Placing the Platform Economy

Gender, Digital Divides, and the Geography of Platform Participation in the Philippines

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Foreword

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It has been said time and again, but it bears repeating; It is astounding to witness Filipino resilience throughout the past years permeated by the pandemic. Truly, COVID-19 has widely impacted people in the Philippines, especially the vulnerable sectors such as the poor, the elderly, women, and children. The country experienced a slump in employment with the unemployment rate reaching as high as 17.7 percent in April 2020. The underemployment rate was high at 18.9 percent in April 2020 (vs. 13.5 percent in April 2019). Furthermore, during the enhanced community quarantine implementation, two thirds of businesses stopped operations. Despite these losses, Filipinos were quick and steadfast to adjust. Among the measures quickly adapted during such unprecedented times is to shift to digital.

Many businesses, including those of small entrepreneurs, began to use digital technologies to make their businesses thrive. These new age entrepreneurs include Filipinos who had recently started a business after losing their jobs to the pandemic. In a UNDP Rapid Response Survey of MSMEs with 285 respondents, digitalization was the most popular demand strategy for both female (70 percent) and male (52 percent) respondents (or 62 percent overall). Shifting to a digital economy by providing digital training and expanding internet connectivity to MSMEs was considered vital in facilitating national economic recovery.

This report titled "Placing the Platform Economy: Gender, Digital Divides, and the Geography of Platform Participation in the Philippines" highlights the rapid growth of the use of digital platforms for business, commerce, or social interactions or what can be called as the Platform Economy. It especially tells the story of how digital platforms have been used by women in the Philippines to cope with the COVID-19 crisis, especially on ensuring financial stability, balancing their responsibilities (such as care work, community, or other economic responsibilities), or upgrading their skills. Platform Economy is seen to be a great equalizer – enabling women and other sectors to access more opportunities to contribute to economic activities, while also juggling other responsibilities.

The report further emphasizes the value of going beyond closing the digital divide by having a place-based and localized approach to promoting inclusion in digital interventions, including those to be implemented by the Philippine government in light of the Mandanas-Garcia Transition.

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The Philippines has a growing need and potential for digitalization. The UNDP remains committed and steadfast in strengthening partnerships and the technical support to provide the much-needed assistance in making this digital shift in the Philippines successful and effective. We hope that this can open possible areas of collaboration among various development partners and stakeholders.

May you find this report enlightening.

DR. SELVA RAMACHANDRAN

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Abstract

Despite long-standing barriers to the mass adoption of digital technologies, the Philippine government's imposition of lockdowns in response to the COVID-19 pandemic has facilitated a dramatic expansion of the country's platform economy. Akin to the broader rise of the knowledge economy, the rapid growth of the platform sector could come with substantial "gender dividends", given the greater rate of women's participation, lower pay gaps, and increased flexibility that can allow women to finesse their care and economic responsibilities. Yet much less attention has been devoted to how geographically-embedded advantages and interventions continue to be decisive in shaping prospects for participation in the sector.

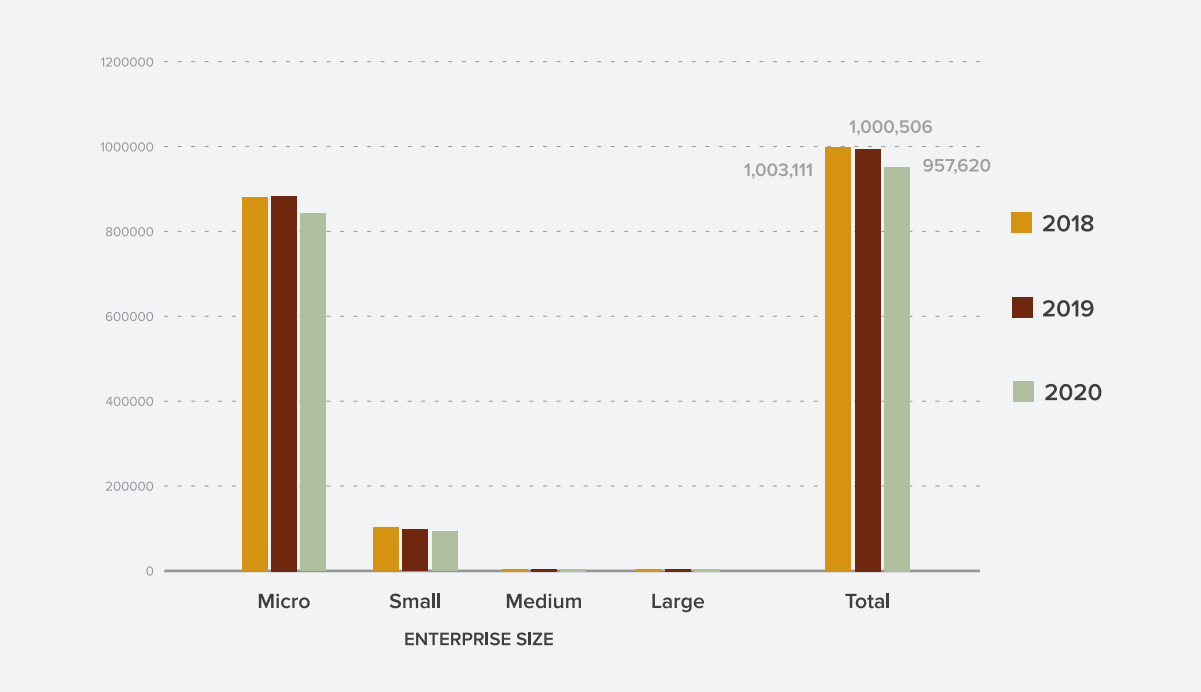
Harnessing case studies of leading local efforts to promote inclusion in the platform economy, as well as empirical analysis of the Philippines' 2019 National ICT Household Survey, we provide preliminary evidence of key forms of socio-spatial variation in the sector's expansion as well as the ability of women and other marginalized groups to participate in it. Even successful inclusion initiatives confront a range of spatially-related impediments that go beyond the conventional digital divide, while quantitative findings suggest that surmounting digital and skills barriers remain necessary yet still insufficient for encouraging women to maximize the socioeconomic opportunities in digital platforms. The role of a more place-based, localized approach to promoting inclusion—especially critical in light of local government resources increasing due to the Mandanas transition—is likewise borne out by the Philippines' largest success to date in encouraging the growth of knowledge economy opportunities nationwide: the business process outsourcing sector.

1. Introduction

Like the rest of the global economy, the COVID-19 pandemic has ushered in the worst economic crisis in the Philippines' postwar history (World Bank 2020). Kneecapped by the spread of the SARS-CoV-2 virus as well as the series of lockdowns imposed on the country's major economic growth zones, the resulting contraction spurred a surge in unemployment and business closures starting in March 2020, which the country has yet to recover from as of March 2022. Current economic statistics paint a grim picture: between 2018 and 2020, more than 42,000 registered businesses nationwide seemingly vanished from the Philippine Statistics Authority's (PSA) List of Establishments (see Figure 1), with the overwhelming share of losses concentrated

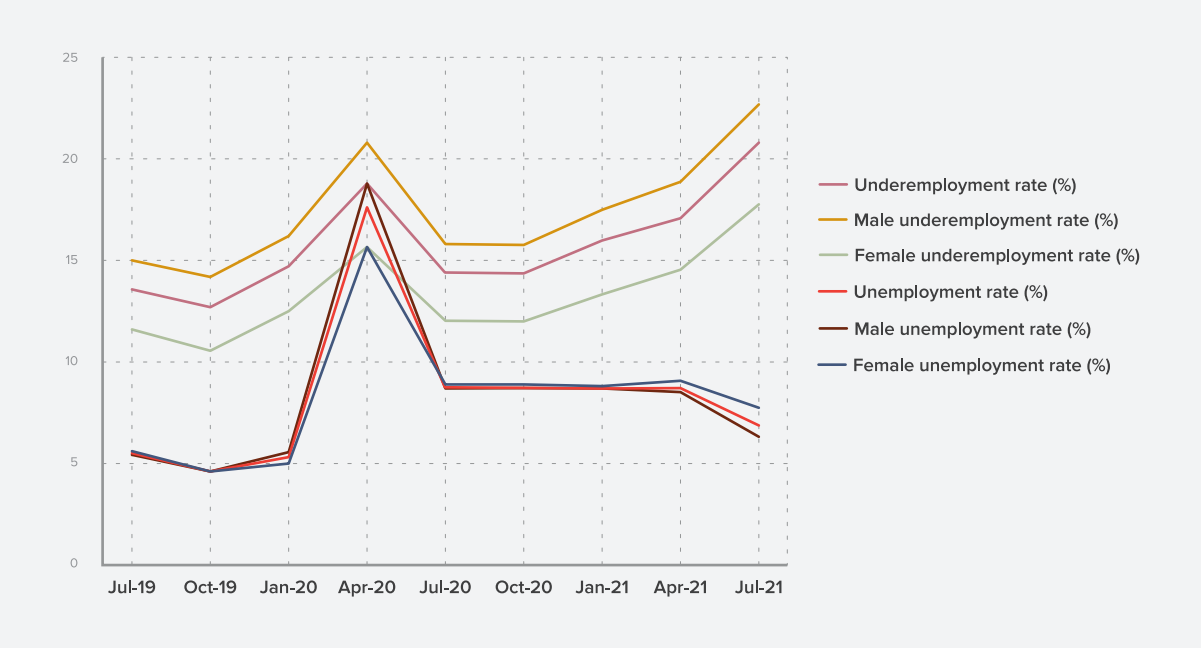
among registered microenterprises. Moreover, the shock posed by this crisis to the Philippines' working population has been even more dramatic. After reaching record lows in 2019 (Figure 2), both unemployment and underemployment levels practically tripled throughout the first wave of quarantines in 2020, and have remained at elevated levels since.

FIGURE 1. Number of Registered Enterprises, 2018-2020



Source: List of Establishments, Philippine Statistics Authority (PSA)

FIGURE 2. Employment Statistics, 2019-2021



Source: PSA

Yet the COVID-19 crisis has also spurred a groundswell of societal shifts that are poised to leave their mark on the Philippine economic landscape. Among the most conspicuous of these transformations has been the breakneck growth of the country's platform economy: having already gathered momentum throughout the past decade due to rising social media penetration and the dynamism of the business process outsourcing (BPO) sector (Soriano 2020; Thompson 2020), digital platforms have evolved into an economic lifeline for the hundreds of thousands of Filipinos whose lives have been upended by the pandemic. For instance, data from the Department of Trade and Industry (DTI) show that the number of enterprises involved in online retail trade has swelled from 1,848 to 88,575 over the course of 2020 despite the broader contraction posed by the pandemic (DTI 2021; Desiderio 2021). Platform-based employment has likewise grown by leaps and bounds, with the Philippines reportedly leading the world in terms of the growth of its online freelancing sector in 2020 (Payoneer 2020), and comprising the sixth biggest contributor to the global online freelance market during that same year (OLI 2021). In the broadsheets, anecdotes abound as to how numerous micro, small, and medium enterprises (MSMEs) have supplemented their brick-and-mortar revenue with e-commerce sales (IFC, 2021) while displaced workers are replacing their lost income with earnings from platform-mediated delivery jobs (Canivel, 2021).

In turn, these trends have fueled debates on how these forms of digitalization[4] might reshape countries' economic geography and open new channels for recovery in the post-pandemic period. On one hand, the integration of economic activities into digital platforms has been hailed by observers for its potential to reduce transaction costs, improve productivity and efficiency, create new tax bases, and generate new jobs and commercial opportunities in information and knowledge-intensive industries (OECD 2019; Serafica and Oren 2020; World Bank 2020b). On the other, the platform sector's transformative potential is widely recognized to be constrained in the short term by severe digital divides.

In the Philippines, for instance, owing to the concentration of Information and Communication Technology (ICT) infrastructure in leading metropolitan hubs and their environs, more than half of Filipino households (57 percent) reportedly did not have internet access as recently as 2018 (Quimba 2020; United Nations Broadband Commission). For Filipino women, such spatial inequities are compounded by long-standing gender inequalities that circumscribe their participation in the sector. While recent studies have found that women are more likely to engage in platform work and e-commerce, these studies also suggest that they are more disproportionately saddled with the sector's job security and social protection deficits relative to their male peers (Bayudan-Dacuycuy and Baje 2021) in addition to being more adversely affected by the COVID-19 pandemic.[5] In the midst of these recalcitrant socio-spatial divides, the common view of big business representatives that the growth of the platform sector constitutes one of the most important pillars of an inclusive recovery (Reyes 2021) may be vulnerable to a fallacy of "synecdoche" (Amin and Graham 1997)—over-identifying "recovery" largely with sectors and activities that can be readily digitized, and innovation with only one particular component thereof.

How is the Philippines' ongoing digital transformation interacting with these socio-spatial inequalities? In this paper, we examine trends concerning the Philippine platform economy's development and expansion, focusing specifically on its repercussions on the country's preexisting digital and gender divides. Complementing previous empirical research in the Philippines (Albert et al 2021; Dacuycuy and Baje 2021; Tabuga and Cabaero 2021), we adopt a mixed-method research design, integrating case studies of local efforts to advance marginalized social groups' platform sector engagement with empirical analysis of a nationally- and regionally-representative ICT household survey to examine how social and spatial forms of exclusion have conditioned sector participation. As we demonstrate, a more geographically-attuned perspective facilitates a more detailed understanding of how socio-spatial divides could constrain the evolving dynamics of the Philippines' digital economy. This perspective also highlights the practical potential of "blended" approaches—online services combined with localized, place-based interventions—to maximize the sector's socioeconomic dividends for women and other marginalized groups: an approach made even more relevant by the Philippine government's move towards "full decentralization" with the implementation of Executive Order (EO) 138 (also known as the Mandanas ruling) starting in 2022.

[4] Also described as "digital transformation" in this paper, this term refers to the various changes prompted by the advancements in and growing use of digital technologies (Albert, 2020)

[5] As an example, a 2021 International Finance Corporation (IFC) report has documented a decline in the gross merchandise value of women-owned e-commerce firms with the onset of the COVID-19 pandemic, from 106 percent that of male-owned businesses in 2019 to only 79 percent in 2020.

2. Women, Place, and the Philippine Platform Economy

Encapsulated in the Philippines by the increasing prominence of social media applications (e.g. Facebook), ride-hailing/logistics services (e.g. Grab), and e-commerce portals (e.g. Zalora), the rise of the platform economy[6] (also referred to in this paper as the platform sector) has entailed the emergence of new digital ecosystems which are fundamentally reshaping the terms with which its participants interact and transact with one another. As defined by Kenney and Zysman (2016), these platforms essentially comprise new business forms facilitated by the emergence and adoption of new technologies (e.g. cloud computing, big data analytics) which host and mediate access to digitized commercial and labor markets, with the latter involving what is now commonly known as "gig" work. "Gig" work, in turn, is usually subdivided into "crowdwork"—geographically flexible project-based work engagements hosted on web-based platforms—as well as "on-demand work" entailing task-based jobs allocated via location-based applications such as Lalamove (de Stefano 2016). In both cases, the majority share of such work entails the mediation of the client-worker relationship by the digital labor platform at stake (Hunt and Samman 2019; ILO 2021).

More generally, the growth of the platform sector can be viewed as the latest development in the rise of the global "knowledge economy"— a services-led growth regime in which economic returns are increasingly predicated on access to high-level soft and technical skills as well as ICT infrastructure (Thelen 2019; Wren 2021). To the extent that the platform economy intensifies such services-oriented structural transformation, it has also been associated with three major socioeconomic sea-shifts that are still being wrestled with in both advanced as well as developing economies. First and most fundamentally, since the knowledge economy places a greater premium on education, levels of educational attainment—higher education, in particular—have become even more crucial determinants of socioeconomic status and mobility than in manufacturing-led economies, where training for industry- and firm-specific skills can be provided in-house by companies and through Technical and Vocational Education and Training (TVET) systems (Hall 2021; Ansell and Gringich forthcoming). Secondly, given the increased dependency of higher-productivity services on skilled human resources, the platform sector could intensify social and economic cleavages between urban zones where the skilled labor forces necessary for globally connected, knowledge-intensive production are typically located, and cities and rural areas which lack such a human capital base (Ansell 2019; Iversen and Soskice 2019). And thirdly, though the knowledge economy requires higher-level skills among individuals to engage productively in it, most of these skills are non-manual in nature and place a greater premium on non-routine social interactions as a base for more cognitively-demanding collaboration in the workforce; this has meant that both the platform sector and the knowledge economy have expanded opportunities for women with such capacities to participate more extensively in ICT-intensive sectors (Iversen and Rosenbluth 2010).

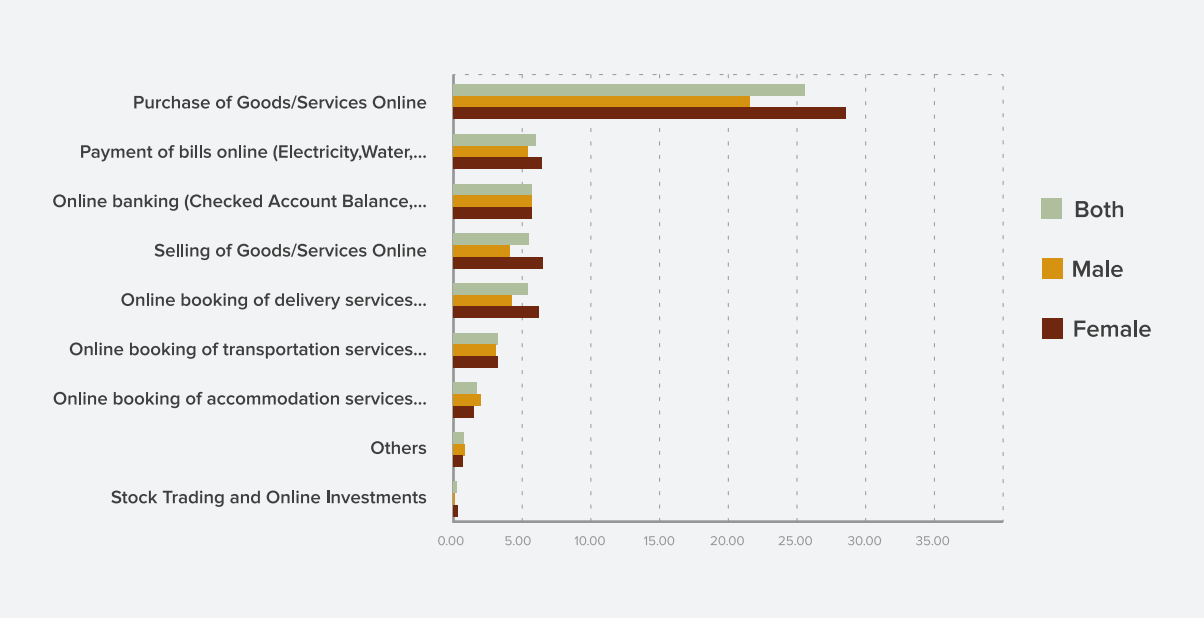
2.1. The Philippine Platform Economy's "Gender Dividend": Chances and Constraints

In keeping with this recent literature, there have been indications that the platform sector could also yield a substantial "gender dividend" in the Philippines as well as in other developing countries. Indeed, women in the Philippines have generally been found to be on par with men in terms of computer and internet usage, as well as more avid users of mobile phones than the latter (Tabuga and Cabaero 2021). Both in terms of e-commerce as well as online work, they have been empirically documented to be more likely to leverage digital platforms for economic purposes, harboring a significant margin over men

[6] As noted by Albert (2020), discussions on the platform economy are often not distinct from those on the broader digital economy, which is commonly understood as the ensemble of transactions facilitated by the internet (Bukht and Heeks 2017).

not only in purchasing more goods and services, but also in engaging in online selling activity (see Figure 3). Indeed, in a separate 2020 survey run by the Philippine Institute of Development Studies (PIDS) with participants of the Department of Information and Communications Technology's (DICT) *digitaljobsPH* program, women (and younger persons) have also been found to be more likely to participate in crowdwork (Bayudan-Dacuycuy and Baje 2021)—a finding which dovetails with studies conducted with both American and Indian crowdworkers (Berg 2016).

FIGURE 3. Utilization Levels of Digital Platforms by Gender, 2019



Source: Tabuga and Cabaero (2021)

The higher participation rate of women in the platform economy is linked with several advantages that the sector usually confers on them. Certainly, like in other developing countries where this economy has taken off (Berg et al 2018), crowdwork has been characterized by higher compensation levels compared to other domestic opportunities, as well as the absence of gender pay gaps (Bayudan-Dacuycuy and Baje 2021). But perhaps even more decisive has been the touted flexibility of platform-based work and commerce (e.g. remote work, flexible hours), which eases the trade-offs that women must normally finesse between their traditional care roles and their capacity to earn (Eviota 1992). Strikingly, surveys of women crowdworkers in the Philippines generally report flexibility and existing housework responsibilities as among the leading motivations for their engagement in platform work, whereas men's considerations focus more on their ability to pursue new interests (ILS forthcoming; Soriano 2021; Bayudan-Dacuycuy and Baje 2021). In the same vein, DICT statistics confirm that women's participation in e-commerce is mainly undertaken as a supplementary source of income, with homemakers and self-employed women comprising more than one-third of female online sellers (Tabuga and Cabaero 2021; Albert et al 2021).

Yet despite this "gender dividend", the growth of the sector has also elicited a growing number of criticisms. As already mentioned, grave disparities in access to ICT technologies have remained a long-standing issue: in 2019, a mere 13 percent of all barangays/villages in the Philippines were reported to have had a full range of access to all ICT infrastructure (Albert et al 2021). This has been paralleled by dramatic education and skill-related disparities, with only 39.8 percent of the population estimated to have at least one of the ICT skills enumerated under SDG Indicator 4.4.1 (ibid). However, increasingly prominent have been the regulatory gaps pertaining to the sector, most especially with respect to labor policy, but also in areas such as cybersecurity, data privacy, digital taxation, and the broader business environment (World Bank 2020). Through dynamics of "policy drift" (Thelen and Streeck 2005; Pierson and Hacker 2010), the proliferation of non-standard employment arrangements in the sector has facilitated

the expansion of precarious work and the general casualization of labor (Ofreneo 2013; Carre 2020; Soriano 2021), since crowdworkers and on-demand workers are typically classified as contractors, self-employed individuals, or independent service providers (Hunt et al 2017; Garcia and Pacis 2019). In fact, existing studies suggest that these labor regulation gaps and their adverse effects on employee protections are of greater concern to women: according to a 2020 survey, the lack of job security was the single biggest challenge that women crowdworkers in the Philippines reported experiencing (Tabuga and Baje 2021).

In addition to the access and regulatory gaps outlined above, Filipino women's historically disproportionate care responsibilities (Eviota 1992) could also cancel out the work flexibility and income-generating opportunities available to them in the digital economy. A PIDS study on Filipino women crowdworkers found that their time on digital labor platforms decreased as their care duties increased, with time on the platform dropping to zero beyond 3 hours of care work (Bayudan-Dacuycuy and Baje 2021). With the ongoing COVID-19 crisis hindering schools' reopening at all levels and a complete return to onsite work, women's unpaid care burdens have been escalating from its pre-pandemic baseline (UNESCAP 2021). Considering that Filipino women have been spending up to 13 hours a day on such responsibilities during the pandemic (Oxfam 2021), the tangible benefits of platform work for most of them could very well be minimal at best. These care responsibilities can potentially affect women entrepreneurs' e-commerce performance as well—per the DICT's 2019 National ICT Household Survey (NICTHS), while more women respondents compared to men are selling online, the men appear to earn more, a finding which again could be linked to the women's greater share of care and domestic work burdens in the home (Bayudan-Dacuycuy 2020).

2.2. The Problem of Place

Even prior to the COVID-19 pandemic, the Philippine government has taken significant steps towards addressing these challenges. For one, the DICT has launched a National Broadband Plan and Free Wifi-for-All program to strengthen public internet access in more remote regions of the country (DICT 2020), as well as the *digitaljobsPH* initiative to deliver free ICT training and capacity-building opportunities to prospective platform sector workers (DICT 2021). Additionally, as elaborated in the next section, the Technical Education and Skills Development Authority (TESDA) has dramatically expanded and strengthened its TESDA Online Program (TOP) in the middle of the pandemic (TESDA 2021; ADB 2021), even while there have been legislative efforts to strengthen protections for gig workers who are otherwise classified as self-employed or independent contractors (Terrazola 2021; Fernandez 2021).

However, a consistent pattern that can be observed from ongoing government initiatives as well as the broader policy literature on the platform economy is that they have tended to de-emphasize the contributions that place-based, geographically-embedded interventions can make in strengthening the engagement of particular places and localities with the sector. Not unlike the predictions of futurists in the 1980s highlighting the submerging of face-to-face interactions in "electronic networks and spaces" (cf. Amin and Graham 1997), the "theory of change" animating both international and national policy approaches towards the sector appears premised on the belief that once infrastructural and skills-related barriers to participation are overcome, individuals should be able to maximize the opportunities available to them in the digital economy. In this, the approach to promoting platform participation bear striking similarities to "in the air" conceptions of the development of urban innovation clusters (Capello 1999; Fitjar and Rodriguez-Pose 2017), which assume that learning and innovation spillovers proceed automatically once the basic skills and infrastructural determinants of knowledge-intensive production are provided.

Though it is true that infrastructure and skill divides are critical constraints to strengthening the sector's inclusivity, this approach risks missing out on the role of spatially-specific factors in advancing the platform sector, and the knowledge economy in general. Far from being confined to the digital sphere, for instance, in-person interactions among clusters of businesses and skilled professionals have been found to be crucial diffusion mechanisms for continuous learning and innovation in the enterprise sphere (Scott 1998). By being more closely located together, participants in online platforms are better able to exchange tacit knowledge, encourage common learning, and facilitate the spread of incremental innovation practices among their peers (Amin and Graham 1997).

Similar research in urban economics has accentuated how dense, in-person interactions contribute to increased productivity among knowledge economy workers by promoting exchanges of ideas and information and human capital externalities (Glaser and Gottlieb 2009). Most recently, comparative political economists have echoed these very same ideas in examining the increasing concentration of multinational firms in geographically-embedded skill clusters: rather than circumventing space, the dynamics of knowledge-intensive production by such enterprises are in fact increasingly confronted by the need to "co-locate" skilled workers who can tap into urban networks of only partly codified knowledge and competencies (Iversen and Soskice 2019).

The validity of these arguments has been somewhat affirmed in the latest research on the platform economy. In reality, rather than spreading evenly to areas where infrastructure gaps have been filled, it appears that the platform economy has instead expanded the most in areas that already hold preexisting technological, political, economic, social, and spatial advantages for the needs of intensive platform activity (Graham and Anwar 2019). In other words, rather than expanding without regard to geography, the prospects for the platform sector's growth remain conditioned by localities that can boast specific place-based advantages for e-commerce and platform work, which include broader business environment and institutional capabilities, as well as the formation of dense economic networks of learning, skill, and knowledge exchange (Goswami et al 2012). In fact, the very need for more place-based interventions to foster the development of the platform economy is borne out by the Philippines' most noteworthy historical success in advancing knowledge-based, ICT-intensive industries: its promotion of the BPO sector. Box 1 discusses a number of place-based interventions that have been undertaken to foster this sector's growth in urban areas around the country, and their connection with the uptake of the platform sector within the same localities in recent years. These place-based efforts promoting the country's world-renowned BPO industry in its urban hubs remain to this day an underappreciated source of positive spillovers for the expansion of the Philippines' platform economy.

BOX 1. Growth Lessons for the Philippine Platform Economy from BPO Development in "Next Wave Cities"

"The beauty of the BPO industry as a vehicle for rural development is that a unit can be set up as a greenfield project virtually anywhere. All you need is a committed local government unit (LGU) that is willing to put up the infrastructure. Other industries, like tourism and agriculture, are limited in terms of location." This quote by Microsoft Philippines' National Technology Officer Dondi Mapa, cited in a 2015 Oxford Business Group analysis on the Philippines' BPO industry, underscores the significance of local government actors in the growth of one of the country's most prominent "sunshine" sectors. As noted by the research cited and case studies developed in this paper, the factors that are presently advancing the Philippines' digitalization—a workforce proficient in English and comfortable with technology as well as a functional ICT infrastructure, among others—can be credited to the same strategies that facilitated the expansion of the country's BPO industry. Apart from human capital and digital infrastructure development, the examples outlined below highlight the importance of measures that leverage a more localized focus in the industry's growth, potentially serving as a model for directing the trajectory of the domestic platform economy.

The expansion of BPO companies beyond the historical economic hubs of Metro Manila and Cebu have played a critical role in the Philippines' long-standing dominance in the industry (Oxford Business Group, 2015). Mindful of the potential saturation problems that may arise due to the concentration of BPO operations in these two cities (Tholons, 2014), targeted support by industry leaders and government stakeholders such as DTI and DICT moved to encourage BPO investments in areas designated as "Next Wave Cities" (NWCs) in the mid-2010s (Kleibert, 2014; Del Prado, 2015). Through this

initiative, NWCs such as Davao City in Mindanao and Dumaguete City in the Visayas became the focus of "ICT Roadshows" designed to increase local stakeholders' awareness on the advantages the BPO industry could bring to the local economy, as well as capacity-building seminars aimed at enhancing local ICT expertise. One notable example was the Rural Impact Sourcing project, which delivered workshops on ICT skills for virtual assistant jobs as a way of fostering the digital and economic inclusion of disadvantaged communities located at the NWCs' economic peripheries. The upskilling focus of this project eventually served as the blueprint for DICT's digitaljobsPH, which continues to provide free digital skills training to aspiring platform workers primarily via the Department's regional offices.

National- and regional-level efforts alone may prove insufficient, however, as illustrated by the varying levels of BPO investment of Baguio City in Luzon and Bacolod City in the Visayas, both NWCs. A study analyzing how Bacolod attracted twice the amount of investments as Baguio—despite the latter initially exhibiting more positive investment attributes (e.g. larger talent pool, existing industrial zones, lower electricity costs due to milder weather) than the former—traces this outcome to the enabling conditions (e.g. setting up an ICT park, creating an ICT-focused school) Bacolod's local government constructed for the outsourcing companies interested in operating in the city (Kleibert, 2014). In contrast, Baguio's reception towards potential investors was noticeably cooler, as local actors' concerns about the potential effects of inward labor migration resulted in a lack of local government support for BPO activity in the city, which translated into concrete negative signals such as the lack of adequate office space (ibid). This example underlines the influence of local institutional actors, whose agency in global digitization processes can be often overlooked, and the critical roles they play in co-shaping the processes integrating their communities into the worldwide digital economy.

2.3. Leveraging Local Government for Localized Solutions

The strategies employed in advancing the BPO industry as outlined in Box 1 can serve as a roadmap for LGUs seeking to harness the opportunities of the digital economy for their localities. Given how their revenues—and, in turn, their responsibilities—are set to expand due to the Mandanas transition beginning in 2022, LGUs could be especially well-positioned to design and deliver such place-based efforts that can drive the sector's growth. Box 2 below furnishes additional details on the upcoming execution of this EO.

BOX 2. Executive Order 138 and the transition process for Local Government Units

The framework for the "full devolution" of mandated responsibilities in Section 17 of the Local Government Code (LGC) is outlined in EO 138, series of 2021, which was released by the Duterte administration following the Supreme Court's 2018 decision on the case of Mandanas et al. v. Ochoa et al. (commonly referred to as the Mandanas ruling) stipulating the reallocation of responsibilities as well as resources from national to subnational government levels starting in 2022 (EO 138, 2021). The biggest shift in the Philippines' local governance framework since the passage of Republic Act 7160 or the LGC of 1991, the EO triggered a transition process for both national government agencies (NGAs) and LGUs, which includes the latter's formulation of devolution transition plans (DTPs) delineating how they will assume the functions and infrastructure that the former will devolve to them from 2022 to 2024. The EO also requires the establishment of a Growth Equity Fund to provide fiscal assistance to "poor, disadvantaged, and lagging LGUs" as well as a Committee on Devolution to oversee the roll-out of the devolution process. In addition, per the EO, LGUS are to develop a Capacity Development Agenda (CDA) that will inform the capacity-building interventions that will be provided to them by the Department of Interior and Local Government (DILG)'s Local Government Academy as well as other NGAs during the transition process.

Released on August 11, 2021 by DILG and the Department of Budget and Management (DBM), the Joint Memorandum Circular on Guidelines for LGUs' DTPs specifies the components of these plans, which were to be submitted on October 13 (barangays), November 12 (cities and municipalities), and December 12 (provinces) 2021. Per the Circular, LGUs are to indicate (a) the state of the functions, services, and facilities that have already been devolved; (b) the projected timeline of their assumption of the full devolution; (c) their CDA; (d) the recommended modifications to their Organizational Structure and Staffing Pattern; (e) their resource mobilization strategy and local revenue forecast; and (f) performance targets for devolved services and functions. Owing to the projected drop in National Tax Allotment transfers to LGUs due to the COVID-19 pandemic along with other likely fiscal gaps, the resource mobilization strategy was included among the required information in the DTPs.

While the Mandanas ruling's implementation stands to give LGUs the fiscal resources that can position them as leading actors in the advancement of the Philippines' platform sector, concerns surrounding their absorptive and service delivery capacity deficits (Diokno-Sicat 2020; World Bank 2021) point to potential roadblocks. According to a 2021 survey jointly conducted by the United Nations Development Programme (UNDP) Philippines' Pintig Lab and the DILG that was distributed to the Philippines' 1,715 provincial, city, and municipal LGUs, 59 percent of the respondents indicated that they do not use any digital systems to monitor their programs, projects, and activities (Cruz and La Viña, 2022). This finding highlights the primarily analog nature of approaches to local governance in the country—likely to be a critical constraint on many LGUs' prospective efforts to reap the gains of the digital economy. The survey also found indications of geographical unevenness in LGUs' ICT system use, with significant disparities among regions (for instance, 42 percent or almost half of the Bicol region's LGUs employ digital monitoring tools, compared to 26.2 percent in Central Luzon and 22.7 percent in Eastern Visayas) and cities typically more apt to digitalize their systems in comparison to municipalities (ibid). These asymmetries in digital transformation—which can signal LGU readiness in advancing the digital economy—echo the research cited in the previous section that emphasizes the relevance of local factors in maximizing the country's prospects in the platform sector.

Ultimately, as Graham and Anwar (2019) argue, the platform economy does not so much do away with geography as instead leverage it. Beyond existing discussions of the country's persisting digital divide and decent work deficits, policy approaches towards developing its platform economy hence stand to benefit from a more spatially-attuned understanding of fostering economic clusters of areas, workers, firms, and institutions within them to engage productively with opportunities in the sector.

3. Facilitating Broader Engagement in the Platform Economy: Case Studies

If place-specific interventions and/or investments are crucial to ensuring the dynamism of clusters of platform- or knowledge-based work, are such patterns reflected in actual experiences in terms of promoting more broad-based engagement with the sector, particularly for women? As indicated earlier, we assess this claim in greater detail via a mixed-method research design that combines case studies of local initiatives promoting greater engagement in the platform economy with a quantitative analysis of DICT's 2019 NICTHS survey. The case studies discussed in the following section include the aforementioned TOP spearheaded by TESDA; two women-led microenterprises that were beneficiaries of DTI's Kapatid Mentor Me (KMME), the Department's leading MSME development program; and Virtualahan, a social enterprise expanding access to platform work for marginalized demographics, such as persons with disabilities (PWDs) and indigenous peoples. Though these initiatives have successfully delivered major opportunities for women and marginalized groups to engage with digital platforms, we nonetheless find that persistent socio-spatial inclusion challenges highlight the need for more dedicated place-based interventions, whether in terms of in-person components, strengthened logistics, and/or dedicated business support measures.

3.1. Governance: TESDA Online Program (TOP)

Apart from employment and business activities, another dimension of daily life that largely had to be conducted remotely due to the pandemic has been education (UNESCAP, 2021), including in TVET. Yet unlike most of the country's schools which quickly had to devise their own digital learning systems, TOP was already available online during the Philippines' first wave of lockdowns in 2020. First launched in 2012, TOP enables registered users to access free modules on various TVET courses via the Massive Open Online Course (MOOC) format; completing a course will qualify them to take TESDA's National Certification (NC) assessments. According to eTESDA program manager Jacqueline Ali, TOP was originally envisioned as a way for the agency to reach populations who traditionally encounter difficulties in availing of TESDA's on-site classes, such as single parents and PWDs. But with almost 3.5 million users (as of October 2021) and counting—more than double since its initial launch—TOP has rapidly come to be considered as TESDA's flagship learning platform.

Per data from eTESDA, the division overseeing TOP, the most in-demand courses on the platform since the pandemic began are related to work that could be feasibly conducted from home, such as culinary arts (e.g. cookery, baking), entrepreneurship, and specialized ICT skills (e.g. cloud administration). In a May 2020 survey conducted by TESDA with 7,000 TOP users as respondents, results revealed that there are more women users than men on the platform. Furthermore, the survey found that TOP users are generally college graduates working in urban areas (chiefly in NCR and Regions 3, 4, 6, 7, and 8) whose primary motivation for using TOP is for upskilling— a finding consistent with previous research.

Yet despite the high level of women's participation in the program, the survey also revealed that they generally recorded lower completion rates (i.e. less timely completion pace or account abandonment) compared to male users, which eTESDA officers suspect may be due to women users' need to juggle domestic responsibilities. In addition to increasing the number of priority courses, eTESDA is thus revising TOP modules to be more "bite-size", with the idea that modules that can be accomplished in a shorter amount of time can better accommodate the care responsibilities that likely impede women's progress on the platform. Moreover, beyond TOP, the division is also working with external partners to develop online courses for "lifelong learning" and "21st century skills", as outlined in the agency's TVET PH 4.0 framework designed to prepare Filipino workers for the Fourth Industrial Revolution (TESDA 2020).

Despite TOP's success in reaching millions of Filipinos during the country's periodic lockdowns, as with education in general, online learning has clear limitations for TVET. According to Chief TESD Specialist Katherine Zarsadias of TESDA's Policy Research and Evaluation Division, considering the general state of internet connectivity in the country, the digital divide affects not only its students but

its trainers as well, which hampers their overall ability to teach effectively. For trades or professions that are especially reliant on tactile learning (e.g. welding, electrical installation) and tacit skills (e.g. BPO customer service), online classes are helpful up to a certain extent, but hands-on training is essential to enable students to achieve mastery. The in-person element is also crucial for the assessment side of TESDA's operations. Given how TESDA's NC credentials facilitate aspiring migrant Filipinos' job applications overseas, the demand for these certificates remained strong even at the height of the country's lockdowns, prompting TESDA to continue with face-to-face NC assessments by adapting these to comply with the required health protocols and guidelines. Where regular in-person classes are not yet possible, online training initiatives such as TOP should therefore be complemented by place-based efforts as much as it is possible, which is particularly urgent for activities that cannot be properly mastered in the home.

3.2. E-Commerce: Sandria's Delicious Concept and Audrey's Confectioneries

A "Success Story" featured in DTI-Central Visayas (Region 7)'s official webpage, Minglanilla, Cebu-based Sandria Cadusale started Sandria's Delicious Concept (SDC) in 2010 on the strength of her signature "barquiron" (barquillos-filled polvoron), which she first started selling to friends and colleagues in between her full-time government job. Thanks to enthusiastic word-of-mouth that eventually reached the DTI regional office, Ms. Cadusale was accepted as a KMME mentee in 2018— the Department's main project for scaling promising micro-enterprises across the country. Through the 6-month mentorship program as well as free technical assistance from various government agencies, Ms. Cadusale learned the finer points of marketing, bookkeeping, and food safety that enabled her to improve her product line and gradually position them for exports. By early 2020, she was fielding inquiries from local and overseas retailers for her products and had expanded her personnel accordingly. Yet like nearly all micro- and small enterprise owners in the country, the onset of the COVID-19 pandemic required her to quickly redirect her business' trajectory. Although SDC was already situated in the "essential" food industry, Ms. Cadusale decided to expand its focus beyond barquiron by diversifying into frozen foods, meat products, and ready-to-eat meals, gaining supplier contracts with government offices and private companies that brought inrevenues comparable to pre-pandemic levels.

In between navigating the new aspects of her business, Ms. Cadusale participated in DTI-supported initiatives aimed at facilitating MSMEs' transition to e-commerce during the pandemic. Through the "E-Taas ang Pinay MSMEs'' online training program held from July to September 2020, Ms. Cadusale and other women entrepreneurs throughout the country learned about the fundamentals of integrated digital marketing and received online promotions for their brands on partner platforms. Ms. Cadusale's takeaways from this program as well as her participation in virtual trade fairs amplified her business' online presence, drawing order inquiries from supermarkets and resellers in the Philippines and overseas (e.g. Japan, Canada, United Arab Emirates, USA). However, although SDC's official website and social media pages have been useful for marketing purposes, sales from its e-commerce channels such as Shopee have been middling. For Ms. Cadusale, this relatively low sales volume—along with the mushrooming costs of internet connectivity (as more of her operations moved online, she was obliged to upgrade her internet package from a personal to a business account, costing her nearly PhP3,000 per month) and individual courier shipping costs that drive down profits even further—makes selling on e-commerce platforms secondary to her overall business strategy.

Branching out into more "pandemic-proof" food items has also been crucial for the Cebu City-based Audrey's Confectioneries, which was launched in 2013 by fellow KMME alumni Audrey Regis. Pre-pandemic, Audrey's Confectioneries' caramel-flavored dried mango line—a twist on one of Cebu City's biggest exports—were mainly sold at an upscale supermarket's branches nationwide and at the Mactan-Cebu and Ninoy Aquino international airports, with the airport sales comprising 50 percent of the business' monthly total profits. By early 2020, Audrey's Confectioneries was ordering new packaging and exhibiting at trade shows abroad in preparation for product exports, which was facilitated by the commercial exposure and specialized assistance the business has received since Ms. Regis' participation in KMME's 2018 run. But with the onset of COVID-19 in March 2020, the abrupt reduction of travel and tourism-related activities throughout the country depressed foot

traffic at Audrey's Confectioneries' usual points of sale. The steep drop in the business' revenues due to the strong association her enterprises with the tourism sector obliged Ms. Regis to tap into her savings, let go of non-production staff, and develop new product lines that are likely to be more viable in the ongoing pandemic context.

Like Ms. Cadusale, Ms. Regis participated in the "E-Taas ang Pinay MSMEs" online training program. By this time, she had been able to secure a loan from DTI's Small Business Corporation to help finance the production of frozen vegetable samosas to be sold in Cebu supermarkets; she would eventually add Cebu chorizos (spicy sausages) to her product line in 2021. Applying the e-commerce sales and marketing techniques Ms. Regis learned from the MSME online training programs helped maintain distributor interest in Audrey's Confectioneries' caramel-flavored dried mangoes, including from a major international retailer. Yet like with SDC, the low volume of individual e-commerce sales as well as the outsize shipping costs exacerbated by the pandemic made online orders unsustainable for the business overall. As of February 2022, Audrey's Confectioneries diversified its operations to include a bakery in addition to the samosa and chorizo production, which have collectively generated enough revenues to keep its production personnel employed. For Ms. Regis, e-commerce in itself does not appear to be suitable for tourism-oriented and non-essential products like her mango delicacies, and until the pandemic-related travel restrictions ease, diversifying into products that are more reliably in-demand are critical for MSMEs' survival at this time.

3.3. Platform Work: Virtualahan

Established in 2015 in Davao City following founder Ryan Gersava's difficulties in finding formal employment as a PWD, Virtualahan is a social enterprise that provides marginalized jobseekers (e.g. solo parents, former inmates) with 5 weeks of online training on digital marketing and other relevant ICT skills, with the goal of helping them find work on digital labor platforms. Nearly a decade since its launch, approximately 50 percent of Virtualahan's 500-strong graduates have been finding crowdwork jobs on platforms (e.g. Upwork, Onlinejobs.ph), 30 percent have been employed by partner companies such as Accenture, and the remaining 20 percent work with Virtualahan or are undergoing various apprenticeships. In a focus group discussion (FGD) conducted with four of Virtualahan's women graduates, they highlighted the flexibility of platform work as its main advantage, reflecting the research on the sector's gendered dynamics outlined above. Platform as well as (primarily home-based) BPO work enable them to earn income while working remotely and/or at their own pace—an arrangement that can better accommodate their personal circumstances and/or care responsibilities compared to the typical employment structures in the Philippines.

Despite these opportunities, however, certain structural and place-based constraints that Virtualahan women graduates experience appear to tangibly delimit their career options in platform work. Per Community Development and Human Resources Head Rose Villamor, many of them feel compelled to accept the first job available in order to provide for their dependents as soon as possible, giving them a smaller range of options which could reduce their total earnings over time. The frequent inability of graduates who are mothers to accept full-time remote opportunities is also a common scenario, owing to the need to care for children during the day, leaving the night shift as their only viable option which in turn negatively affects their health. In addition to these, they still have to contend with the long-standing issues generally encountered by Virtualahan graduates, such as burdensome treatment costs for PWD-related ailments and significant internet connectivity expenses that are necessary for their digital work; as Ms. Villamor notes, the need for reliable ICT infrastructure explains why the vast majority of Virtualahan graduates reside in metropolitan areas.

To mitigate these problems, the Virtualahan team provides job coaching assistance and organizes community-based peer support networks, which help transmit the tacit knowledge that can enhance its graduates' prospects in platform work. Virtualahan's sustained networking with local actors also serves to expand their graduates' employment options (such as in regional BPO branches) as well as to expand their reach beyond their established hubs in Davao and NCR. According to Ms. Villamor, Mr. Gersava's active outreach to the Cebu and Marawi city LGUs culminated in the 2019 workshop conducted for Lapu-Lapu City Jail inmates and in the 2021 training for students who experienced the siege of Marawi in 2017. Through such outreach work, Virtualahan helps equip underrepresented groups in the country with the ICT skills necessary to enable them to benefit from the Philippines' growing digital economy.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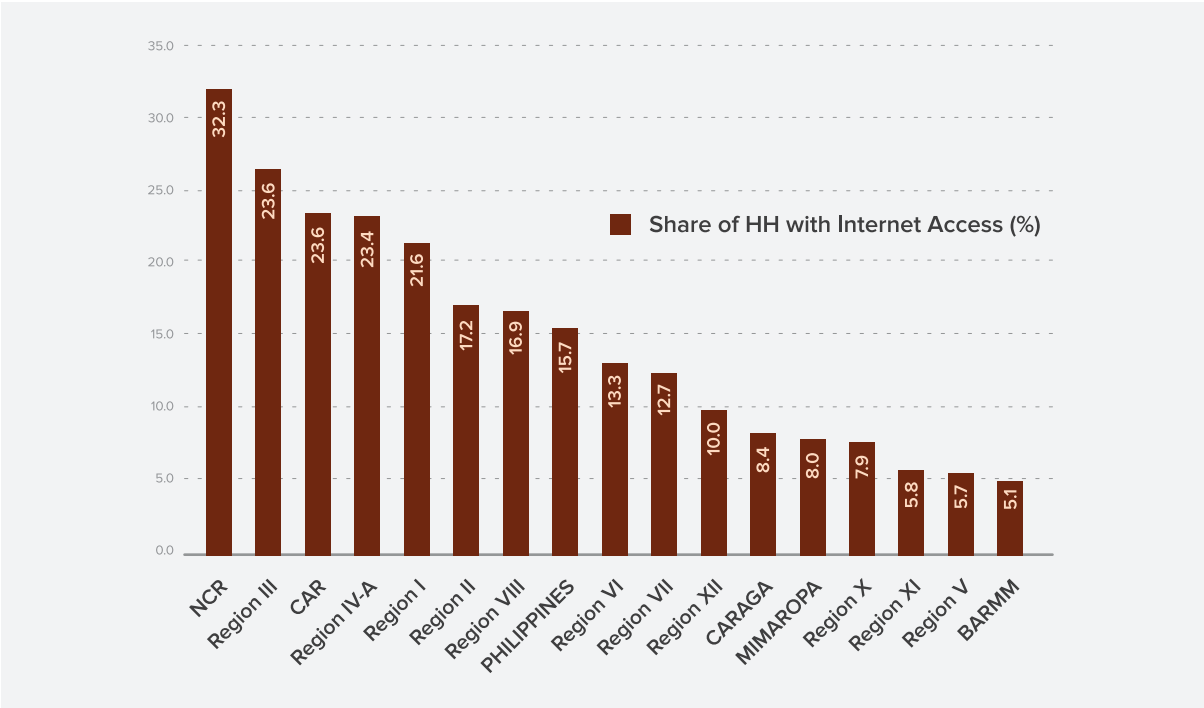
4. Beyond the Digital Divide: Empirical Analysis

The case studies outlined in the previous section drive home the point that the platform sector's dynamics remain subject to socio-spatial disparities that overlap with—but can be distinct from—the digital divide. Even while the TOP and Virtualahan are extending learning opportunities on engaging with platform work to millions of Filipinos, its own proponents attest to the need for in-person learning for tacit skills and tactile knowledge that require either a physical or social presence. Similarly, against the much-ballyhooed opportunities that e-commerce has been augured to offer for microenterprises such as DTI-KMME beneficiaries SDC and Audrey's Confectioneries, the promise of digital platforms remains circumscribed by spatial constraints, such as logistical costs as well as embeddedness in sectors where activities cannot be readily digitized (e.g. tourism). In this section, we complement these insights with more general evidence of trends in platform participation in the Philippines. For this, we examine trends from DICT's 2019 NICTHS as well as separate waves of Facebook's Global Survey of Small Business (GSOSB) conducted in 2021.

4.1. Disparities in Digital Access

As DICT's 2019 NICTHS was designed to be a representative sample of household trends in ICT usage down to the regional level, we begin by providing regional-level descriptives. In this respect, Figure 4 generally confirms what is known about disparities in ICT access as well as economic development and urbanization: the 32.3 percent share of households with internet access in Metro Manila (NCR) is more than six times that of the Bangsamoro Autonomous Region of Muslim Mindanao (BARMM)[7] at 5.1 percent, with regions that tend to boast greater internet access typically being located on Luzon island (NCR, III, CAR, IV-A, I, II), followed by the regions in the Visayas (VIII, VII, VI) and Mindanao (XII, CARAGA, X, XI, and BARMM) island groups. In general, more urbanized and economically-developed regions tend to have better internet connectivity at the household level.

FIGURE 4. Share of Household Internet Access by Region, 2019



Source: Authors, DICT-NICTHS

[7] BARMM refers to the poorest region of the Philippines, where the country's Muslim population is predominantly concentrated.

However, the estimated national household rate of access to the internet is only 15.7 percent. This number is *less than half* of previous estimates of the number of households with some form of internet connection, which had previously been pegged at around 43 percent (Quimba 2020; World Bank 2020). Indeed, placed in substantive context, a household rate of access to the internet of 32.3 percent in Metro Manila already falls below levels that one might otherwise expect from the most affluent area within the country. Even the equivalent figure for individual (as opposed to household) internet usage indicates a national usage level of roughly 37.4 percent, which remains below previously calculated levels. This suggests that the level of disparities in digital infrastructure access may have been underestimated in previous studies.

FIGURE 5. Share of Individuals with Online Buying/Selling Account by Region

Source: Authors, DICT-NICTHS

These disparities in internet connectivity are closely associated with the share of individuals with accounts for buying and selling on digital platforms. Though the NICTHS does not have dedicated questions asking whether individuals engaged in crowdwork or on-demand work, it does feature a section focused on the extent and form of respondents' participation in e-commerce activity, a regional-level summary of which is provided in Figure 5. Overall, the national rate of participation in the e-commerce sector (as of end-2019) appeared to be rather low, and—to a greater extent than household internet access—skewed towards the country's leading economic growth poles. Only around 10 percent of individuals reported holding an account for buying and/or selling goods and services online, with Greater Manila (NCR, IV-A, and III) leading the regions, followed by CAR (where Baguio City is located, see Box 1) and Region VII (where Metro Cebu is located). As with the internet connectivity figures, Luzon-based regions generally performed best, followed by the Visayas, and then Mindanao, with the Zamboanga Peninsula (Region IX) and BARMM featuring the lowest rates nationwide. Indeed, the rates of account ownership in Metro Manila are more than 12 times that in BARMM.

4.2. The need for place-based interventions

At first glance, these manifestations of the digital divide appear to indicate that addressing internet (and by extension, digital platform) access gaps and skills deficits are among the most crucial interventions needed to enable broader-based participation in the Philippines' digital economy. Yet ICT access and skills, while a *necessary* condition for platform participation, are hardly *sufficient* ones. As has already been pointed out, the country's experiences in fostering the BPO sector and other ICT-intensive industries suggest that broader place-based interventions to transform localities into digitally-connected clusters of economic activity have a crucial role to play in realizing such potential.

To provide evidence of this point, we partly replicate the analysis of Albert et al (2021)[8], which examined the correlates of NICTHS individual respondents' engagement with online selling/e-commerce, but also investigate the correlates for online buying. We include practically the same set of variables employed by the aforementioned study, but also add whether the household of individual respondents had any kind of computer.

[8] Albert et al (2021) undertake a logistic regression, with individual engagement in online entrepreneurship as their dependent variable, and gender, age, age squared, marital status, household head status, completion of an ICT course, completion of basic education, completion of college, access to internet, and residence in an urban area as their explanatory variables.

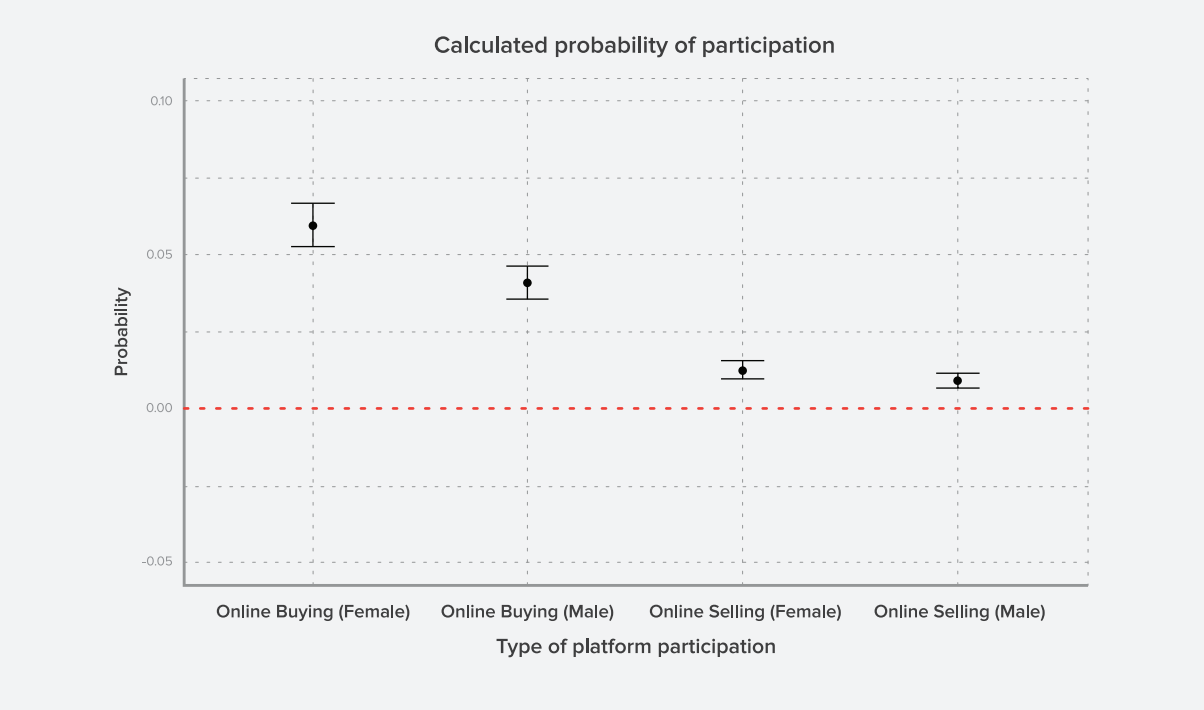
TABLE 1. Probability (%) of Engaging in Online Selling and Buying for Women and Men, Urban Areas*

Activity	Female	Male
Online Buying	5.92%	4.04 %
Online Selling	1.23 %	0.87 %

**Predicted based on the nationwide logistic regression model featured in Annex I. Typical values are based on the mean values for continuous variables (e.g. age) and medians for discontinuous variables (e.g. household head status, possession of internet access and computers).*

Source: Authors, using NICTHS data

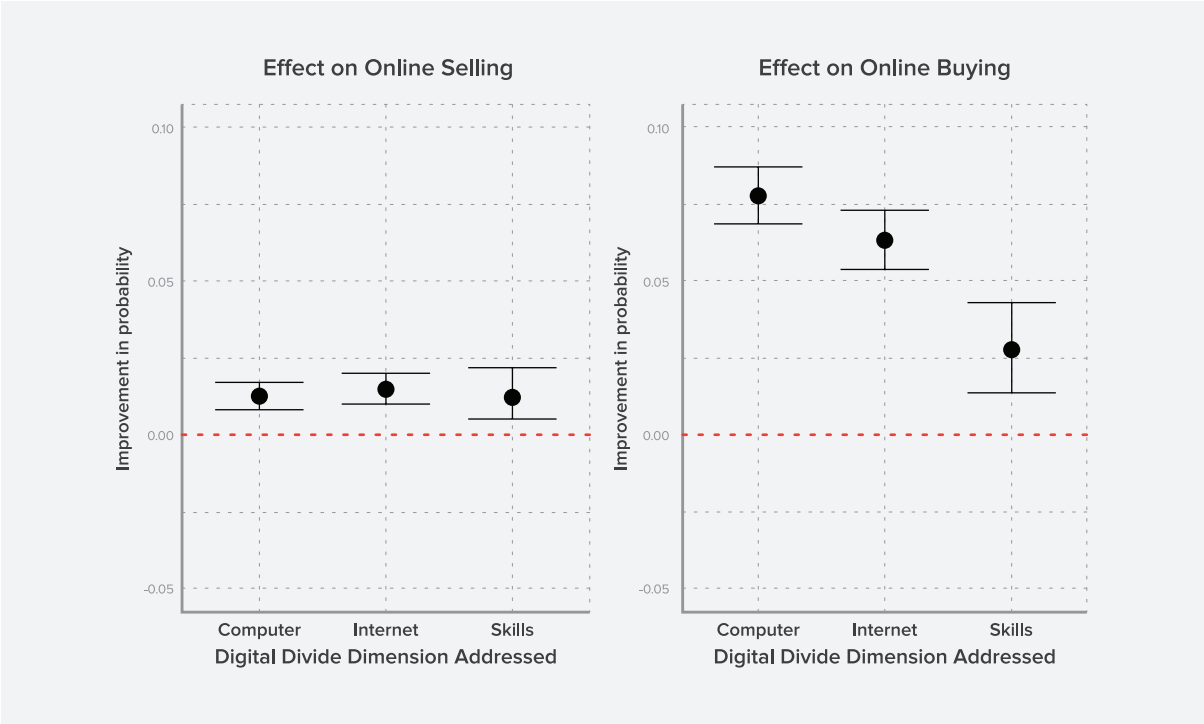
FIGURE 6. 95% Confidence Intervals: Probability (%) of Engaging in Online Selling and Buying for Women and Men, Urban Areas*



Source: Authors, using NICTHS data

Our resulting statistical estimates are substantively similar to that estimated by Albert et al (2021). In general, a respondent's gender has a strong significant relationship with engagement in online buying and selling. As shown in Table 1 above, a typical female respondent in an urban area basically has a 1.2 percent chance of being someone engaged in online selling, while a typical male only has a 0.9 percent chance. The gap is even wider with respect to participation in online buying, with the typical woman in an urban area having a 5.9 percent chance of using digital platforms for purchasing goods and services, whereas the equivalent figure for men is 4.0 percent. In Figure 6, we should note that this association between women and increased platform participation is robust even when we re-randomize the NICTHS dataset (using non-parametric bootstrapping). This trend is in line with what has already been mentioned about women's slightly greater rates of participation in the platform economy, though overall levels of participation are visibly low.

FIGURE 7. 95% Confidence Intervals of Estimated Effects of Improving Internet, Digital Skills, and Computer Access on e-Commerce Participation

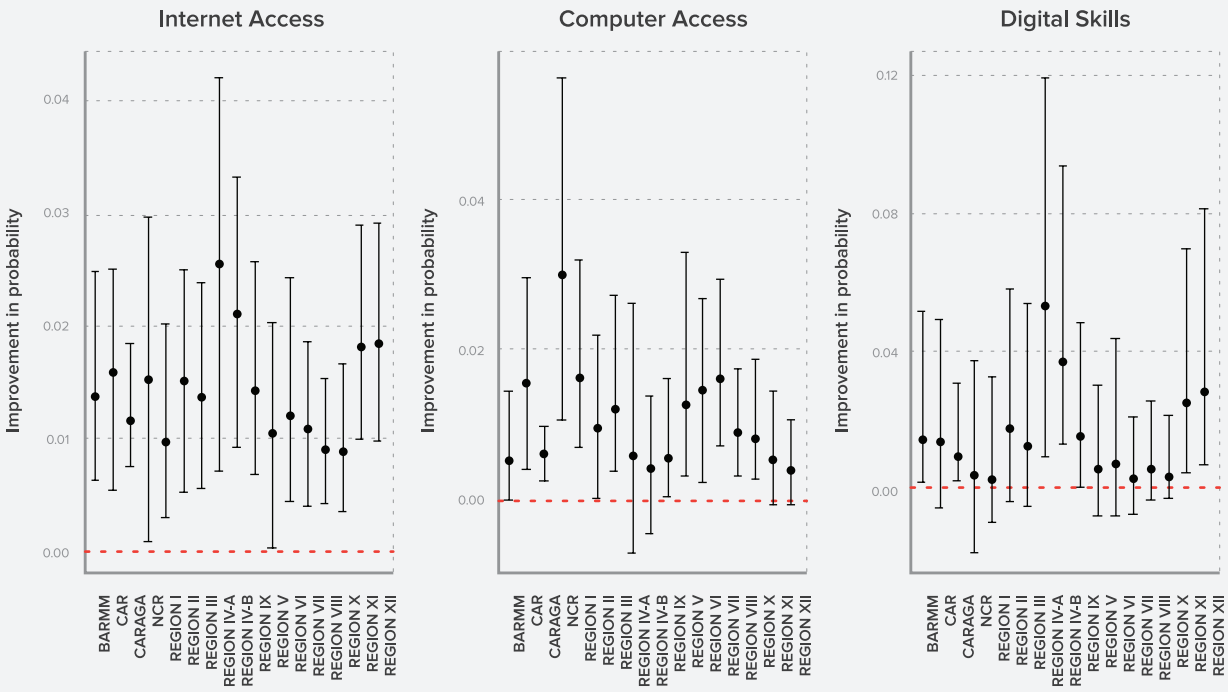


Source: Authors, using NICTHS data

How would bridging the most prominent manifestations of the digital divide affect these low rates of participation? In Figure 7, we show the results of a simulation where we predicted the effects of fully remedying the digital divide for *all individuals nationwide* (i.e. all survey respondents) without household access to internet and computers, and without digital skills training (referred to in the NICTHS as the completion of a short ICT training course). In both panels of the figure, the bars demarcate our confidence intervals of the effect of fully addressing a particular digital divide dimension on individuals' engagement in either online selling (left panel) or online buying (right panel). As can be seen, addressing the digital divide has a significant effect on inducing online buying behavior, with computer access enhancement providing an average improvement in individual online buying activity nationwide by about 7.8 percent, internet access by 6.3 percent, and digital skills training by around 2.8 percent. In practice, these increases more than double the women and men's chances to buy products and services online, as shown in Table 1.

Yet relative to online buying, the figures for improvements on the selling side of e-commerce are minuscule: fully addressing the digital divide for household computer access leads, on average, to an increase in the chance of engaging in online selling by only 1.3 percent, 1.5 percent for internet connection, and 1.2 percent for digital skills. Given the considerable resources that need to be spent by the public and private sector (as well as households) to be able to address such divides in the first place, this increase seems to be a low return-on-investment in terms of the effect generated. While the NICTHS itself does not have any data related as to whether respondents were recipients of other government programs and initiatives, these surprisingly minor effects of bridging the digital divide on catalyzing increased online entrepreneurship can be viewed as suggesting that while addressing this divide is a necessary condition for promoting e-commerce, other measures are needed to facilitate more productive engagement by individuals in the platform sector. As we have previously pointed out, the Philippines' track record with the BPO sector could provide a more appropriate framework in promoting the platform economy, specifically in terms of advancing local economic clusters of entrepreneurs and professionals and the formation of supportive knowledge networks by means of place-based interventions.

FIGURE 8. Estimated Effect of Improving Internet, Digital Skills, and Computer Access on Online Selling by Region

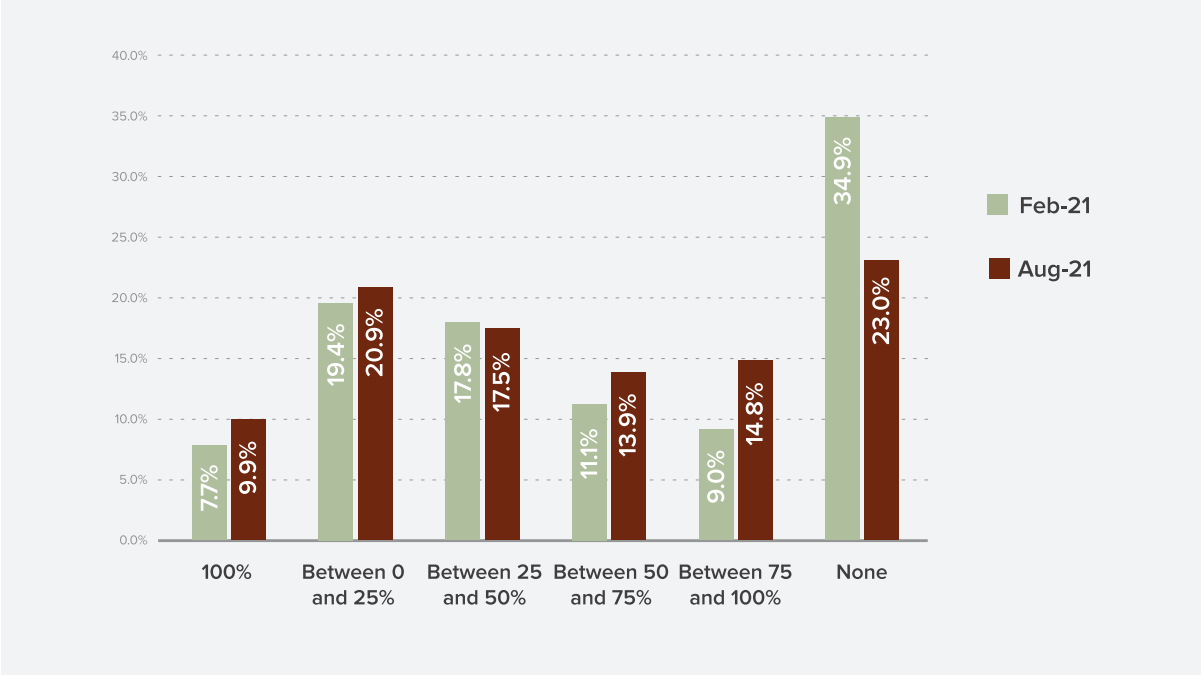


Source: Authors, using NICTHS data

The importance of place-based interventions based on more careful analysis of local conditions is likewise highlighted by high levels of the likely effect of closing the digital divide on e-commerce at a regional level. Reanalyzing the regression model used for generating Table 1 as well as Figures 6 and 7, but this time using a specification which allows for varying-effects across regions[9], we find that the effect of closing the digital divide will be most pronounced in regions that already have dense economic activity. In general, Figure 8 above shows that the region-specific effects of fully addressing the digital divide for internet access, computer access, and digital skills on online selling are comparable to those found in Figure 7: in most regions, the increase in probability in participation in online selling only amounts to about one percentage point. However, we also observe number of positive outliers, where completely addressing the digital divide promises to have a magnified effect on online entrepreneurship, such as Region IV-A (for internet access), NCR (for computer access), and Regions III and IV-A (for digital skills). While our specification does not allow us to say whether the increased economic development of these outlier regions is exactly what is driving this greater effect, it is nonetheless consistent with our argument and the historical experience of the Philippine BPO sector. Increasing the take-up of the platform economy, though obviously relying on the availability of digital infrastructure and skills, will also hinge on promoting local economic dynamism and business activity. These general trends in which platform economy participation dynamics differ dramatically from region-to-region (generally appearing more pronounced in economically developed ones) attests to the need for more context- and locally-informed economic measures that have been thus far discussed in the existing policy literature on the sector.

[9] Specifically, we use a non-linear mixed effect specification with region-varying coefficients.

FIGURE 9. Digital Businesses Revenues Generated by Philippine Firms, February 2021 vs. July/Aug. 2021*



While data on this question is also available for 2020, the quality of responses is much lower, with majority of respondents responding "N/A" to this question.

Source: Facebook GSOSB, 2021

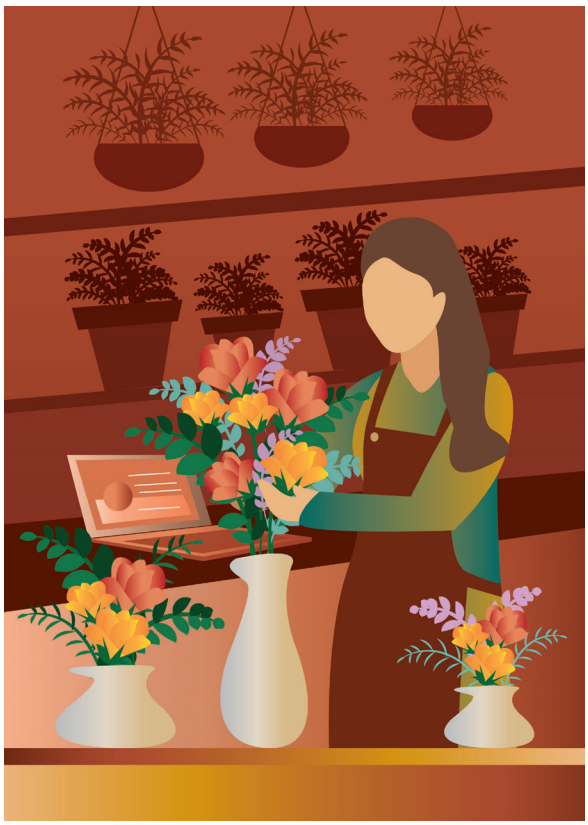
An important caveat to the empirical results just presented in this section is that they have mostly been based on the 2019 NICTHS, and that the onset of the COVID-19 pandemic may have substantially altered some of our trends and results. Yet while it is true that many businesses have shifted more of their operations online, this has hardly meant that e-commerce has become MSMEs' most important source of revenues. In fact, as shown by Figure 9, the opposite appears to be true based on Philippine data from Facebook's 2021 Global State of Small Business (GSOSB) survey: both during February 2021 (when the country was under more relaxed lockdown restrictions) as well as in August 2021 (when Greater Manila was again placed under the most restrictive community quarantine category), a decisive majority of small business respondents to the GSOSB survey received less than 50 percent of their business revenues from digital platforms, with the largest share of firms having no such platform-based returns whatsoever. These trends more than one year after the pandemic's onset affirm the continuing significance of place-based interventions that can support business efforts, not only to more effectively leverage platform opportunities, but also sustain their brick-and-mortar sales.

TABLE 2. Business Plans for Using Digital Operations when COVID-19 Pandemic Ends, August 2021

Plans for digitalizing business operations	Share
Use both in-person and digital business operations roughly equally	49.1%
Use mostly digital business operations	14.8%
Use mostly in-person business operations	6.9%
Use only digital business operations	12.5%
Use only in-person business operations	16.8%

Source: Facebook GSOSB, 2021

The importance of this approach is further reinforced by examining enterprise responses as to their digitalization plans in the August 2021 wave of the GSOSB. While the majority (49.1 percent) of the local MSMEs surveyed reported planning to use in-person and digital operations in roughly the same measure, it is also worth noticing that these firms' preferences remained tilted towards using *only* in-person operations (16.8 percent). Certainly, there remains about one-fourth of respondents who expressed interest to move towards more digital-heavy operations, but this means that, if such business plans were to be realized, the great majority of businesses would continue to have sizable in-person functions. In other words, while the COVID-19 pandemic has indeed nudged the Philippine MSME sector to increasingly adopt digital strategies as a coping measure, these survey results indicate that in-person and place-based operations will remain a critical—if not the most pervasive— form of MSME activity for the foreseeable future.



5. Conclusion

The COVID-19 pandemic has driven game-changing shifts for the Philippine economy, with digital platforms having emerged as a crucial socioeconomic lifeline and service delivery mechanism in leading economic hubs across the country. As various observers have argued, this digital transformation harbors significant gender-equalizing opportunities for women's work and entrepreneurship—yet substantial barriers to the realization of these opportunities continue to exist. To this end, this paper has emphasized how interacting spatial and socioeconomic divides in the Philippines' economic geography have thus far limited the "inclusivity dividends" that have been reaped thus far in the country's ongoing digital transformation. Our case studies of efforts in delivering ICT skills development online (TOP and Virtualahan) and in facilitating women-led MSMEs transition to e-commerce (DTI-Region 7's KMME) reveal striking space-related barriers that continue to impede equitable access to the platform sector's socioeconomic opportunities. Indeed, a common theme that has emerged from these cases has been the need to conceive and approach the rapidly-expanding platform economy not in dichotomous (i.e. digital versus analog) terms, but rather with respect to the dynamics and features of their geographic embeddedness.

A crucial assumption motivating much recent policy initiatives promoting the platform economy in the Philippines has been that the most pressing constraint for equalizing access to its economic opportunities has been the country's persistent digital divides, manifested in terms of access to ICT infrastructure, technologies, and skills. Though true to an extent, the results of our empirical analysis suggest that ameliorating digital disparities, by itself, will not address other critical conditions needed for strengthening access to the sector by social groups that are already disadvantaged by the Philippines' broader socio-spatial inequalities. Due to geographically-related disparities that can only be addressed in the medium-term, as well as sector-, skill-, locality-, and even firm-specific differences on activities and processes that can be readily digitized, significant areas and demographics within the country remain unable to transition fluidly and/or fully into the digital economy. This behooves a more fine-grained, place-based approach towards the promotion of the platform economy and socioeconomic inclusion initiatives related to it—one that can more deftly integrate digital and non-digital activities across different sectors as well as facilitate better access to the sector within sub-national economic clusters of enterprises, professionals, and networks. As noted earlier, the 2022 Mandanas transition, if managed effectively, stands to equip LGUs with the resources that can enable them to advance such approaches in their respective localities.

To be able to realize the gains of the burgeoning platform economy, both national and local policymakers as well as their partners in the private sector and the development community would be well-advised to pursue the following measures:

- **Reform social protection schemes:** while the flexibility of platform work has been a major draw for women who are also saddled with care and household responsibilities, the lack of social protection coverage for those in the sector unduly exposes them to labor market uncertainties, with women being especially vulnerable to such dynamics (as highlighted by the Virtualuahan FGD participants). Indeed, while Republic Act 7699 or the Portability Law aims to establish a unified social security system nationwide, allowing for portable social security benefits from private and government sources, a wide range of work undertaken on digital platforms is not sufficiently formal for men and women undertaking such "crowdwork" or "gig work" to access such protection schemes (Dacuycuy and Baje 2021).

  To mitigate such risks while better allowing them to adjust to market fluctuations, government can furnish and/or expand unemployment insurance programs, which will furnish platform workers with income to smoothen periods of insecurity while also supporting the reskilling and/or upskilling activities that likely need to be undertaken in between jobs (TESDA 2020). These programs can be funded from various sources, including both tax and non-tax contributions, and can also be administered via online platforms to more directly reach those already involved in the digital economy. Creating insurance schemes that combine both contributory and non-contributory systems, and that cover both unemployment protection and upskilling needs, seem promising options to overcoming the lack of enrollments of platform workers on existing social protection schemes (ibid).

- **Provide care services:** as mentioned in this report, a major reason why women in particular are drawn to platform work—yet are also unable to maximize its dividends—are their persisting care responsibilities. Helping them meet these responsibilities by means of dedicated public services as well as other "care-sensitive" policy measures (UNESCAP 2021) are hence imperative to enhancing economic inclusion in the platform sector. Among others, strengthening child care services, promoting uptake of remote working arrangements, and encouraging different government agencies and LGUs to recognize unpaid care work in planning and budgeting processes are immediate steps forward that can be taken on this front (ibid).

- **Recognize platform workers as workers:** while there have been attempts in recent years to reform labor laws to accommodate crowdwork, such as House Bill 8817 ("The

Freelance Workers Protection Act"), there appear to have been no legislative breakthroughs as of February 2022 in recognizing crowdworkers as workers with rights to organize and with access to entitlements afforded to other types of workers (e.g. hazard pay). Recognizing that crowdworkers are employees would also permit the Department of Labor and Employment (DOLE) to intervene on behalf of gig economy workers (e.g. delivery riders) in the case of labor disputes, as well as enable platform workers in general to organize with trade unions and secure collective bargaining agreements. Beyond these, it is also crucial for government to look into strengthening labor rights protections for emerging types of platform workers (e.g. domestic workers who are also participating in platform work), such as by amending the Kasambahay Law and other relevant legislation (Garcia and Pacis 2019).

- **Enhance skills development programs:** due to its technical requirements, addressing gaps in the existing stock of skills needed to engage in the digital economy in addition to promoting general digital literacy is crucial to addressing lingering inclusivity gaps in the sector. Though already an urgent national priority prior to the COVID-19 pandemic, the public health and economic crisis that has triggered the widespread displacement of jobs and businesses has made facilitating the acquisition of such technical skills even more imperative. Certainly, as the examples of TESDA's TOP and DICT's digitaljobsPH initiatives demonstrate, it has been possible to sustain—if not expand—such skills development and training systems even in the midst of the pandemic. Building on such programs and extending new training opportunities via digital platforms can and should be a part of the government's strategy for making the platform economy more inclusive.

  Yet to be able to reach more disadvantaged and isolated groups and to strengthen training in areas that are less amenable to digital delivery, "blended" versions of these programs can be piloted and rolled-out with LGUs, as well as the regional bureaus of national government agencies. At minimum, the government may want to explore maximizing the digital connectivity opportunities afforded by the "Free Wi-Fi for All" hotspots in LGUs across the country to reach less-connected demographics, while simultaneously building on the remote learning approaches that have been experimented with since the pandemic's onset. To ensure that such initiatives also address gender gaps in skills, measures can also be taken to maximize the women's participation in skills training areas that have previously been tilted towards men, such as in data management and analysis, modeling and simulation, and use of statistical software (Albert et al 2021).

- **Develop local economic clusters for the digital economy:** the Philippines' landmark success in diffusing the BPO industry to the country's "Next Wave Cities" (now known as "Digital Cities" in an ongoing initiative conducted jointly by DICT and the IT and Business Process Association of the Philippines) illustrates the historical contribution of spatially-attuned and place-based efforts in encouraging the spread of knowledge economy opportunities beyond the Philippines' metropolitan cores. Government programs aiming to leverage the platform economy as a vehicle for economic inclusion can adopt a similar approach, emphasizing the development of local e-commerce and freelancing clusters that are supported by a range of supportive infrastructure and services. To illustrate, the implementation of DTI's KMME program in Region 7 provides some indication of how this can be achieved by LGUs for e-commerce, in addition to accelerating MSMEs' digital development by promoting a better local business environment and increasing their ease-of-doing-business via the adoption of MSME- and startup-friendly policies and services. In terms of advancing high-level skills, Virtualahan's track record in placing its graduates in ICT-intensive jobs attests to how community-based support can strengthen the accessibility of crowdworking for marginalized groups, thereby boosting their localities' capacity to participate in the digital economy.

Bibliography

Albert, J. R. G., Quimba, F. M., Rosellon, M. A. D., & Munoz, M. S. (2021). Promoting a more innovative and inclusive society through ICT development. Philippine Institute for Development Studies Policy Notes.

Ang, A. P., Cruz, J. P., & Custodio, N. A. B. (2019). The impact of trade on employment in the Philippines: Country report [Report]. ILO. http://www.ilo.org/manila/publications/WCMS_714022/lang--en/index.htm

Ansell, B. 2019. "The Politics of Housing," Annual Review of Political Science 22" 165-85.

Ansell, A. and J. Gingrich, "The End of Human Capital Solidarity?" In Frances Rosenbluth and Margaret Weir, eds., Who Gets What? The Politics of Insecurity (forthcoming).

Arbon, Ma. E. (2021, November 23). Interview with Authors (DTI-Region VII) [Personal communication].

Bayudan-Dacuycuy, C., & Baje, L. K. (2021). Decent Work in Crowdwork: Gendered Takeaways from an Online Survey in the Philippines. Philippine Institute for Development Studies.

Bayudan-Dacuycuy, C., Orbeta, Jr., A., Serafica, R., & Baje, L. K. (2020). Online Work in the Philippines: Some Lessons in the Asian Context. Philippine Institute for Development Studies.

Beerepoot, N., B. Lambregts and J. Kleibert (eds.) (2017) Globalisation and New Patterns of Services-driven Economic Growth London: Routledge.

Brynjolfsson, E., & McAfee, A. (2014). The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. Norton. https://books.wwnorton.com/books/The-Second-Machine-Age/

Bukht R. and Heeks, R. 2017. Defining, conceptualising and measuring the digital economy. GDI Development Informatics Working Papers, no. 68. University of Manchester, Manchester. http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/di/di_wp68.pdf

Canivel, R. S. C. (2021, May 13). Riders and rights: What a scattered workforce can do. INQUIRER.Net. https://newsinfo.inquirer.net/1431113/riders-and-rights-what-a-scattered-workforce-can-do

Capello, R. (1999). Spatial transfer of knowledge in high technology milieux: learning versus collective learning processes. Regional Studies, 33 (4): 353–365.

Chaudhary, R. (2020). The Future of Work for Women Workers India's Emerging Gig Economy. The Asia Foundation. https://asiafoundation.org/publication/indias-emerging-gig-economy-the-future-of-work-for-women/

CNN Philippines. (2020, September 3). Some 73,000 online businesses registered during the COVID-19 pandemic, DTI says. CNN Philippines. https://www.cnnphilippines.com/business/2020/9/3/dti-730000-online-business-registered-covid-19-pandemic.html

De La Cruz, C. I. (2021, April 30). 10 Online Medical-Consultation Services You Can Use From Home. SPOT.PH. https://www.spot.ph/newsfeatures/the-latest-news-features/85998/10-teleconsult-health-services-in-the-philippines-a833-20210430-lfrm

Del Prado, F. L. E. (2015). The BPO Challenge: Leveraging Capabilities, Creating Opportunities. Philippine Institute for Development Studies.

DOLE-ILS. (2021, August 24). Interview with DOLE-ILS Representatives (Ahmma Charisma Lobrin-Satumba, Miraluna Tacadao, Ivan Villena) [Personal communication].

Eviota, E. U. (1992). The political economy of gender: Women and the sexual division of labour in the Philippines. Zed Books.

Fitjar, R. D., & Rodríguez-Pose, A. (2017). Nothing is in the air. Growth and Change, 48(1), 22–39.

Garcia, L., Barrameda, T., Pacis, J., & Barrameda, A. S. (2019). Cleaning ladies on demand: Are local digital platforms transforming domestic work in the Philippines? (p. 25). Foundation for Media Alternatives.

Graham, M. (ed). 2019. Digital Economies at Global Margins. Cambridge MA: MIT Press.

Graham, M., & Anwar, M. A. (2019). The global gig economy: Towards a planetary labour market? First Monday. https://doi.org/10.5210/fm.v24i4.9913

Hacker, J. and P. Pierson. (2010). "Winner-Take All Politics: Public Policy, Political Organization, and the Precipitous Rise of Top Incomes in the United States," Politics and Society 38(2): 152-204.

Hall, P. 2021. "The Postwar Evolution of Capitalism and Democracy," Government & Opposition. Online.

Hunt, A., & Samman, E. (2019). Gender and the gig economy: Critical steps for evidence-based policy. Overseas Development Institute.

Hunt, A., Samman, E., & Mansour-Ille, D. (2017). Syrian women refugees: Opportunity in the gig economy? Overseas Development Institute.

IFC. (2021). Women and E-commerce in Southeast Asia. International Finance Corporation.

ILO. (2021). World Employment and Social Outlook 2021. International Labour Organization. http://www.ilo.org/global/research/global-reports/weso/2021/WCMS_771672/lang--en/index.htm

Iversen, T. and D. Soskice 2019. Democracy and Prosperity: Reinventing Capitalism through a Turbulent Century. Princeton: Princeton University Press.

Kenney, M., & Zysman, J. (2016). The Rise of the Platform Economy. Issues in Science and Technology, 32, 61–69.

Kleibert, J. M. (2014). Strategic coupling in 'next wave cities': Local institutional actors and the offshore service sector in the Philippines. Singapore Journal of Tropical Geography, 35(2). https://scholar.google.com/citations?view_op=view_citation&hl=nl&user=7Kou3poAAAAJ&citation_for_view=7Kou3poAAAAJ:u5HHmVD_uO8C

Manila Standard. (2021, March 29). Wellness app zennya now offers COVID-19 tests, other medical services. Manila Standard. https://manilastandard.net/mobile/article/350761

Maramara, K. (2021, February 26). 8 Best Home Cleaning Services in Manila: 2021 Edition—8List.ph. 8list.Ph. https://www.8list.ph/best-cleaning-services-manila/

Ofreneo, R. E. (2013). Precarious Philippines: Expanding Informal Sector, “Flexibilizing” Labor Market. American Behavioral Scientist, 57(4), 420–443. https://doi.org/10.1177/0002764212466237

OLI. (2021). The Online Labour Index | The iLabour Project. The ILabour Project: Investigating the Construction of Labour Markets, Institutions and Movements on the Internet. http://ilabour.oii.ox.ac.uk/online-labour-index/

Orbos, T. M. (2021, September 6). Delivery riders–Our lifeline to normalcy | Thomas M. Orbos. BusinessMirror. https://businessmirror.com.ph/2021/09/06/delivery-riders-our-lifeline-to-normalcy/

Oxfam Philippines. (2021, June 22). Oxfam encourages women to #FlexYourHouseband and celebrate equality at home. https://philippines.oxfam.org/latest/press-release/oxfam-encourages-women-flexyourhouseband-and-celebrate-equality-home

Oxford Business Group. (2015). The Report: The Philippines 2015. Oxford Business Group. https://oxfordbusinessgroup.com/philippines-2015/bpo

Payoneer. (2019). The Global Gig Economy Index: Q2 2019. Payoneer. https://explore.payoneer.com/q2_global_freelancing_index/

Payoneer. (2020). 2020 Freelancer Income Report. Payoneer.

Rivas, R. (2021, May 26). Philippine startup Zennya secures $1.2 million. RAPPLER. https://www.rappler.com/business/philippine-startup-zennya-secures-funding-may-2021/

Schwab, K. (2015, December 12). The Fourth Industrial Revolution: What It Means and How to Respond. Foreign Affairs. https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution

Soriano, C. R. (2021). Digital Platform Labor in the Philippines: Emerging Configurations and Policy Implications. Japan Labor Issues, 5(32).

Soriano, C. R., Cabalquinto, E. C., & Panaligan, J. H. (2021). Performing “digital labor bayanihan”: Strategies of influence and survival in the platform economy. Sociologias, 23, 84–111. https://doi.org/10.1590/15174522-113027

Soriano, C. R., & Cabanes, J. V. (2020). Entrepreneurial Solidarities: Social Media Collectives and Filipino Digital Platform Workers. Social Media + Society. https://journals.sagepub.com/doi/full/10.1177/2056305120926484

Streeck, W. and K. Thelen. 2008. Beyond Continuity. NY: Oxford University Press.

Tabuga, A. D., & Cabaero, C. C. (2021). Filipinos’ Access and Exposure to ICT: A General Overview based on the National ICT Household Survey. Philippine Institute for Development Studies, 21.

TESDA, 2020. TVET PH 4.0: Fourth Industrial Revolution Framework. Technical Education and Skills Development Authority, Manila.

Thelen, K. 2019. “Transitions to the Knowledge Economy in Germany, Sweden and the Netherlands,” Comparative Politics 51(2): 295-315.

Tholons. (2014). 2015 Top 100 Outsourcing Destinations: Rankings. http://www.tholons.com/nl_pdf/Tholons_Whitepaper_December_2014.pdf

United Nations, Asian Development Bank, & United Nations Development Programme. (2021). Responding to the COVID-19 Pandemic: Leaving No Country Behind.

Villamor, R. (2021, September 17). Interview with Authors (Virtualahan) [Personal communication].
World Bank. (2019). E-commerce Development: Experience from China. World Bank. https://www.worldbank.org/en/news/infographic/2019/11/23/e-commerce-development-experience-from-china

World Bank. (2020). Philippines Digital Economy Report 2020: A Better Normal Under COVID-19: Digitalizing the Philippine Economy Now. World Bank.

Wren, A. 2021. "Strategies for Growth and Employment Creation in a Services-Based Economy: Skill Formation, Equality and the Welfare State." In Anke Hassel and Bruno Palier, eds. Growth and Welfare in Advanced Capitalist Economies. Oxford: Oxford University Press.

Placing the Platform Economy

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