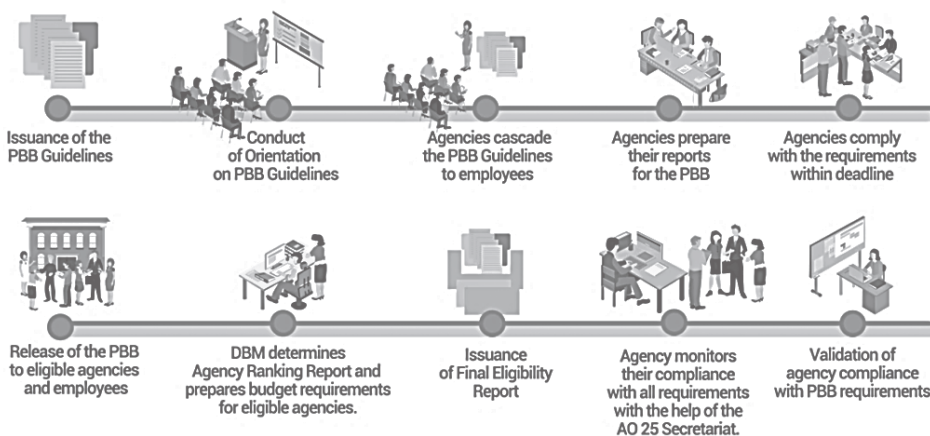
For instance, local government units can have an idea of how much of their

constituency has internet access and correlate the data with wealth.

Similarly, “open-source data, such as density of road networks from OpenStreetMaps, number of 3G and 4G users from Facebook Marketing, and nighttime lights dataset from NOAA may also provide data on the relationship of infrastructure development and wealth,” she added.

APPC is the main and culminating activity of the Development Policy Research Month, an annual event led by PIDS to promote awareness and understanding of the importance of policy research in formulating evidence-based policies, programs, and projects. **CPSD**

Revisit PBB policy design to improve effectiveness



A STUDY BY state think tank Philippine Institute for Development Studies (PIDS) revealed areas of concern in the implementation of the performance-based bonus (PBB) that run counter to its objectives.

Jose Ramon Albert, PIDS senior research fellow and lead author of the study titled “*Process evaluation of the performance-based bonus scheme*” reported a mixed picture of the PBB, including some potentially perverse outcomes, such as alleged issues of unfairness and “gaming” of the incentives, even as he noted that there is generally strong support for its continuation.

Albert added that some agencies resort to “massaging the data” to “maximize

PIDS study recommends reforming the current performance-based bonus framework to address alleged issues of unfairness and mounting requirements. (Photo from Administrative Order 25 Inter-Agency Task Force)

compliance and increase their chances of receiving the PBB”.

The PBB is a component of the Performance-Based Incentive System, a system of incentives for employees in the executive branch of government. Introduced in 2012, the PBB is given on top of the bonuses currently provided to government employees who have contributed the most to the accomplishment of the department/ agency-wide performance. Implementation of the PBB is premised on theories of motivation and follows the framework of a government-wide results-based performance management system.

From 2012 to 2018, as much as PHP 13 billion, on average, was appropriated per year for PBB amounting to a total of PHP 92.2 billion.

The PIDS study evaluated the PBB implementation across national government agencies (NGAs), state universities and colleges (SUCs), and Department of Education (DepEd) schools.

The study noted “tension between quantitative and qualitative targets and goals” of the PBB.

While the PBB aims to foster a culture of excellence in government agencies, the study identified unintended consequences from the implementation of the program.

For instance, “jealousy over incentives” and unnecessary competition among employees were observed.

Some agencies also reported ‘sharing of the monetary incentive’ among those who

qualified for the grant with those who did not, which is considered a bad practice.

Nonetheless, some best practices were identified, such as “strengthened team work” among the employees.

“Employees become more aware of their responsibilities and deadlines having accountability for each other,” Albert explained, quoting the study findings.

Meanwhile, many lamented the “ever-changing and kilometric requirements, which are challenging to comply with,” he said.

For instance, it was noted that the requirement for international organization for standardization-quality management system or ISO certification only started in 2015, and this was a contributing factor as to why many agencies and SUCs were ineligible to receive the PBB grant starting that year.

In SUCs, the high volume of documentary requirements and quality assurance mechanisms make the compliance burdensome for faculty members and staff.

While certain mechanisms have been adopted to streamline the process in qualifying for the PBB, the evaluation of compliance, however, has to be done in accordance with the existing rules and regulations of the Administrative Order 25 Inter-Agency Task Force (AO25 IATF).

Further, for SUCs with multiple campuses across the country, consolidation of requirements is a major concern.

In DepED schools, the study showed that there is a “feeling of resentment” among high-performing teachers who believe that the PBB scheme is ‘gamed’ by freeloaders who receive the same benefit as them.

While the PBB objectives are met, the parameters of evaluation do not capture the real “productivity” of teachers as many equate exemplary performance to “working hard” or “working longer hours”.

Further, the study revealed that some key performance indicators for DepED such as the National Achievement Test scores and dropout rates are purposely misreported since these indicators are crucial to agency eligibility in the PBB.

“Some education staff appeared to favor making students repeat rather than tarnish their dropout indicators for the school,” the study said.

This sends a problematic incentive signal to teachers as they are evaluated based not on the actual quality of their teaching. Mass promotion is the resulting behavior to this messaging.

Among NGAs, “the PBB works by incentivizing more work output, though not necessarily better-quality services.”

A “tendency to increase overtime” was likewise observed as a result of the “increasing number of requirements through the years, which are more stringent”, making it more difficult for agencies to be eligible for the incentive.

Need for PBB Reform

Despite these issues, study respondents still want to continue the implementation of the PBB. However, “there is a need for some improvement on the policy design,” Albert said.

To address the various concerns, the study recommended that the Department of Budget and Management (DBM) and the AO25 IATF Secretariat revisit and revise the policy design of the PBB to examine its effectiveness on agencies’ reform efforts and on public sector employees’ performance.

In particular, the study advised to “change the PBB requirements less frequently” since the yearly changes in the PBB guidelines are “confusing and generate documentary burdens to agencies”.

In addition, the study suggested to emphasize that “rewards are not merely for quantity of tasks, but also quality of work”

when cascading information about the rationale for the PBB as a reform measure.

Given the salary increases under the salary standardization law, Albert and co-authors suggest to “carefully monitor and assess the combined effect of these salary increases and the PBB to ensure that all of the increased compensation is tied to better government services”.

“In agencies where salaries are already expected to be high, PBB can be recalibrated to include nonfinancial incentives in the future,” Albert explained.

“It is critical that the PBB be understood within a broader reform context across government agencies,” Albert said. It is important that “reform roadmaps in each agency be synced with the use of the PBB,” he explained during a recent PIDS webinar where the study was presented.

He cautioned that staff who are “overwhelmed” with requirements may

actually be discouraged rather than incentivized.

Albert is also leading a research team in conducting a follow-up study on the effects of the PBB by employing a mixed methods research using primary and secondary data.

The new study consists of not only a perception-based survey of government bureaucrats but also seven focus group discussions with PBB focal points and members of the performance management teams of selected agencies, as well as representatives of oversight agencies.

The AO25 IATF is the body that formulates and issues the implementing guidelines for the implementation of the PBB. It also validates the requirements submitted by agencies. It is composed of DBM as chair, Office of the Cabinet Secretary as co-chair, and the Office of the Executive Secretary, National Economic and Development Authority, the Presidential Management Staff, and the Department of Finance as members. **RTAL**



CALL FOR PAPERS

Philippine Journal of Development

The Philippine Journal of Development is a professional journal published by the Philippine Institute for Development Studies. It accepts papers that examine key issues in development and have strong relevance to policy development.

Submissions and inquiries may be sent to PJD@mail.pids.gov.ph.

RESEARCH DIGESTS

RPS 2020-05

Assessment of the Free Irrigation Service Act

by *Roehlano M. Briones, Roberto S. Clemente, Arlene B. Inocencio, Roger A. Luyun Jr., and Agnes C. Rola*

This study is a preliminary assessment of the policy change brought by the Free Irrigation Service Act through an examination of secondary data and collection of primary information through key informant interviews and focus group discussions. The study found that free irrigation had the potential to benefit millions of individuals, although it only led to a small savings in palay production cost. Moreover, while palay farmers were poorer than the average household, most of them were not poor. The study urges the government to continue pursuing irrigation management transfer within the context of free irrigation based on minimum maintenance for the National Irrigation Administration (NIA) and transparent maintenance standards for both NIA and irrigators' associations. It also calls for a sustained and increasing subsidy for operations and maintenance, which must be made available only on a performance basis. The study advocates for the transformation of NIA into a service agency specializing in technical assistance, contract design, and performance monitoring. Download the full study at <https://www.pids.gov.ph/publications/7145>.

PN 2020-08

Mitigating Climate Change through Mangrove Forest

by *Madonna C. Daquigan*

This *Policy Note* emphasizes the role of mangroves in sequestering significant amount of CO₂ by harnessing their potential as CO₂ capture and storage (CCS). It zeroed in on the Bued Mangrove Forest Park in Pangasinan and assessed the diversity of its mangroves, sediment carbon, mangrove distribution and carbon stock, and vegetation index. Its analysis revealed that this forest has a potential as CCS, which can lead to notable strategies for climate change mitigation

and provide adaptation measurements. To sustain this benefit, it calls for the adoption of policies and regulations that can mitigate the impact of human actions on the forest. It also urged the government to establish sustainable funding and concrete incentive systems to balance the conservation of mangrove ecosystem and sustainable livelihood for coastal inhabitants and regulations for tourism. Download the full study at <https://www.pids.gov.ph/publications/7132>.

DP 2020-27

Towards a Sustainable Online Work in the Philippines: Learnings from the Online Survey of Market and Nonmarket Work during the Enhanced Community Quarantine

by *Connie B. Dacuycuy, Aniceto C. Orbeta Jr., Ramonette B. Serafica, and Lora Kryz C. Baje*

The emergence of digital labor platforms has broadened market work opportunities. Certain segments of the population, such as women and those belonging to the younger generation, may be naturally drawn to platform or online work. This has important implications on skill formation and human capital development, especially in countries where online work is mostly found at the lower end of the value chain. In addition, this may result in the widening gaps in social protection coverage and may cause social protection schemes to become unsustainable. This paper aims to investigate these issues in the context of making online work a sustainable form of work. Download the full study at <https://www.pids.gov.ph/publications/7152>.

DP 2020-25

FTA Utilization of Philippine Imports

by *Francis Mark A. Quimba, Maureen Ane D. Rosellon, and Sylwyn C. Calizo Jr.*

This study seeks to understand the relationship between preferential margin and free trade agreement (FTA) utilization rates in the case of the Philippines. It uses an empirical model to estimate this relationship using an FTA import ratio as a variable for utilization

and the difference between most-favored-nation (MFN) and FTA tariff rates as a variable for margin. Findings suggest that the preferential margin is positively associated with the utilization rates for FTA agreements. Results are found to be relatively robust after controlling for different fixed effects variables. Among the Philippines' FTA partners, margin is revealed to be significant in increasing imports from its neighbors in the Association of Southeast Asian Nations region. Furthermore, the study found a positive and significant relationship between margin and imports of nearly all commodity groups. Download the full study at <https://www.pids.gov.ph/publications/7150>.

DP 2020-24

The Role of Agrarian Reform Beneficiary Organizations (ARBOs) in Agriculture Value Chain

by *Marife M. Ballesteros and Jenica A. Ancheta*

This paper evaluates how agrarian reform beneficiary organizations (ARBOs) participate in the value chain, how they engage actors along the value chain, and what challenges do they face in the process. Farmer organizations, such as ARBOs, are important conduits for smallholders to participate, specifically in higher value chain. This strategy enables smallholders to pool resources, jointly carry out profitable activities, reduce risks and transaction costs, and operate on scale economies. However, many farmer organizations in the country have low level of organizational maturity and are mainly formed to access funding. Thus, smallholder participation in higher value chain is limited—the gains from value chain initiatives would impact only on a modest number of smallholders' population and may not be sustainable in the long run. The paper suggests that farmer organizations and their participation in higher value chain can be improved by (1) enabling farmer members to commit to the organization through equity participation, (2) enabling farmer organizations to establish enterprises that will generate income for members, and (3) capacitating farmer organizations on building alliances/networking. Download the full study at <https://www.pids.gov.ph/publications/7149>.

How Can PH Meet the Rising Demand for Data Workers?

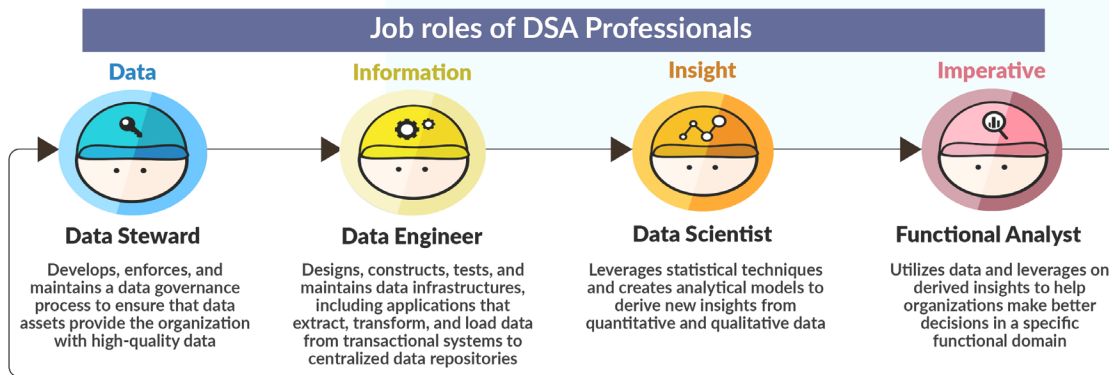
With the advent of the Fourth Industrial Revolution comes the increasing demand for data science and analytics (DSA) workforce. DSA skills, however, remain underdeveloped among the Philippine workforce. This infographic answers the question: “Are the DSA-related

undergraduate degree programs able to supply the current demands for DSA talents?” It provides evidence on the current DSA skill gaps, identifies specific DSA competencies, and recommends actions to address the challenges in preparing the future DSA workforce. **GGM**

What is data science and analytics or DSA?

Data science and analytics (DSA) is the process of progressing data along the value chain as it transforms **data to information to insight to imperatives** with the purpose of delivering the right decision support to the right people and digital processes at the right time for the good of society.

SOURCE: Analytics Association of the Philippines



10 DSA Competencies and Job Roles

The job roles of DSA professional are characterized by a set of 10 applicable DSA competencies with the required proficiency level.

LEGEND:
 Expert : 3 ★★★★★
 Intermediate : 2 ★★★
 Basic : 1 ★

10 DSA Competencies	Required Proficiency Level			
	Steward	Engineer	Scientist	Analyst
Domain Knowledge	3 ★★★★★	1 ★	2 ★★	3 ★★★★★
Data Governance	3 ★★★★★	2 ★★	2 ★★	2 ★★
Operational Analytics	3 ★★★★★	3 ★★★★★	3 ★★★★★	3 ★★★★★
Data Visualization	2 ★★	1 ★	2 ★★	3 ★★★★★
Research Methods	1 ★	1 ★	3 ★★★★★	1 ★
Data Engineering	-	3 ★★★★★	1 ★	-
Statistical Techniques	-	1 ★	3 ★★★★★	-
Methods & Algorithms	-	1 ★	3 ★★★★★	-
Computing	1 ★	2 ★★	3 ★★★★★	1 ★
21 st Century Skills	3 ★★★★★	3 ★★★★★	3 ★★★★★	3 ★★★★★

SOURCE: Analytics Association of the Philippines

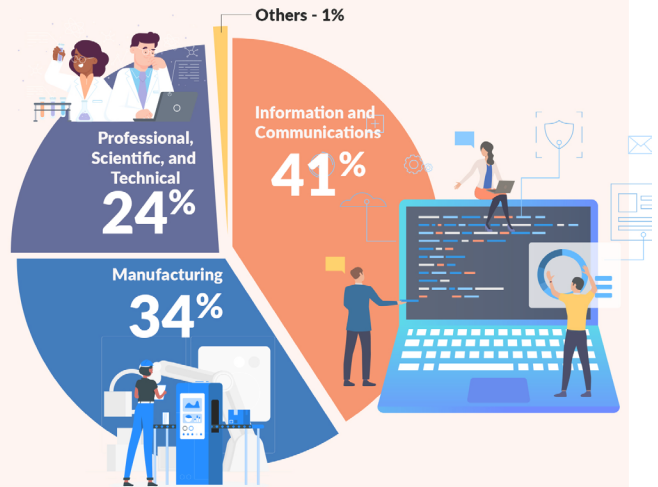
Who are the DSA workers?

DSA competencies in PH workforce

Of the **1,271** job activities in the Philippines, only **22 (1.7%)** require any of the **10 DSA competencies**



About half of these DSA-related jobs belong to the **information and communications subsector**



About **174,000** workers perform these jobs



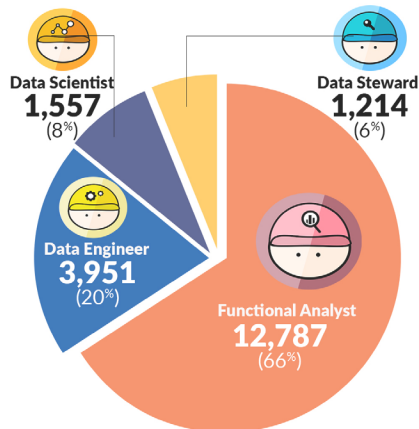
This figure represents **0.4%** of the total labor force in the Philippines

NOTE: Figures were as of 2016. SOURCE: Philippine Statistics Authority

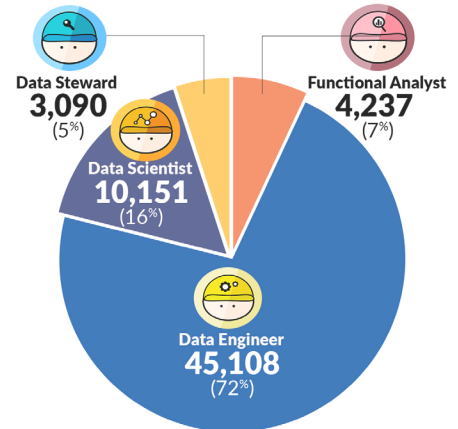
Demand for DSA professional in PH, 2019

VS.

Supply of DSA Professionals in PH, 2019



There is a misalignment between the demand and supply of DSA professionals. While employers were looking for graduates who can perform the work of a functional analyst, universities and colleges were producing graduates apt to be data engineers.



SOURCE: Authors' calculations

**POLICY
ISSUE AT
A GLANCE**

This infographic is based on PIDS Policy Note 2020-04 titled *Aligning Higher Education with Demands for Data Science Workforce* written by Brenda A. Quismorio, Maria Antonette D. Pasquin, and Claire S. Tayco, PIDS consultants. The full version of this infographic can be downloaded from <https://www.pids.gov.ph/gallery/485> while the full study may be accessed at <https://www.pids.gov.ph/publications/6959>.

Editor's Notes (continued from page 2)

Harnessing available technologies to improve connectivity, especially in far-flung areas, was the message of our article on the use of satellite technology. However, outdated policies and regulations hamper the initiatives in this area. Another article showed how machine learning using satellite imagery, social media data, and crowdsourced information, which are low cost and freely accessible, can provide useful socioeconomic data that can augment ground-truth surveys for evidence-informed policymaking.

Meanwhile, another article explained why contact-tracing applications had not reached a significant number of people, thus the need to design inclusive technologies. Most of these apps were accessible only through the more advanced mobile phones, to which the poor have limited access.

Another recurring theme was the need for a whole-of-society approach in dealing with the pandemic. No less than the socioeconomic planning secretary emphasized this in one of the DPRM activities. Quoting his speech, our article noted his advice of forging stronger multisectoral partnerships given the scope and magnitude of the problems caused by the pandemic, which the government cannot solve on its own. A related article echoed the same sentiment by a foreign social justice advocate who noted that the challenge to this approach is “bring(ing) together people with different backgrounds to agree and work together for a common vision”. Another impediment is mistrust between the government and its citizens, which can result in the latter’s unwillingness to collaborate. As one of our articles in this issue notes, enhancing public trust in the government, especially in times of crisis, is vital, as people look at their government first as protector and source of help. Monopolizing and withholding information delays the response and breeds distrust that can escalate to social unrest. Reforms in data sharing and transparency and recalibrating systems and processes to provide more responsive and efficient services are some of the ways by which the government can win their citizens’ trust and confidence. Toward this end, another article in this issue features the recommendation of a public health expert to increase the pool of data scientists and data analysts in the public sector. The lack of these experts, including those in the fields of disaster risk reduction and management and communication, he noted, affected the government’s quick and effective response to the COVID-19 pandemic.

Our infographic on the supply and demand of data analytics and science workforce and an article discussing the salient findings of the Institute’s evaluation of the implementation of the Performance-Based Bonus scheme complete this issue. As this year comes to a close, we thank all our loyal readers for making the *Development Research News* (DRN) and other PIDS publications your regular source of information on current and emerging development issues. We wish everyone a healthy, productive, and thriving Philippines in 2021! **SVS**

About DRN

Development Research News is a quarterly publication of the Philippine Institute for Development Studies (PIDS). It highlights the findings and recommendations of PIDS research projects and important policy issues discussed during PIDS seminars. PIDS is a nonstock, nonprofit government research institution engaged in long-term, policy-oriented research.

This publication is part of the Institute’s program to disseminate information to promote the use of research findings. The views and opinions expressed here are those of the authors and do not necessarily reflect those of the Institute.

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