

DEVELOPMENT RESEARCH NEWS

April–June 2021 • Volume 39 (2) • ISSN 0115-9097

Asia to benefit most from rise of digital platforms amid pandemic

THE ASIAN REGION is expected to benefit the most from the accelerating growth of digital platforms globally driven by the coronavirus disease 2019 (COVID-19) pandemic lockdowns.

This was according to the Asian Development Bank's (ADB) *Asian Economic Integration Report 2021* presented by ADB Senior Economist James Villafuerte during a webinar jointly organized by the Bank and the Philippine Institute for Development Studies (PIDS).

"Given its market size, Asia is at the center of this digital platform development and competition, and most of the big technology companies will try to take advantage of this [potential]," Villafuerte said. The region is also home to more than 60 percent (about 1.9 billion) of the world's 3.2 billion e-commerce users.

Villafuerte further noted that Asia sees a much faster revenue growth of around 16 percent for digital platforms than the United States and Europe, which have been posting growth of below 10 percent.

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Editor's Notes

While the COVID-19 pandemic has inflicted massive damage to our economy and society, it has unleashed a positive unintended consequence. The pandemic has fast-tracked our digitalization journey. It has accelerated the adoption and use of digital technologies. This DRN issue features articles that summarize the prospects, challenges, and opportunities of the country's digital economy based on analyses presented in PIDS studies and fora.

As the banner article emphasizes, countries like the Philippines have good opportunities to take advantage of platform developments. We have a good “digital talent pool” and a “strong start-up ecosystem”. Other bright spots include the presence of an innovation industrial strategy by the government and the country's growing fintech and e-commerce sectors. The private sector is also increasingly embracing technology in implementing both process and product innovations to adapt to the fast-evolving business landscape.

These prospects, however, are primarily constrained by issues that are obstructing the growth of the digital economy. One of these is the digital divide. According to the 2019 National ICT Household Survey, “82 percent of households have no internet access at home” and “5 percent of all Filipino households [still] do not have electricity at home.” A PIDS study featured in this issue found that most individuals benefiting from the digital economy through online work are highly educated. (Page 20)

The Asian region stands to benefit from the growing digital platforms, particularly in trade and employment.

“For Asia, the increased [digital] output will be equivalent to USD 1.7 trillion, which is almost 6 percent of the 2020 baseline output,” Villafuerte said, adding that an increase of 20 percent in digital inputs in 2025 will generate 66 million jobs in the region.

Risks and challenges ahead

While digital platforms open vast growth opportunities for global economies, they also bring risks and challenges. One perennial issue highlighted in the report is the digital divide, which has resulted in rising inequalities globally.

Speaking at the same webinar, ADB's chief for Digital Technology for Development, Thomas Abell, expressed the importance of building infrastructure and providing better internet access to ensure that the digital economy can “benefit more people at the bottom of the pyramid and not cause more inequality”.

Meanwhile, Villafuerte pointed out that the digital divide can be multidimensional, ranging from access to technology, age, geographic location, or even gender. He also expressed concern about the highly concentrated nature of digital platforms, noting that most of the top 70 digital platforms globally are either from the United States or the People's Republic of China. He cautioned that this could lead to “excessive market power for platform giants”.

Other issues identified in the report are the varying readiness of countries to embrace

digital technology and digital platforms, lack of social protection for platform workers, and data privacy and security issues that could lead to identity theft and cybercrime.

Digital platforms in PH

The digital platforms' three-percent contribution to the Philippine economy is relatively low compared to the sector's regional contribution, which is about six percent. Despite this, the ADB report still sees the country's potential given the number of Filipino digital platform users.

“In the Philippines, [there are] about 76 million users of digital platforms. This means that if we do our policy right, we can use this as a leverage for growth,” Villafuerte explained.

Abell likewise recognized the country's potential to benefit from the growth of the digital economy.

“There is going to be more flexibility in terms of where digital jobs can be located. The Philippines already has an advantage with 1.2 million BPO [business process outsourcing] workers and a strong start-up ecosystem where there is a good digital talent pool,” Abell explained.

With these factors opening more opportunities for the Philippines, Abell urged the country to position itself as “an attractive place for start-ups to relocate or for those who want to have flexibility”.

Villafuerte, for his part, identified six priority areas that could help the Philippines unlock its digital potential: affordability and

access to information and communications technology, availability of e-payment, logistics and delivery infrastructure, digital skills training, effective taxation policies, and development of regulations for data privacy and security.

Meanwhile, Senator Juan Edgardo ‘Sonny’ Angara, the closing speaker at the webinar, emphasized the need to update the country’s outdated laws and regulations that make using new technologies difficult for Filipinos.

“Many studies have pointed out that our laws and regulations are somewhat antiquated, dating back as far as the 1930s. Others have also [commented] that some

of our laws do not encourage competitive markets in the arena of technology and communications,” he said, stressing that updating the country’s laws is essential to its digital expansion.

Measuring the digital economy

New data are needed to better understand the potential benefits and risks of the increasing use of digital platforms.

In his presentation at the webinar, PIDS Senior Research Fellow Jose Ramon Albert said that “the platform economy is not under the radar of [most national statistics offices] at present” due to the absence

of a commonly accepted definition of the platform economy, digital economy, and the digital sector. Another challenge, he said, is the cross-border and cross-sectoral nature of these platforms.

Albert then suggested to reengineer how existing surveys in the country are done and supplement traditional data collection with alternative data sources, such as web scraping.

He also called on the government to establish regulatory frameworks to manage the risks of using digital platforms. However, he stressed that these regulations should not stifle innovation in the country. **GBDC**

‘PH online workers must be provided skills training, social protection, infra support’

GIVEN THE INCREASING globalization and demand for online workers, the government is advised to provide skills training, a sustainable protection system, and infrastructure support.

In a study released by state think tank Philippine Institute for Development Studies (PIDS) titled “*Online work in the Philippines: Some lessons in the Asian context*”, authors Connie Bayudan-Dacuycuy, Aniceto Orbeta Jr., Ramonette Serafica, and Lora Kryz Baje asserted that there should be skills training development programs sustained with a social protection system to ensure Filipino workers’ global inclusion in the platform economy.



There is a need to scale up skills development training systems for online workers in the Philippines. (Photo from Department of Information and Communications Technology | Facebook)

The emerging platform economy, powered by information and communications technology (ICT), has reshaped the landscape of life and work. Moreover, the coronavirus disease 2019 (COVID-19) pandemic and the subsequent imposition of work-from-home schemes and online operations have changed the standard work arrangements.

“The adoption of telecommuting and virtual collaboration blurred the line between office and online work, transcending boundaries across spatial borders,” the authors observed.

Using Google Trends data, the authors found an increasing interest in online work in the Philippines since the government started implementing community quarantines in March 2020.

Further, aggregate data from the Online Labor Index (OLI) released by the Oxford Internet Institute showed that online industries, such as software development and technology and creative and multimedia, have been rising globally at almost 50 percent and around 20 percent, respectively. The top three countries with the highest number of online workers are India, Bangladesh, and Pakistan, which together account for the 52 percent of the global online workforce. The Philippines, meanwhile, ranks 6th, with Viet Nam and Indonesia at 12th and 15th spots, respectively.

Patterns of online work in PH

In 2018, the United Nations Conference on Trade and Development reported that trade in creative services in developed economies

had grown from 17.3 percent in 2011 to 18.9 percent in 2015.

According to OLI data, about 1 in 2 (47%) Filipino online workers are in the creative and multimedia industry. However, this sector has been experiencing a major downturn due to the COVID-19 pandemic.

Meanwhile, projects related to software development and technology, where only 14 percent of online Filipino workers are engaged, have remained resilient owing to the rising demand for these occupations in the global market. However, it was noted that the share of Filipino workers in this field is relatively lower compared to other Asian countries, such as India with 59 percent, Pakistan with 45 percent, and Viet Nam with 52 percent.

Despite being low value-added tasks, clerical and data services account for 25 percent of online workers in the Philippines. On the other hand, less than 10 percent of online workers in Bangladesh, India, Indonesia, and Pakistan are engaged in these types of work.

Due to the competitive nature of the platform economy, the authors contended that skills development for value creation in online work, especially jobs at the lower end of the value chain, is imperative.

“There is a need to assess the skills of the workforce vis-à-vis the requisite skills of the target occupation and industries and create enabling environments for workers to prosper in platform work,” the authors recommended.

They also highlighted the lack of an adequate social protection system among online workers as most of them are classified as contractors or self-employed.

Results from the 2015 International Labour Organization Survey of Crowdworkers showed that only around 60 percent of platform workers had health insurance coverage, and only about 35 percent had pension plans. The authors also cautioned that this could exacerbate gender gaps in social protection since women are more likely to participate in online work because it allows them to do care work while earning extra income (see related article on page 5).

The authors also cited ‘reintermediation’, a situation where specific tasks are farmed out to less visible and less experienced workers for lower pay, as an exploitative practice in online work. On the other hand, they noted that this could also result in ‘skills arbitrage’, in which workers are no longer confined to the local labor market and are, thus, able to maximize their skills and talents for rightful compensation.

Moving forward

“There is a need to design a social protection system that covers all workers,” the authors recommended. They explained that platform workers should have universal and equal access to social protection systems that are responsive to their needs and preferences.

The authors also called for infrastructure support for the industry, particularly for

improving internet connectivity, so that online work production could function more efficiently.

The authors lauded the government's initiative to craft a creative economy roadmap for the Philippine creative services. The roadmap identifies priority sectors that could strengthen the competitiveness and attractiveness of the country's creative talents and make the country a leader in the creative economy.

"Bangladesh, Indonesia, and the Philippines, which are mostly into creatives and multimedia, can create their niche in online work by expanding into tasks that differ in scope and complexities, such as digital marketing, content creation,

creative design, and creative technology," the study read.

Another option is to capture jobs in software development and technology, but this may require investing more in ICT skills training and educating workers on science, technology, engineering, and mathematics.

Aligning the country's workforce skills with the target skills and occupation in the global market is also vital, considering that a large percentage of local online workers are performing data and clerical services, which are low value-added tasks.

The authors also suggested creating a "sustainable ecosystem encompassing skills

development programs and training support initiatives that are useful in any work setting".

"The government, along with businesses, labor unions, workers, academe, and service providers, may craft a competency framework and a national strategy for skills and human capital development," authors suggested. They added that a competency framework strategy that considers the needs of global and local labor markets could help strengthen the sharing of information, tools, and resources among industry players.

Moreover, the authors recommended the inclusion of the platform economy as an area of cooperation among Asian nations. **MPT**

Women dominate platform work in PH, PIDS-DICT survey says

MORE WOMEN THAN men are engaging in platform work or jobs performed online.

This was according to a local online survey of market and nonmarket work conducted by the Philippine Institute for Development Studies (PIDS) and the Department of Information and Communications Technology (DICT).

PIDS and DICT conducted the survey from May to December 2020 to characterize market and nonmarket work, along with the issues, challenges, and motivations on why Filipinos engage in platform work.



Since women are more likely to work exclusively in a platform setting, gender inequalities in social protection coverage may arise, according to a PIDS study.

Using data from this survey, PIDS researchers Connie Bayudan-Dacuycuy and Lora Kryz Baje, in a study titled *“Decent work in crowdwork: Gendered takeaways from an online survey in the Philippines”*, revealed that Filipino women are more likely than men to engage in platform work due to considerations of higher salary, flexibility, and access to care economy.

Results from the first phase of the survey showed that out of the 219 respondents who engage in platform work, around 70 percent were women. This finding was consistent with the second phase results, showing that out of the 333 respondents, 69 percent were women. Meanwhile, female respondents who have ever done platform work are at 42 percent, higher than male respondents at only 33 percent. In contrast, a bigger proportion of male respondents (31.21%) versus female respondents (24.03%) are engaged exclusively in nonplatform or standard work. On the other hand, more female respondents (16.82%) than male respondents (7.96%) are doing platform work exclusively during the survey periods.

The average age for both Filipino male and female platform workers who participated in the May-December 2020 online survey is 31 years old.

Benefits of platform work

Flexibility is a critical motivational factor in this work arrangement, according to the PIDS study.

“Flexibility makes it possible for platform workers, particularly the younger generation, to maximize economic opportunities through technology and network resources while pursuing personal interests and leisure activities,” the study read.

Other factors viewed favorably by platform workers that the study noted are self-supervision and reduced financial and health costs from less commute.

“Along with these benefits, platform work may also be performed alongside nonplatform work in the local labor market, with the latter serving as a potential source of social protection like insurance coverages, provident funds, time deposit accounts, and cooperative memberships,” Dacuycuy and Baje said. Thus, they noted that platform work gives workers an avenue to generate a secondary source of income.

“It also offers women economic opportunities even as they perform care work and housework,” the authors added.

They further observed no gender bias in compensation in this type of work. Considering educational background, experience, and geographical location, the daily rate for both men and women remains equal. The income rate of USD 36.8 per day for an eight-hour work rendered among platform workers is higher than the country’s prevailing minimum wage of USD 4 to USD 9 per day as well as the basic pay of professionals, which is only about USD 15 to USD 17 per day in 2020.

Troubleshooting platform work

Despite the advantages, there are also disadvantages that make platform work unfavorable.

In another PIDS study titled *“Towards a sustainable online work in the Philippines: Learnings from the online survey of market and nonmarket work during the enhanced community quarantine”*, Dacuycuy and Baje reiterated the need to analyze the issues that come with platform work to “prevent the widening and deepening of existing inequalities [and ensure decent, inclusive, and sustainable work in platforms]”.

They cautioned that without policies and programs toward skills development, the gender skills gap is likely to remain, if not widen.

“Skills development and training systems that enable workers to develop the skills required in any work arrangement is crucial,” they maintained. They suggested that public and private providers work together through digital platforms to serve the demand for skills and training.

Examples of these initiatives are the DICT’s digitaljobsPH program, which aims to assist economically disadvantaged areas and rural communities by creating and promoting ICT-enabled jobs, and the Department of Labor and Employment’s Philippine Qualifications Framework and Philippine Talent Map Initiative.

In addition, workers who wish to join the platform economy are having difficulties

finding suitable jobs, while existing online workers are experiencing job insecurity.

Workers who have no job experience or weak credentials have limited opportunities in a platform setting. Furthermore, online workers are solely responsible for their own training and skills development since they need to bring a certain level of knowledge and expertise into the platform.

According to the authors, platform work requires hard skills (e.g., numeracy, literacy, writing, internet literacy, and basic information technology skills) and soft skills (e.g., time management and communication skills). They added that most online freelancers possess a college degree, which signals a competitive environment for platform work.

“When the need for training and learning developments arises, platform workers pay for their training to sustain employment,” the authors said. Thus, they recommended that online tools must be included as part of businesses’ strategy to reskill platform workers and enhance their employability.

Meanwhile, the government must provide training through technical and vocational education and training schools. At the same time, the academe must update the curriculum of the higher education system to provide forward-looking education and training that are attuned to the needs of future work.

“Since platform work is based on contracts, workers are not guaranteed a secure income flow and social protection,” the authors said.

The study also noted the inability of platform workers to negotiate prices and standards with their clients. Survey results show that only around 30 percent of respondents have successfully negotiated a price with their clients. In comparison, one percent claimed that their outputs were rejected without any justifications or giving them room for improvement.

“The lack of collective representation and voice is a critical issue in platform work due to asymmetries in power and information,” the authors said.

Furthermore, discrimination, work instability, and the absence of grievance mechanisms have contributed to workers opting out of the platform economy.

Thus, they suggested that the government set up digital labor platforms to facilitate the matching of demand and supply of workers and provide job security entitlements.

“One way to do this is to link training and social protection systems. A potential starting point is an unemployment insurance that provides not only minimum income while unemployed but also covers reskilling or upskilling and training costs to facilitate movement in-between jobs,” they said.

Another obstacle that needs government intervention is the lack of social protection systems for those engaged in platform work.

According to the study, the inability to pay contributions regularly due to limited funds and the instability of their monthly income is the main reason platform workers do not

subscribe to security funds, pension funds, or private health insurance.

Dacuycuy and Baje said this issue could be addressed by combining contributory and noncontributory (e.g., tax) schemes to finance universal social protection.

The authors also noted that women are more likely to work exclusively in a platform setting. Thus, to ease their burden in performing household tasks and economic activities at the same time and further encourage their participation in the labor market, good and reliable child care services that coincide with the office schedule must be provided. Four-day workweek and work-from-home schemes for those whose tasks can be done offsite can also be implemented.

Another obstacle is the slow internet connectivity, as pointed out by more than half of the survey respondents. Thus, it is recommended that the government prioritize the provision of reliable and faster internet connection given its importance in platform work.

Lastly, they suggested implementing strategies to collect “nationally representative data” of platform workers through the Philippine Statistics Authority.

“Without initiatives to collect nationally representative data of workers on the platform, analysis of benefits and challenges will remain descriptive,” the authors concluded. **MPT, GGM**

Study finds low interest in STEM careers among Filipino youth



The low supply of research scientists contributes to the lack of innovation in the Philippines (Photo by International Rice Research Institute / Flickr)

THE NUMBER OF Filipino youth who pursue careers in science, technology, engineering, and mathematics (STEM) is declining amid government's push for greater innovation.

In the study *"Future S&T human resource requirements in the Philippines: A labor market analysis"* by state think tank Philippine Institute for Development Studies (PIDS), researchers Jose Ramon Albert, Ana Maria Tabunda, Carlos Primo David, Kris Francisco, Charlie Labina, Janet Cuenca, and Jana Flor Vizmanos advised the government, academe, and private sector to be prudent in investing on science and technology (S&T) human resource development.

S&T has long been recognized as a key driver of economic growth and development. The Fourth Industrial Revolution (FIRe), which constitutes the emerging technologies that have been changing the public's way of doing business, and the increased globalization of labor markets are expected to bring in new challenges and demands in the S&T fields, especially in the next five years.

"Without urgent and targeted actions today to manage the near-term transition and build a workforce with future-proof skills, governments will have to cope with the ever-growing risks of technological unemployment and income inequality, [while] businesses [will face] the

possibilities of a shrinking consumer base," the authors warned.

Thus, the labor market must be restructured to adapt to the swift changes in the world economy.

The report also identified barriers and bottlenecks in meeting the demands of science, technology, and innovation (STI). It noted that while spending more on research and development can be helpful, this may not be enough to make the country "FIRe-ready".

"Strong institutions, combined with human capital and hard and soft infrastructures, are needed to implement catch-ups and leapfrogs in this area," the study emphasized.

The low supply of research scientists and engineers, poor performance in starting a business, meager spending on education, and low production of scientific and technical publications are the main reasons why the Philippines lags behind its neighbors in the Association of Southeast Asian Nations in the 2019 Global Innovation Index, according to the PIDS paper.

"The country faces challenges in advancing STI, with only 2 in 5 firms being innovation-active as of 2015," the authors emphasized.

Why is enrollment in S&T courses declining?

Students' course preference also contributes to the declining enrollment rate in S&T programs. This was confirmed by a high-level official from an employers' group in the Philippines interviewed by the study team. According to the official, the transition of some companies to digitalization and automation increased the demand for S&T workers.

"However, STEM courses remain less appealing to students and parents compared to business-related courses," the official observed.

Based on the 2015 Census of Population of the Philippine Statistics Authority, the S&T workforce is classified into (1) life sciences, (2) physical sciences, (3) math and statistics, (4) computing/information technology (IT), and (5) engineering.

Citing data from the Commission on Higher Education (CHED), the authors showed that engineering fields have the highest concentration of S&T enrollment, which increased by 41 percent in academic year (AY) 2015–2016, followed by IT-related fields with a 36-percent increase. Given the demand for graduates in engineering and IT fields, workers' supply for these disciplines is also expected to flourish. Likewise, the demand for statisticians is expected to rise due to the popularity of data analytics in the country.

The implementation of the K–12 program also contributed to the decline in tertiary enrollments for AY 2016–2017 and



By 2020, engineering will remain the field with the highest supply of S&T graduates. (Photo by Department of Public Works and Highways / Facebook)

2017–2018. This downward trend continued in AY 2018–2019, contrary to expectations that enrollment for this academic year would go back to its pre-K–12 levels. According to authors, it is likely that some senior high school graduates decided not to pursue college anymore and enter the workforce instead.

The high cost of tertiary education, particularly S&T courses, is also a factor for the low turnout of enrollees in these fields. Although the Department of Science and Technology (DOST) provides various scholarships to qualified students in S&T degree programs, the authors noted that "this alone may not be enough to produce the needed pool of future S&T human resources."

The study also highlighted possible job mismatches among S&T graduates. For example, they cited results from the 2014 CHED-PIDS Graduate Tracer Study, showing that only 45 percent of chemical engineers work in their field as professionals, with 18 percent working as clerks and 9 percent as health professionals.

What can be done to encourage young people to pursue STEM careers?

Academe sector

According to authors, higher education institutions (HEIs) must regularly develop and update their curricula to ensure that their degree programs are responsive and attuned to the changing workforce requirements.

They also recommended that there should be enough S&T teachers in colleges and universities. CHED data showed a decreasing trend in the number of teachers through the years. If this continues, the authors cautioned of a possible shortage of S&T teachers by 2022–2023.

"The country needs more S&T faculty to produce more graduates," the authors contended. To increase the pool of S&T teachers, they suggested that faculty development policies, including postgraduate benefits and increased salaries for faculty retention, must be reviewed.

Government sector

The government is the single largest employer of S&T graduates in the country. Of the 1,435,676 permanent government personnel, about 8 percent are S&T workers. Meanwhile, if all personnel in the medical and allied fields were to be considered S&T workers, they would represent the majority in government.

However, it was observed that most S&T plantilla positions in government are silent in the specific field of specialization required for each position. According to the authors, the qualification requirements are commonly left to the discretion of each

agency. It is also likely that the agencies adjust the requirements for S&T personnel in government with advanced degrees based on the applications they receive and the qualifications of their personnel who can be promoted. Thus, the authors recommend that a review of recruitment policies, specifically those affecting S&T agencies engaged in teaching and research, must be carried out.

The government sector, particularly DOST and the Department of Education (DepEd), is also advised to conduct annual surveys similar to South Korea's Ministry of Education and the Korea Research Institute for Vocational Education and Training's

school-age dream job annual survey. The authors concluded that this strategy could help escalate S&T advocacy campaigns for Filipino youth.

"Aggressive media campaigns supporting S&T, especially through social media platforms, could be used to reach the youth and their parents. Facebook, Instagram, YouTube, and other social media can [serve as channels to communicate] S&T careers and opportunities," the authors added.

DepEd, CHED, DOST, and PIDS are also encouraged to collaborate in producing quality data and studies on policy issues affecting S&T education. **MPT**

Bridging digital divide could improve access to livelihood opportunities

GOVERNMENT EFFORTS TO narrow the digital divide in the Philippines are crucial so that all segments of the population can equitably benefit from the gains of information and communications technology (ICT), thereby improving their access to livelihood opportunities.

This was according to a Philippine Institute for Development Studies (PIDS) research titled *"Filipinos' access and exposure to ICT: A general overview based on the National ICT Household Survey"* by Aubrey Tabuga and Carlos Cabaero.

Using data from the 2019 National ICT Household Survey (NICTHS) conducted

by the Department of Information and Communications Technology and the Philippine Statistical Research and Training Institute, Tabuga and Cabaero examined online entrepreneurship in the country and its opportunities and constraints.

"The continuing emergence of ICT and the industries that come with it, particularly online selling, seems to spur economic participation from otherwise disengaged members of the population. Online selling appears to be a viable option for homemakers to engage in economic activity, which could lead to higher income and improved well-being for their families," the authors said, adding

that opportunities provided by online entrepreneurship are also extended to both employed and unemployed individuals who want to augment their incomes.

Based on the 2019 NICTHS, a quarter of the estimated 1.1 million individuals who engaged in online selling reported this activity as their primary source of income. For most, online selling is only supplementary rather than their primary source of income. This is true for both men and women but more so for women.

The survey also revealed that majority of those who are finding livelihood

opportunities in online selling are highly educated or have a college education. Thus, the authors underscored the need to improve ICT access among the less educated.

When asked about their reasons for not engaging in online work, respondents cited lack of interest (82%) and lack of knowledge or skills (31%) as the most common reasons.

Moreover, the authors revealed that “there is [still so] much to improve in using ICT for economic purposes, such as acquiring skills, doing online financial transactions, and conducting business.”

According to the authors, only 6.7 percent used the internet for online financial transactions like banking, shopping, and booking/reservations, with the majority (51%) of respondents unaware that they can do online financial transactions.

“Efforts to improve access and encourage people to [use] ICT more in their daily activities must focus on improving awareness, knowledge, and skills,” the authors said, emphasizing that the low awareness and lack of knowledge of many in using the internet prevent them from maximizing the gains from ICT.

Addressing skills deficit

In another PIDS study titled *“Digital divide and the platform economy: Looking for the connection from the Asian experience”*, researchers Francis Mark Quimba, Maureen Ane Rosellon, and Sylwyn Calizo Jr. called for greater skills

development of the youth and reskilling and retooling of adults.

Looking at the indications of the presence of digital divide in Asia, this study showed that only those who have adequate skills have better access to computers and the internet.

Citing data from related studies, the authors disclosed that people who have access to computers make use of the technology mostly for basic communication, entertainment, and gaming. In addition, few of those who have access to computers use the technology to send emails, encode data, use word processing software, transfer files, and conduct distance/online/computer-aided learning.

The more advanced tasks, such as running a software program and performing data management and analysis, have the lowest proportion of computer users, with the majority of them highly educated.

“In the Philippines, those who have higher education use the internet for more advanced tasks, such as for learning (e.g., taking online courses, doing academic research, reading ebooks, and searching for dictionaries), producing creative or user-generated content (e.g., managing a personal homepage, blogging, and vlogging), and transacting online (e.g., online banking, online booking/reservation, and online shopping,” the authors said.

It was noted that digital skills are essential for the population to maximize the use of the digital economy. The PIDS study also emphasized that people with limited digital

and technological skills would use ICT for less productive activities.

Improving ICT infrastructure

Aside from the need to address skill barriers, both studies underscored the need to improve ICT and non-ICT infrastructures simultaneously.

Many Filipinos face various infrastructural constraints that hinder their access to ICT. The NICTHS results show that while many subnational regions have almost 100-percent access to electricity, there remain five regions with below 90-percent share of households without electricity. These include the Bangsamoro Autonomous Region in Muslim Mindanao (84.7%) and Region IX (88.6%).

Further, the survey shows that 5 percent of all Filipino households do not have electricity at home, 17 percent do not have television at home, 10 percent of barangays are still without cellular phone signals, 60 percent do not have TV signals in their area, and 70 percent of barangays do not have fiber optic cables installed. About 82 percent of households have no internet access at home.

Quimba, Rosellon, and Calizo emphasized that providing material access and supporting infrastructure are necessary to encourage digital platform participation. They added that developing the skills needed to participate in the platform economy is conditional on one’s motivation to learn and physical access to basic technologies. **WMA**

Photo by Department of Information and Communications Technology / Facebook

Experts: Pursue national interest in trade negotiations on e-commerce



Barriers to digital trade and cross-border data flows, including customs duties on electronic transmissions, could adversely affect the whole economy, experts say.

EXPERTS FROM STATE think tank Philippine Institute for Development Studies (PIDS) are urging the government to consider the national interest in negotiating the rules on trade-related aspects of e-commerce.

In a paper titled “*Costs and benefits of new disciplines on electronic commerce*”, research fellows Ramonette Serafica, Francis Mark Quimba, and Janet Cuenca advised that the impact of barriers to digital trade and cross-border data flows on all sectors must be considered for a more balanced assessment of the costs and benefits of trade disciplines on e-commerce.

The PIDS study, which explored the potential impacts of trade disciplines on e-commerce, specifically the moratorium on customs duties on electronic transmissions, also urged the government to invest in digital infrastructures needed for an efficient and effective tax system fit for the digital economy.

Philippines' international commitments on trade-related aspects of e-commerce

As a member of the World Trade Organization (WTO), the Philippines has not imposed customs duties on electronic

transmissions. This practice is now being reviewed under the Joint Statement Initiative (JSI) on e-commerce, which seeks to establish multilateral rules on trade-related aspects of e-commerce. As of October 2020, 86 WTO members, which together account for 90 percent of global trade, have joined the JSI on e-commerce. The Philippines officially joined in January 2020.

The authors advised the Philippine government to “consider all scenarios and be ready to respond to whatever international consensus reached at the WTO regarding the moratorium on the imposition of customs duties”. In particular, they noted that the case wherein the WTO members agree on a permanent moratorium must be considered.

Based on estimates of digitizable products, the foregone revenues due to a moratorium represent about 0.10 percent and 0.65 percent of national government revenues using the average most-favored-nation (MFN) tariff rate and the bound tariff rate, respectively.

However, using estimates based on broader definitions of electronic transmission, foregone national government revenues are higher, ranging from 0.59 to 1.38 percent and 3.68 to 8.59 percent, using the average MFN rate and bound rate, respectively.

On the other hand, if the WTO members decide to lift the moratorium, the authors cautioned of practical difficulties and policy constraints limiting the actual intake from tariffs.

“Supposing the moratorium is lifted, [the Philippines has existing laws and international commitments that] limit the application of customs duties, thus affecting the potential revenues that could be collected,” the authors explained.

This includes the Customs Modernization and Tariff Act (CMTA) or Republic Act (RA) 10863, which provides that “no duties and taxes shall be collected on goods with freight onboard or free carrier value of PHP 10,000 or below.” The law currently applies to goods only. However, if it is to be extended to cover electronic transmissions (digitizable products delivered electronically), duties and taxes will also not be collected on these imports with a value of PHP 10,000 or below.

In addition, the Philippines, as a signatory to the Florence Agreement, does not collect customs duties or other charges on the importation of educational, scientific, and cultural materials. The authors noted that given the country’s obligation under this treaty, it could be argued that exemptions should also apply to digitized products.

The country is also committed to the Information Technology Agreement (ITA), which requires its participants to bind and reduce tariffs to zero for all products specified in the agreement.

Moreover, if services were to be included in the definition of “electronic transmissions”, then the General Agreement of Trade in Services (GATS) would apply. Under the GATS, imposing a customs duty would violate national treatment obligations where commitments have been made since duties are considered discriminatory.

Economic impact of cross-border data flows regulations

The authors also cautioned that various barriers to cross-border data flows could adversely affect the whole economy, including both data-intensive and traditional industries.

For example, they noted that given the data-intensive nature of the services it offers, the Information Technology-Business Process Management (IT-BPM) sector could be adversely affected if barriers to cross-border data flows, including customs duties, will be imposed.

The IT-BPM sector has been cited as the main driver of the success of the Philippine service exports. The country, which emerged two decades ago as an alternative to India for IT-BPM services, has become the top destination for voice-related services and has been rapidly growing its capability to offer nonvoice services to a broader set of clients globally.

Meanwhile, even traditional industries, such as agriculture, mining, and manufacturing, rely on data from all over the world to support the various stages of their operations, and for research and development. Small and medium

enterprises (SMEs), households, and governments also consume digital products and rely on data sharing across borders.

Regulating the platform economy

In another PIDS study titled “*Understanding the costs and benefits of digital platforms and the implications for policymaking and regulation*”, authors Ramonette Serafica and Queen Cel Oren advised the government to develop appropriate policy and regulatory responses concerning the platform economy.

“The emergence of various digital platforms and the technologies that drive them will continue to shape our economy and society in ways that we cannot yet fully anticipate. Their impacts, whether beneficial or detrimental, will largely depend on government responses and the quality of regulatory governance,” they said.

The platform economy is characterized by digitally enabled activities in business, politics, and social interaction. A platform connects two or more user groups and mediates the transaction between those users through digitalized services. Examples of such are e-commerce and ride-hailing and delivery service platforms.

Central to identifying the appropriate government intervention, according to the PIDS study, is understanding the public interests involved, which could include the promotion of competition, innovation, consumer protection, ensuring safe and reliable digital communication, protection of workers, and taxation issues.

“Government intervention could take the form of public production or provision,” the authors noted.

As examples, the study cited the initiatives of some government agencies in the Philippines, such as creating e-commerce websites and mobile apps to support SMEs, farmers, and science and technology innovation.

These include the Department of Trade and Industry’s GoLokal to help promote Filipino products and the Department of Science and Technology’s OneSTore.ph, a project with the Filipino Investors Society Producers Cooperative to market indigenous products from all the regions of the country for free. Another initiative is the Department of Agriculture’s eKadiwa, which allows farmers and agripreneurs to sell products directly to consumers in Metro Manila.

However, “there may be other ways for the government to encourage the creation and growth of digital platforms designed for a specific purpose or group, without necessarily operating one,” the authors said.

Creating an enabling environment is another way for the government to support the growth of the platform economy. According to the authors, the Innovative Start-up Act (RA 11337) and the Innovation Act (RA 11293) should be utilized to support digital start-ups and introduce innovative products that address market needs.

Furthermore, they noted that investing in digital infrastructure is necessary to enable greater participation in platform-enabled activities and establish a tax system suited for the digital economy.

Lastly, to cope with the various issues related to digital transformation and the data economy, the authors recommended a shift toward collaborative regulation.

“There needs to be a close collaboration between the ICT regulator and other regulators, such as those dealing with competition, consumer protection, data protection, finance, energy, transportation, commerce/trade, and other issues ... [as] some form of digital regulation now occurs across different agencies,” the authors pointed out.

“Regulations have to be forward-looking, holistic, development-oriented, evidence-based, market-proof, incentive-based, innovation-based, inclusive, and technology-neutral,” they emphasized. **WMA**

‘Restrictive regulations may hamper growth of PH digital platforms’

THERE IS A need to calibrate the country’s “restrictive” regulatory infrastructure for digital platforms to thrive.

This was according to Aiken Larisa Serzo, author of a study released by state think tank Philippine Institute for Development Studies (PIDS) on “*Cross-border issues for digital platforms: A review of regulations applicable to Philippine digital platforms*”.

With the emergence of new business models resulting from Industry 4.0



Regulators should ensure that laws do not pose anti-innovation effects on digital platforms and other emerging technologies.

technologies, Serzo noted that the government must provide a regulatory environment that encourages digital platforms to contribute to the country's sustainable and inclusive growth.

To do this, "existing regulations in the country must be reevaluated to address possible unintended anti-innovation effects," Serzo suggested.

Challenges in regulating cross-border digital products and services

Due to the fluid and cross-border nature of digital products and services, crafting regulations for digital platforms is challenging. Complicating the situation, said Serzo, is the absence of laws or regulations that directly govern cross-border transactions through digital platforms.

In examining the country's regulatory ecosystem, which includes innovation, electronic transactions, payments and movement of funds, consumer protection, access to funds, intellectual property rights, and data protection and privacy, the study found apparent regulatory gaps that hinder further adoption of digital transactions.

For instance, the study noted that the absence of rules on electronic notarization limits the types of contracts that may be executed electronically, impeding seamless electronic transactions.

Restrictive policies also affect firms' ability to get funding. The study revealed that the country has been lagging behind its

neighbors in the Association of Southeast Asian Nations in attracting investments in the internet sector. For example, she cited that the Philippines was only able to close 72 deals valued at USD 221 million in 2019, while its neighbors Singapore and Indonesia were able to close 675 (valued at USD 7.1 billion) and 355 (valued at USD 3.2 billion) deals, respectively.

"The volume of investments received by a country may correlate with the ability of the country's regulatory framework to provide some level of certainty and stability," Serzo explained, adding that restrictive policies could lead to "regulatory arbitrage", wherein firms relocate to other areas or jurisdictions where risk is more manageable.

Aside from its effect on funding, the study also noted that regulations may affect the ability of firms to roll out products and services and consumers to access them. For example, she cited a licensing regime by the Cagayan Economic Zone Authority for offshore cryptocurrency operations, which attracted investment commitments of USD 13 billion.

"This is also seen in the experience of ride-hailing services and motorcycle taxis in the Philippines and its push and pull routine with the local regulators," Serzo added.

Because of these impacts, Serzo urged the government to reevaluate the objectives behind restrictive policies and assess whether these are aligned with the country's innovation policies and those issued by other intergovernmental organizations.

Data regulation for digital platforms

In another PIDS study on "*Cross-border data regulation for digital platforms: Data privacy and security*", Serzo called for stronger intergovernmental and regional data protection frameworks. According to Serzo, "there is no binding international framework that provides a single standard for legal data transfers among different jurisdictions in the region," adding that each state has its own way of regulating personal information.

With the rise of digital platforms, data has increasingly become a valuable commodity. More than enabling the delivery of services by the platforms, data shared by users could be used by businesses to create new products and upsell other services. Thus, there is a need to implement privacy regulations to uphold the privacy rights of individuals while still allowing the flow of data across entities and jurisdictions.

On the other hand, the author cautioned that the "stringent requirements of data protection laws, coupled with the divergent regulations among jurisdictions" also affect the ability of platforms to engage in cross-border transactions. She also argued that undesirable data processing practices would not be curbed if there are varying regulations, as platforms may take advantage of jurisdictions with weaker data protection rules.

The author, however, maintained that a general and comprehensive international data protection regime may not be the

solution. A more viable approach in the short to medium term, she said, is to have intergovernmental mechanisms that facilitate the cross-border transfer of data. This could include promoting cooperation among each country's data protection authorities and pushing for uniform certification standards for controllers, such as the existing mechanism under the Cross-Border Privacy Rules of the Asia-Pacific Economic Cooperation to make data transfer standards more objective and predictable.

Moreover, she called on regulators and international bodies to "consider how each country's data protection legislation and regulation may affect digital platforms and other emerging technologies".

On the challenges of regulating emerging technologies, she also advised regulators to balance the need to protect the public and the need to ensure that legislation and regulations do not have a chilling effect on innovation.

"Regulators may consider implementing light-touch regulatory approaches for specific types of technologies that involve the processing of data, alongside a more general data protection legislation," the study read. Examples of these approaches are regulatory tools providing oversight, such as best practices guidelines, warnings and advisories, official speeches, interpretations, and meetings with regulated parties. These types of approaches allow the government to supervise developments in certain industries while observing how the technology will develop and affect consumers. **RTAL**

Common definition, measurement needed to devise digital tax rules



Digital taxation in the country is challenging due to its framework that is intended for brick-and-mortar economy or businesses with physical presence.

THE LACK OF a unified definition and measurement of the size and impact of the country's digital economy poses a challenge for the government to develop a tax regime for the sector.

This was according to Janet Cuenca, a former research fellow at the Philippine Institute for Development Studies (PIDS) in her study, *"Emerging tax issues in the digital economy"*.

Citing an Asia-Pacific Economic Cooperation (APEC) report, the author identified these problems as major obstructions to implement reforms in the tax administration and management of the country's digital economy.

"There is no single standard definition of digital trade and technical innovations, and new business models do not exactly fit within the traditional sectoral classifications," the report read.

Cuenca said it takes a "good understanding of what digital economy is, what it covers and how it works, as well as the business models that emerge" to address such barriers.

Owing to the digital economy's "complex and multifaceted nature", Cuenca urged the government and policymakers to look into the experience of other countries in the taxation of their digital transactions and "take note of the lessons and insights relevant to the Philippines".

“The opportunities and challenges that the digital economy brings are particularly important for developing countries,” she said.

Despite the government’s efforts—through the Philippine Statistics Authority (PSA)—to measure the contribution of the digital economy to the country’s gross domestic product in 2018, the APEC report noted a deficiency in the PSA data to estimate the impact of digital trade on the overall growth of the Philippine economy.

The APEC report revealed how the country’s industry categorizations seem to fall behind the rise of local businesses that employ digital technologies and create new value in the market, as the digital economy altered the production and promotion of products and services across borders.

Likewise, the United Nations Conference on Trade and Development (UNCTAD) reported that advances in ICT have fueled digital transformations, improved business processes, and promoted innovation in all sectors of the economy, resulting in new business models that have altered the global business landscape.

Focusing on the digital cross-border flow of goods and services, the author said the “taxation of the intangibles” has become more challenging for the Philippines because its framework was intended for the brick-and-mortar economy or businesses with physical presence and assigned tax jurisdictions.

Cuenca said it remains a challenge for the country to come up with tax base

and measures that can increase the revenue generated through digital goods and services, and at the same time, “will not reduce the benefits from digitalization”.

She highlighted the absence of a legal framework to help regulate business platforms and promote new digital products. Other barriers identified by the PIDS study include poor connectivity, such as the lack of internet access in about 74 percent of secondary schools in the Philippines, and the expensive information and communications technology (ICT) services, which remain the highest in the Association of Southeast Asian Nations. The study also highlighted the need to improve competition policies and consumer education.

“The government must eliminate the barriers and challenges and address the identified policy gaps to reap fully the benefits of the digital economy,” Cuenca said.

“The gap in digital infrastructure must be addressed, but the estimation of investment requirements is needed,” she added.

Meanwhile, an UNCTAD study proposed various levels of digital infrastructure consisting of ICT networks or the “core digital infrastructure for connectivity”, as well as data infrastructures like data centers, submarine cables, and cloud computing.

Also important, according to UNCTAD, are digital platforms, which can be agents participating in the activity that takes place on them or performing infrastructure-like functions by connecting two or more sides of a market, and digital devices and applications.

“The available digital infrastructure in the country can be assessed based on these categories,” Cuenca said, adding that “competition in the private sector,



The government must address the gap in digital infrastructure in the country to reap fully the benefits of the digital economy. (Photo by Department of Information and Communications Technology / Facebook)

particularly telecommunications companies, is crucial in the digital economy.”

In particular, she noted that “improving the country’s connectivity is essential to explore the minimum standards for reliable and affordable internet access.”

She further argued that the lack of standard permits issued across local government units also affects the deployment of necessary digital infrastructures.

The author also underscored the importance of consumer education in the digital economy, which, according to her, can be led by key players in the country’s digital economy from both the public and private sectors.

“Consumer education should include awareness of the value that can be derived from the digital economy and the strength of the security of digital transactions,” the author said.

The COVID-19 pandemic has led many traditional local firms to conduct business online, resulting in an increased dependency of consumers on digital transactions to obtain goods and services.

In June 2020, the Bureau of Internal Revenue issued Revenue Memorandum Circular 60-2020, which requires “all persons doing business and earning income in any manner or form, specifically those who are into digital transactions through the use of any electronic platforms and media and other digital means, to ensure that their businesses are registered”. The circular covered all partner-sellers and merchants and other stakeholders like payment gateways, delivery channels, internet service providers, and other online facilitators. **EGR**

RESEARCH DIGESTS

RPS 2021-04

Regional Analysis of the Philippine Services Sector

by Ramonette Serafica, Jean Colleen Vergara, and Queen Cel Oren

In the Philippines, the services sector accounts for 60 percent of gross domestic product and almost 57 percent of employment. Across regions and subsectors, however, the contribution of services varies. This study examines the patterns at the regional and subsector level and decomposes the changes into three factors: national share (growth effect), industry mix (sectoral effect), and regional shift (competitive effect). Focusing on changes in employment, the shift-share decomposition reveals that the overall growth of the economy from 2012 to 2018 had a positive impact in all sectors and regions. However, some industries showed negative sectoral effects, namely, accommodation and food service activities; arts, entertainment, and recreation; and education. Download the full study at <https://www.pids.gov.ph/publications/7278>.

DP 2021-17

How Ready Are We? Measuring the Philippines’ Readiness for Digital Trade Integration with the Asia-Pacific

by Francis Mark Quimba, Sylwyn Calizo Jr., Jean Clarisse Carlos, and Jose Ramon Albert

This study assessed the Philippines’ readiness for regional digital trade integration with the Asia-Pacific by using the Regional Digital Trade Integration Index (RDTII) framework to provide an analytical overview of the Philippines’ digital trade policy and regulatory environment. This study finds that the Philippines generally has an open policy environment for digital trade, which suggests that it is ready for digital trade integration with the region. However, the proper implementation of some of these policies has not been fully achieved, and this could be a great obstacle or challenge to regional integration. Download the full publication at <https://www.pids.gov.ph/publications/7277>.

DP 2021-16

Regional Health Integration and Cooperation in the Philippines

by Valerie Gilbert Ulep and Lyle Daryll Casas

This paper has two objectives: (1) assess the health sector performance of the Philippines relative to other ASEAN member states and (2) assess regional health integration and cooperation in the Philippines and identify challenges and opportunities. The Philippines is lagging in critical health outcome and access indicators in the region. This is a reflection of the long-standing challenges in terms of health financing, health service delivery, governance, and health human resources. Health integration and cooperation could be instrumental in achieving health system goals. While the country has made significant strides in facilitating regional integration and cooperation in recent years, challenges related to regulations, infrastructure, and implementation remain. Download the full study at <https://www.pids.gov.ph/publications/7276>.

RPS 2021-03

Process Evaluation of the Performance-Based Bonus Scheme

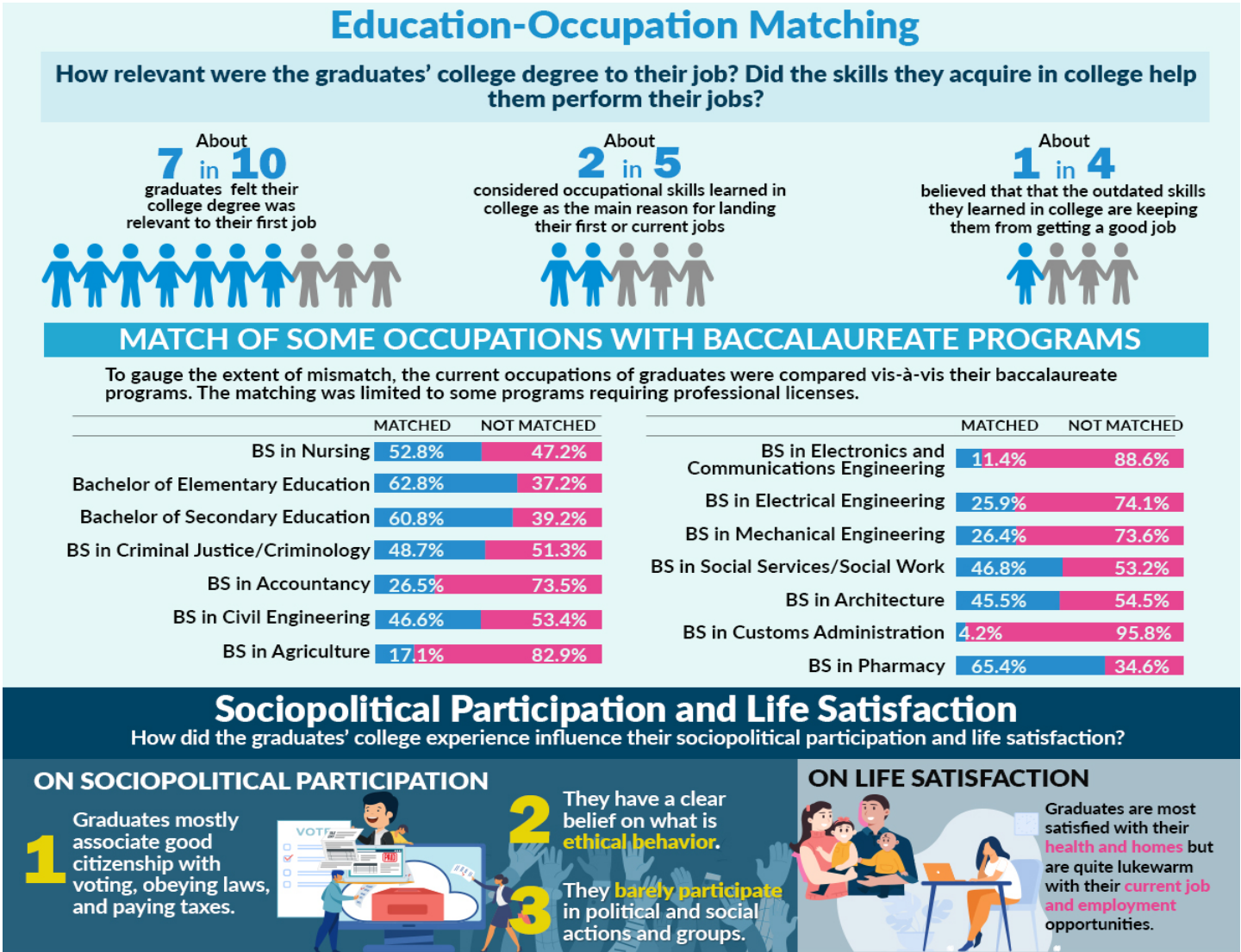
by Jose Ramon Albert, Ronald Mendoza, Janet Cuenca, Gina Opiniano, Jennifer Monje, Michael Pastor, and Mika Muñoz

This study examines the execution of the Performance-Based Bonus (PBB) scheme and identifies its implementation deficits. It looks into the challenges encountered by government agencies in meeting the conditions to qualify for the PBB. It also presents initial data on the possible effects of the PBB on at least three levels: (a) agency-wide incentive effects, (b) team-level collaboration effects, and (c) individual staff-member incentive effects. This study finds mixed results on these three main channels of impact. It recommends a general review of the main policy objectives of this reform. It also identifies several concrete reforms that could help sharpen the PBB moving forward. Download the full study at <https://pids.gov.ph/publications/7274>.

Life after College: How Are Our Graduates Doing?

How are graduates of Philippine higher education institutions (HEIs) doing after graduation? Do the knowledge and skills they learned in college make them employable? Are their jobs relevant to their degrees? How did their college experience influence their sociopolitical participation and life satisfaction?

This infographic, which is based on the results of a graduate tracer survey conducted by the Philippine Institute for Development Studies and the Commission on Higher Education, shows the relationship between college experience and postcollege life, including labor market and sociopolitical participation. **GGM**



This infographic is based on the PIDS Discussion Paper titled “Philippine Graduate Tracer Study 4” written by Melba V. Tutor (consultant), Aniceto C. Orbeta Jr. (senior research fellow), and James Matthew Miraflor (consultant). The full version of this infographic can be downloaded from <https://www.pids.gov.ph/gallery/459> while the full study may be accessed at <https://www.pids.gov.ph/publications/6918>.

**POLICY
ISSUE AT
A GLANCE**

Editor's Notes (continued from page 2)

The digital divide emphasizes one of the dim realities of technology—that it can be a double-edged sword. While digital platforms can create jobs, facilitate the convergence of industries, and generate substantial revenues for the economy, they are highly selective. As another PIDS study showed, digital platforms favor the skilled, the educated, those with access to technology, and those located in affluent areas.

Moreover, digital platforms could exacerbate gender gaps and widen existing inequalities. Another PIDS study featured in this issue emphasized that while digital platform work provides opportunities for women to be economically productive while performing housework and care work, they have no guarantee of secure income flows and social protection. This is because platform workers are usually classified as contractors or self-employed. As such, they are not likely to have security benefits or social protection coverage. Ensuring that digital platforms are inclusive and accessible to everyone is just one part of the solution. Strategies that promote social protection coverage, job security, and skills development are also essential to ensure that everyone sustainably benefits from the platform economy and no one is left behind.

The other articles in this issue emphasize the need for better measurement of the digital economy. At present, the government and the private sector still lack the data required to understand this phenomenon and economy fully. We need to develop nuanced and more holistic measures to be more equipped to make decisions and interventions for its growth over the long term. Given the cross-border nature of digital platforms, international cooperation is vital in producing internationally comparable data and developing mutually beneficial policies for the global advancement of the digital economy.

Another area that requires international cooperation is regulation. As discussed in one of the articles in this issue, “there is no binding international framework” on legal data transfers, and “each state has its own way of regulating personal information.” Harmonized regulations across jurisdictions are essential. It is also vital to ensure that rules are not too stringent to the point of impeding cross-border data flows. Businesses, primarily those dependent and engaged in digital technologies, and the services sector rely on international data transfers, and so are other sectors as the economy goes more digital.

Digital taxation also requires an in-depth look. Another article in this issue explains that the current tax regime does not fit the new business models arising from the digital economy. Studying well how taxation should be imposed on digital goods and services is essential to ensure that any tax measure will not stifle the growth and instead support and promote the expansion of the digital economy.

This issue also underscores the need for reforms and interventions in our education and training sector to increase our pool of science and technology (S&T) professionals, whose talents are indispensable to enhance the country's innovation capacity. The government, academe, and the private sector play essential roles. But more than this, there should be synergy and collaboration among them in addressing our S&T human resource gaps and building a workforce equipped to face the demands of the Fourth Industrial Revolution and take advantage of its opportunities, including the steadily growing digital economy.

Completing this issue is an infographic summarizing some of the salient findings from a graduate tracer study conducted by PIDS researchers. **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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