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Bridging Gaps, Breaking Barriers, and Building Capacities in Online Marketplaces

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in Online Marketplaces

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Abstract

As the Fourth Industrial Revolution transforms the conduct of work and enterprises, inequalities and the digital-spatial divide become front and center of conversations that aim to promote online marketplaces and maximize their benefits. This paper takes stock of the development in human capital, labor market, and e-commerce, identifies state-led initiatives to build capacities, and analyzes barriers and gaps in labor and retail platforms. Data collected through desk reviews and key informant interviews with stakeholders were synthesized to highlight state-led initiatives and programs related to platform work, identify barriers to participation in the digital economy, and draw recommendations to address gaps.

The paper finds that several state-led programs and initiatives for online marketplaces and legislative agenda related to the digital economy are in place. Despite this, the paper finds that 1) barriers related to gender roles, business environments, and financing exist and 2) gaps in social protection, digital competencies, and infrastructure support remain. Some directions to bridge gaps, break barriers to participation, and build capacities are forwarded to harness the full potential of labor and retail platforms.

Keywords: Online marketplaces, platform work, freelancing, human capital, labor, and retail platforms

Table of Contents

1. Introduction	1
2. Some developments	2
2.1 On the labor market front	2
2.2 On the e-commerce front	3
2.3 On the human capital front	4
3. Synthesis of qualitative data and desk review	6
3.1 Labor market	6
3.2 Retail platforms	9
4. Ways forward	12
5. Bibliography	14

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Connie Bayudan-Dacuycuy and Leih Maruss V. Sinsay*

1. Introduction

The Fourth Industrial Revolution has introduced the world to advanced robotics, artificial intelligence, biotechnology, nanotechnology, data analytics, blockchain, cryptocurrencies, cloud technology, the Internet of Things (IoT), and 3D printing, among others, which transformed industries and the labor market. As the age of automation and technology comes, new jobs are formed while old ones are being replaced. This is set to transform industries and workplaces, shifting trends and economies and changing the market and job demands. For all the industrial revolutions that have passed, human labor has struggled to adapt to make themselves still the indispensable and superior part of industrial productivity. One of the biggest changes brought by technology in the past decade is the shift in the labor paradigm. Change in work settings also became the norm as the world went under lockdowns due to the COVID-19 pandemic.

Developments in information and communications technologies (ICT) have transformed the conduct of work and enterprises. Business models that leverage data, the Internet, and smart devices have substantially grown in the Philippines in the last decade, although in developed economies, the conversation of online marketplaces have already taken shape in the form of Internet-based auctions in the late 1990s. Online marketplaces differ from traditional marketplaces in the increased personalization and customization of product offerings, lower search costs, faster price discovery, and improved facilitation (see Bakos 1998). These online marketplaces are now popularly known as platforms, which have three basic characteristics: they are technologically mediated, link user groups, and allow user groups to do particular things (Kenney and Zysman 2016). Platforms facilitate the demand and supply of at least three commodities: labor (e.g., Uber, Upwork, and Amazon Mechanical Turk), assets (e.g., Airbnb), and activities (e.g., Spotify). Labor platforms, such as Upwork and OnlinejobsPH, facilitate the matching of labor demand and supply and provide people with work opportunities. Filipinos quickly took advantage of this platform work¹ and are now dubbed modern-day overseas Filipino workers. Indeed, some successful crowdworkers have brought jobs to their communities and are satisfied with their platform stints. Meanwhile, retail platforms, such as Lazada and Shopee, have digitized retail and commerce and provided avenues for businesses to be visible to a bigger client base. The diverse online payment channels have been instrumental to the successful conclusion of platform transactions.

These platforms, also called online marketplaces (Howard et al. 2006; Bakos 1998), have provided substantial economic benefits. These link sellers and buyers of goods and services and facilitate matching, resulting in efficiency and lower business search costs. Indeed, participation in these platforms has been uptrend, especially during the pandemic when mobility was restricted and the need to survive amplified the Filipinos' entrepreneurial spirits.

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¹ (1) local government unit workers, (2) academic workers, (3) national government agencies, (4) platform workers, including DigitalJobsPH graduates and trainers, and (5) civil society organizations.

As digital platforms become ubiquitous, concerns regarding inequalities along the digital-spatial divide become front and center of conversations that aim to promote platforms and maximize their benefits. Preexisting gaps in access to ICT infrastructures, financing, skills and training, and gender equality are obstacles to sustainable and equitable platform ecosystems.

As the labor force brace to be at the forefront of the Fourth Industrial Revolution, policies must also be recalibrated to ensure that upskilling and reskilling measures are in place. A policy framework should be implemented to ensure that the labor force is equipped to cope with the changing market demands. Changes in labor and retail markets prompted the need to rethink policies on education and human development to bridge the skills gap, break participation barriers, and build capacities relevant to platform work. This paper takes stock of the development in human capital, labor market, and e-commerce, identifies State-led initiatives to build capacities, and analyzes barriers and gaps in labor and retail platforms. It uses data collected through desk reviews and key informant interviews with stakeholders¹ from March to May 2022. The qualitative data and desk review were synthesized to highlight State-led initiatives and programs related to platform work, identify barriers to participation in the digital economy, and draw recommendations to address gaps. Desk review of data and supporting literature are also used to identify gaps and barriers related to enterprises' engagements on retail platforms.

2. Some developments

2.1 On the labor market front

Technological advancements have always played a role in the world of work. Advancements in Information and Communications Technology (ICT) create opportunities to innovate, expand, and simplify services, production, and marketing techniques. During the pre-industrial revolution, work was piecemeal and task-based. Employment relations were pursued in line with international standards and decent work agenda. However, waves of globalization facilitated the unbundling of production and consumption to take advantage of price differentials between countries. Unbundling involved trade and, later, the relocation of firms from the Global North to the Global South to capitalize on low-cost labor.

As ICT became more sophisticated, unbundling of labor and services became possible. Due to its English-speaking workforce, the Philippines became an outsourcing destination in the early 1980s and has become a Business Process Outsourcing hub since then. However, the 2017 Annual Survey of Philippine Business and Industry indicates that around 68% and 13% of the total employment in IT-Business Process Management (IT-BPM) is involved in customer relationship management activities and sales/marketing, respectively, and only around 6% and 2% in activities related to computer programming and computer consultancy/computer facilities management, respectively.

Further innovations ushered platform work that breaks down jobs into simple tasks and takes advantage of a global talent pool. Once again, Filipinos were quick to grab these opportunities. Dubbed modern-day Overseas Filipino Workers, platform workers are growing in number and bringing jobs to their communities. Evidence, however, indicates that a small fraction of

Filipino online workers (14%) are into software development and technology and a large fraction perform creative and multimedia tasks (43%) and clerical and data entry (25%) (Bayudan-Dacuycuy et al. 2020a). These jobs were severely affected by the pandemic and not as resilient as jobs in software development and technology (Stephany et al. forthcoming). The government recognizes the potential of the platform economy in employment generation. Thus, there are State-led training programs on digital competencies like the DICT's DigitaljobsPH and TESDA's Go Digital ASEAN program. However, fundamental issues remain. Slow or no internet connectivity in some areas impedes people from fully harnessing platform opportunities.

2.2 On the e-commerce front

Technological advancements have paved the way for better visibility and a wider enterprise client base. The pandemic has pushed the envelope of the retail sector by pushing businesses to join online marketplaces. Indeed, e-commerce in the country is projected to be at 15 billion US\$ in 2025, although this is smaller than in Indonesia, Vietnam, and Thailand². In 2021, a large portion of the total retail sales value is found in apparel/footwear, consumer electronics, food/drinks, and media products³.

A survey conducted by the International Finance Corporation (2021) indicates that around 70% of Filipina sellers in Lazada, a major platform in Southeast Asia, are classified as microenterprises. Micro and small enterprises face challenges in financing and human capital resources that can prevent them from making strategic investments in people and infrastructures. Women sellers are also more likely to use social media platforms to complement their e-commerce activities. These platforms have provided free spaces for entrepreneurs for advertising and marketing.

² Source of data: Statista, accessed on September 19, 2022.

³ Source of data: Statista, accessed on September 19, 2022.

2.3 On the human capital front

One of the biggest driving forces of Philippine Economic Development in the colonial period was the country's access to the US Market, which was an advantage for the Philippines versus its Asian neighbors (Sicat 2021). Public education was free from the primary to the high school level. Religious schools introduced by the colonial authorities pushed for better teacher training for various skills such as linguistics and social and science studies. Investments in public health were prioritized. Due to these investments, the Philippines produced a more educated workforce that could thrive on evolving economic conditions and opportunities. At the dawn of its independence, the Philippines was among the best-performing countries in Southeast Asia.

However, some policies pursued in response to earlier external and local developments were not conducive to human capital development. The export-oriented industrialization strategy pursued in the early 1970s was focused on attracting investments through incentives. Multinational firms, mostly involved in the lower portion of the value chain, brought their businesses into the country. Thus, jobs created offered little or no technology transfers and domestic linkages. In addition, the country started the deployment of workers abroad in the early 1980s, a practice that persists to this day. While the workers' exodus enhanced foreign exchange inflows and fueled domestic consumption, the country was deprived of experts and professionals who could greatly contribute to nation-building.

The current industrialization strategy, however, has more inclusive approaches. Two out of the six priorities of the DTI's Inclusive Innovation Industrial Strategy (i3S), for example, are targeted at upskilling and reskilling the workforce with digital skills. It prioritizes the development of more complex non-voice services in BPO and Knowledge Process Outsourcing in medical, financial, and legal services; game development; engineering services outsourcing, software development, and shared services (DTI 2017).

In the mid-2022, the PSF Initiative (PSFI), a collaboration of various government agencies, including the DTI, Philippine Trade Training Center-Global MSME Academy (PTTC-GMEA), and the Technical Education and Skills Development Authority (TESDA), was launched. It follows the Singapore's SkillsFuture Initiative in mapping industry information to provide its citizens with information sets on career pathways and reskilling options. Currently, the PSFI is mapping skills for priority sectors such as construction, creatives, food (agriculture and fishery), health and wellness, IT-BPM, logistics, supply chain, manufacturing, and tourism.

On the basic education front, the major reform came from implementing the Enhanced Basic Education Act of 2013, also known as the K-12 curriculum. This reform increased the years for basic education from ten to twelve, adopted the mother tongue-based instruction up to Grade 3, and introduced a new award and recognition system, among others. However, the K-12 implementation was not smooth-sailing, as personnel grappled with issues on the mother tongue as a medium of instruction for the first three years of primary education and on teaching in a spiral progression. The current administration is considering a shift to English as the medium of instruction.

Despite continuous reforms, metrics indicate mixed progress. The country has been identified as a legacy country with a strong production base and is at risk in the future because of weak performance in different fields that thrive in future industries such as the ICT, global trade and

investment, human capital, and demand environment (World Economic Forum 2018). Based on the 2022 Human Development Index, the Philippines has high human capital development and is on equal footing with Indonesia. It is behind its affluent neighbors like Singapore, Malaysia, Brunei Darussalam, and Thailand, however. In addition, the 2021 Human Capital Index indicates that children born today will only achieve half of their potential (World Bank 2021).

Test scores from various assessments, including the 2018 PISA, 2019 Trends in International Mathematics and Science Study, and 2019 Southeast Asia Primary Learning Metrics, put the Philippines at the bottom of the score distribution. These low test scores partly result from inadequate investment in learners (Albert et al. 2021). Evidence indicates that the share of education spending on the country's GDP has increased from 2015 to 2019, and public spending (3.1% in 2019) is still below the 4-6% benchmark set by the Education 2030 Incheon Declaration (Abrigo 2021). Public spending is critical since gaps in education outcomes are also driven by the income divide. This is supported by data showing that private schools are meeting the expected scores despite inadequate support and funding (Orbeta and Paqueo 2022).

The human development crisis needs a multifaceted approach. Aside from education reforms, healthcare programs and skills development should also be reinforced. According to Haas (2006), a growing body of research suggests an important role of early-life health in shaping educational and socioeconomic trajectories. Previous research has found that poor health adversely affects various educational outcomes.

On the nutrition front, the country continuously battles health-related problems, including chronic malnutrition, stunting, and nutrient deficiencies. The annual reduction of stunting prevalence is 0-1% from 2000-2015, even when the GDP per capita has increased by 3-4% per year during the period (World Bank 2021). About 37 in 100 children aged 12–23 months old were affected by stunting in 2018. Evidence also indicates disparities in health outcomes along income divides. In 2015, about 49% of children in the bottom 20% of the population were stunted, compared to 14% in the top 20% (UNICEF 2021).

On the skills front, there were telling signs of the country's problematic human capital development. One such sign is the quality of its export portfolio, which reflects its production capabilities, including its physical and human capital infrastructures (Hausmann et al. 2007; Hidalgo 2009). Indeed, evidence from the product space from 1995 to 2014 indicates that the sophistication of the country's export basket was low (Bayudan-Dacuycuy and Serafica 2019).

In addition, on-demand jobs in the country require basic skills, while hard-to-fill jobs require analytical skills (Bayudan-Dacuycuy and Dacuycuy 2021). These patterns reflect two key issues: a job creation that leverages its workforce strength and a workforce ill-equipped to take on high value-adding jobs. These could feed into a vicious cycle of low skills attracting investments that are after low-cost labor and the proliferation of jobs that do not develop high value-adding skills. These do not bode well, given that ICT advancements have widened skills segmentation in the labor market. For example, coding and programming skills are needed in data science and web/game development, while basic skills are needed as shoppers and riders in the booming on-demand work. Geographical factors also manifest skills segmentation, with the NCR and CALABARZON as prominent examples of a skills gap. The highest proportion of workers involved in jobs that use social, fundamental, analytical, and management skills are in NCR, while CALABARZON holds the greatest number of workers engaged in occupations applying mechanical skills (Bayudan-Dacuycuy and Dacuycuy 2021).

4. Synthesis of qualitative data and desk review

4.1 Labor platforms

Capacities

Several State-led initiatives and programs are strengthening physical and human capital infrastructures needed in platform work.

- Government agencies such as the DTI, DepEd, TESDA, and DICT have launched programs that support (directly and indirectly) platform work. In terms of the physical infrastructure, Technology Empowerment for Education, Employment, Entrepreneurship, and Economic Development (Tech4ED) is a shared facility that provides communities access to ICT. As of 2019, there are 3381 centers in all provinces, 85% of cities, and 51% of municipalities nationwide; 54% are in Luzon, 14 % in the Visayas, 29% in Mindanao, and 3% in NCR⁴. Tech4ED centers are concentrated in Bicol (17%), CALABARZON (11%), and Central Luzon (9%). ARMM and CAR have the lowest percentage (2%), followed by NCR, Eastern Visayas, and Cagayan Valley (3%).
- Digital Cities 2025 has designated 25 cities envisioned as growth centers and spur investments beyond the NCR.
- DigitaljobsPH and Go Digital ASEAN Initiative are related to improving the digital skills and competencies of enterprises and individuals.

New business models that leverage digital platforms to bring together markets for tangible goods, non-tangible goods, and labor have paved the way for stronger legislative agenda on digitization.

- Several bills are filed in Congress that can help Filipinos harness the full potential of a digital economy, including HB 6926 (National Digital Careers Act), SB 1834 (Philippine Digital Workforce Competitiveness Act), HB 6874 (Digital Philippines Act), HB 7049, HB 7153, SB 1470 (National Digital Transformation Act). These aim to promote measures and strategies to improve digital competence, 21st-century skills, and digital careers, implement digital skills training programs, conduct skills mapping, provide scholarships, and pursue public-private partnerships.

A vibrant community of crowdworkers supports new and existing platform workers through training initiatives and sharing information on tools and resources.

- The Filipino Online Professional Service Cooperative is a community of people involved in crowdworking/freelancing as workers, trainers, and entrepreneurs. It provides support through coaching/mentoring and leadership training programs. Members belong to the talent pool that more experienced members tap into when getting additional help delivering tasks. This substantially helps new members since platform experience is critical in securing future platform jobs.

⁴ PowerPoint Presentation (psa.gov.ph)

- Filipino Homebased Moms is a social enterprise empowering mothers through online work and entrepreneurship. It provides a platform for learning for home-based mothers. It also provides support through its rent-to-own computers and the *Wifi para kay Nanay*. In 2021, its digital services agency started to bring mothers economic opportunities by linking crowdworkers to its business networks and corporate linkages.
- Virtual Workforce Professionals (VWP) is an agency that gets jobs from Upwork, a crowdsourcing platform that leverages the global talent pool. VWP provides jobs to graduates of the DigitaljobsPH training, who are absorbed as independent contractors first but eventually become regular employees. Unlike a business process outsourcing firm that locates in economic zones and digital cities to avail of subsidies and tax discounts, VWP taps talents in the countryside.

Gaps

Despite various State-led human capital development initiatives, critical barriers to participation in platform work, especially by those in the countryside, remain.

- Obstacles to fully harnessing online opportunities exist, like low internet connectivity and high equipment cost. While access to these infrastructures is available through the Tech4ED Project, going to these facilities entails additional costs, especially for people in remote areas.
- ICT infrastructure improvements are underway. However, data indicate digital-spatial divides. Based on the 2020 Annual Poverty Indicators Survey, only 28.8% of families from rural areas have used the Internet in the past six months, and all regions, except NCR and CALABARZON, have less than 50 % of families that used the Internet in the past six months (PSA 2021). While 92.3% of households have electricity in rural areas, only 14.6% own a personal computer, and 7.2% have a broadband internet subscription. These are lower than urban households at 96.6%, 29.1%, and 21.6%, respectively. With respect to 4G access, around 60.6 % of Filipinos have access, although disparities among the regions are evident. NCR (94.2%) and Region III (80.3%) have the highest percentage of households with mobile connectivity, while BARMM (15%) has the lowest.
- Platform work is not for everybody. Some are successful and have evolved into entrepreneurs that bring jobs to their communities. Some are struggling due to inadequate confidence and weak communication skills. Some DigitaljobsPH trainees never secured a platform job and pursued work in the traditional work arrangement instead.
- Some LGUs do not choose the more technical DigitaljobsPH training, like web development, because it entails additional costs to participants (e.g., domain hosting).

While platform work is generally known to have low barriers to entry, some platforms have become stricter in their requirements for registration and securing jobs.

- Upwork, for example, despite successful registration and validation, requires niche skills and accredited certification like the International English Language Testing System English Proficiency Exam. It also requires “connects”⁵⁵ before workers can start bidding for a job.

⁵⁵“Connects” are akin to Facebook’s feature of adding a friend.

Many Filipino platform workers are involved in low value-adding jobs.

- Based on the Online Labor Index, workers in major English-speaking platforms are involved in clerical and data entry, a result corroborated by findings from the 2020 PIDS Online Survey of Market and Non-Market Work. Meanwhile, recent data indicate that sales and marketing, customer service, and data entry make up 32%, 21%, and 20% of the total traditional freelancing work, respectively (Payoneer and GCash 2022).
- Local platforms or international platforms that specifically hire workers from the Philippines put a premium on experiences in the BPO, especially for projects requiring good communication skills.

Social protection has yet to keep up with the proliferation of non-standard work arrangements like platform work.

- Work has become fluid, with workers moving in and out of different types of work. Thus, social protection must be portable and flexible. This is important since some workers view premium payments as taxes that reduce their take-home pay.
- Clients mostly come from the Global North. Since transactions cross borders, national laws and regulations cannot be enforced. Thus, workers are independent contractors without benefits or entitlements.

Some workers with long experience in platform work indicate that some credentials, considered by the traditional labor market to be important, are not necessarily required to start a platform stint.

- A college education is not a requirement to thrive or succeed on platforms.
- Some clients do not require good communication skills, especially when tasks involve technical skills like web/game development and programming/coding or low value-adding tasks like clicking or encoding.
- Grit, patience, courtesy, and professionalism are skills that clients value more. Some stakeholders shared that clients prefer Filipino workers due to these attributes. This is corroborated by Payoneer and GCash (2022), citing familiarity with outsourcing and a culture of hard work as some of the reasons why Filipinos enjoy opportunities in online marketplaces.

Some workers indicate satisfaction with their platform stints. This is because they know what to expect from the work.

- Some charge higher rates to factor in their contributions to their social security funds, and they voluntarily pay for their social protection and taxes. However, some expressed difficulties navigating the legal and regulatory requirements. These can be confusing and burdensome (Serafica and Oren 2022).

Barriers

A gender gap exists in the participation in various opportunities in the digital economy because of age-old gender roles.

- Women’s labor force participation is tied to care work and gendered roles, regardless of where work is performed (e.g., work in the traditional labor market or platform work). Women participate in platform work due to its flexibility, while men participate due to monetary rewards.

There is no gender pay gap in labor platforms if personal and platform attributes are controlled.

- The analysis of unconditional means indicates that men earn more than women.
- However, the analysis of conditional means indicates no statistical difference between the male and female’s compensation/hour, and this is true across different assumptions in the workers’ and platform-related attributes (Bayudan-Dacuycuy and Baje 2021). This result is consistent with findings abroad.

Despite some successes, entrepreneurial crowdworkers have raised concerns about their local business environments.

- Compliance with regulatory and legal requirements can be burdensome. They are classified differently and have to file different forms depending on whether they are self-employed or mixed-income earners, with the latter needing to file and pay local and national taxes.
- Some requirements of the BIR, such as issuing receipts, do not apply to platform work since platforms have automatic invoicing facilities.
- Transaction costs related to the provision of the necessary social protection for their workers may also take time away from growing the business.
- Crowdworkers want recognition from the government. Some shared that they run into trouble with immigration when going out of the country. They do not have employment certification, and the certificate of earnings issued by platforms is not recognized.

4.2 Retail platforms

Capacities

There are State-led programs for enhancing the MSME’s management and labor capabilities.

- These include the DTI’s development of various technology tools and solutions related to online market spaces, free webinars to enhance the digital competencies of MSMEs via the CTRL+BIZ: Reboot Now!, and coaching and mentoring via the Go Negosyo’s Mentor ME⁶.
- The DigitaljobsPH also includes MSMEs as training beneficiaries. Its first phase provided a venue for collaboration for MSMEs and practical knowledge in creating digital campaign strategies. Through the project, 381 websites were developed for MSMEs and generated more than P10 Million in revenue (DICT, 2020).

Non-bank financial intermediation services have facilitated payments on online marketplaces.

- Freelancers primarily use GCash to receive payments for products and Payoneer to receive payments from overseas clients (GCash and Payoneer, 2022).

⁶ See <https://www.dti.gov.ph/covid19/assistance/> for complete list.

State-led initiatives for fintech infrastructures help online marketplaces/retail platforms develop and thrive.

- On the fintech front, the BSP launched the PESONet and InstaPay in 2017 and 2018, respectively, to enhance interoperability among banks and other online payment solutions. Instapay is a low-value electronic fund transfer service that enables customers with accounts in participating banks and eWallets to send or receive funds⁷. Consumers, for example, can cash in their eWallets, such as GCash, using their bank account. In turn, these eWallets are facilitating financial transactions like the payment of bills, credit cards, online purchases, tax, and government insurance. PESONet is an electronic fund transfer service that enables businesses, the government, and individuals to pay or transfer funds from their accounts to other participating financial institutions and electronic money issuers⁸.
- These ecosystems of diverse payment channels, such as credit cards, eWallets, online banking, and over-the-counter transactions, have helped businesses to attract online shoppers/clients and to continue their operations during the pandemic. The BSP's approval of the operations of a Singapore-based fintech as a digital bank in the Philippines in 2021 also increases Filipino financial inclusion⁹.

There are bills aiming to help small enterprises in the online space.

- These include one that seeks to institutionalize the Mentor Me Program for Micro and Small Enterprises (HB 747, HB 2606) and another that seeks to establish a National Commission on Entrepreneurial Education (HB 8491).
- HB 7698 (Online Small Enterprise Support Services Act) seeks to help small online businesses to get cheap loans from government banks and free training from TESDA.

Gaps

The ongoing pandemic has prompted businesses to shift to digital solutions such as using online payment platforms, online advertisements, and online selling on social media or established e-commerce platforms like Shopee and Lazada. There are challenges, however.

- Businesses new to e-commerce or not financially capable and technically equipped to invest in connectivity, software, equipment, and devices for digital solutions are likely to struggle in the new normal. These are likely to be true for micro and small enterprises.
- Fraudulent online schemes have also increased during the pandemic. Sellers grapple with fake deposit slips as proof of payment and fake bookings. Consumers deal with fake or defective products, deceptive/unfair/unconscionable sales practices, poor customer service, and false advertising. Indeed, in the aggregate, evidence shows that 44% of the Filipino survey respondents had been targeted by digital fraud. Among these targeted consumers, 40% indicated to have encountered phishing and 31% third-party seller scams (TransUnion, 2021).

⁷ See https://www.bsp.gov.ph/PaymentAndSettlement/FAQ_Instapay.pdf for more details

⁸ See https://www.bsp.gov.ph/PaymentAndSettlement/FAQ_PESONet.pdf for more details

⁹ See <https://business.inquirer.net/324433/bsp-oks-digital-bank-license-for-singapore-based-fintech#ixzz6xLb1CMFz>

- Skills development in branding, marketing, and advertising are needed to help small businesses create an impactful online presence. In addition, skills development in management is needed to craft initiatives that will aid their growth and create new markets for their products and services.

The access of businesses to information on government-led initiatives is lacking.

- Businesses have difficulty accessing information on the benefits of the State-led COVID-19 programs (see International Trade Centre 2020). This is validated by members of some business associations, indicating they became aware of some COVID-19 assistance to MSMEs only after their leaders shared relevant information.

The effects of some gaps on successful participation in online marketplaces have also been quantified.

- Based on Bayudan-Dacuycuy and Dacuycuy (2022): 1) sellers without facilities for stable online transactions earn two times lower than those with stable Internet connections, 2) sellers of financial products/services earn 14-18 times as much as those selling travel-related products, 2-7 as much as those selling professional services or foods, and 5-7 times as much as those selling software products, and 3) sellers who lack awareness of cybersecurity and are not proactive in reporting cybercrimes have lower incomes as well.

Barriers

Access to financing remains an issue among micro and small enterprises.

- Many women-owned businesses participating in a major retail platform in the Philippines are classified as microenterprises (International Finance Corporation, 2021). These businesses typically have limited assets and cash flows, preventing them from pursuing innovation and digital adoption.

Those who participate on retail platforms have characteristics that contribute to lower earnings.

- Some people participate in online selling to earn while waiting for better opportunities, and these individuals may lack commitment and have a lower investment appetite and tolerance for risk (Bayudan-Dacuycuy and Dacuycuy 2022).
- While e-commerce platforms have bridged the gaps between customers and sellers, especially during the COVID-19 lockdowns, startups and MSMEs who joined platforms such as Shopee, Lazada, and Foodpanda have endured reduced profits and paid for additional costs that affected the sustainability of their businesses (Li et al., 2020).

A gender gap in income from e-commerce exists.

- Evidence indicates gendered disparities in income from online marketplaces, with male sellers earning more than women. Skills also have roles to play in the income differential. For example, research skills favor male sellers more than their female

counterparts, while clerical, social, or technical skills benefit female sellers more than their male counterparts (Bayudan-Dacuycuy and Dacuycuy 2022).

5. Ways forward

Bridging Gaps

Ensure that initiatives and programs do not widen inequalities. Specifically, state-led initiatives should be reinforced, evaluated, monitored, and promoted well by the agencies involved, including the DICT, TESDA, DPWH, DepEd, and CHED, among others. To do this, there is a need to

1. Enact the Rural Wired Connectivity Act to encourage ICT investments in rural areas. This helps eliminate rural-urban divides in ICT access and, thus, fosters more inclusive ICT developments.
2. Sustain infrastructure support to micro and small enterprises. Strengthen their awareness of alternative financing schemes like crowdlending. Establish a MSMEs credit risk database to facilitate a more efficient and reliable assessment of credit risks. This reduces the transaction costs of banks and borrowers and enhances the enterprises' access to financing.
3. Empower social enterprises, cooperatives, associations, and groups. These entities help their members connect with other business networks and other players in the supply chain. These also help their members access information on markets, resources, tools, and State-led assistance. Thus, these entities are well-positioned to help policymakers since they have firsthand information about their sector's strengths and needs.

Social protection needs to evolve with work that has become fluid and with workers that have become mobile. There is a need to encourage the self-employed, including platform workers, to contribute to social protection funds such as PhilHealth and SSS. To do this, there is a need to

1. Simplify registration, payment, and claims, which can be done by setting up a one-stop online platform.
2. Target promotion and protection. Designing an unemployment insurance with upskilling and reskilling benefits and including a social protection module in skills and training programs for platform workers can be explored.

Breaking Barriers

Retail platforms provide avenues for entrepreneurs to expand their client base. Given some barriers, there is a need to

1. Develop a curriculum that integrates gendered perspectives, which can help improve awareness of gendered differences in expectations and prospects in online marketplaces. Given the role of skills in gendered disparities in income from retail platforms, formal institutions can foster a better environment to improve women's entrepreneurial skills. Efforts to mainstream gendered perspectives in the entrepreneurial curriculum will enhance the learners' sensitivity to gendered expectations and prospects in the marketplaces and help shape the learners' efforts towards achieving their goals in such spaces (Bayudan-Dacuycuy and Dacuycuy 2022).

2. Strengthen efforts towards financial inclusion. Financial literacy is as important as getting the unbanked population onboarded to formal financial institutions.
3. Strengthen confidence in the online market space. Trust is eroded when fraud and scams are committed in the online market space. Thus, it is imperative to strengthen cybersecurity, protect confidential information, and put penalties for fraudulent behavior in place. Cybersecurity and digital literacy among MSMEs should be reinforced because they are likely to be targets of cyberattacks due to the lack of knowledge, necessary resources, and security policies (Karr et al. 2020). Thus, there is a need for increased awareness among stakeholders on cybersecurity and digital literacy to reduce potential risks and threats.

Building Capacities

Skills are important regardless of the nature of the work. Platform work and work in the traditional setting require similar sets of skills. Thus, it is imperative to focus on building portable skills across platforms and work arrangements. To do this, there is a need to

1. Convert the Philippine Skills Framework Initiative into an accessible online resource and tool. Currently, this skills mapping is available only in a portable document format. Translating the rich information in the document into an information system like the SkillsFuture in Singapore and O*NET in the U.S. will guide a wider audience, including individual job seekers who wish to upskill, reskill, or shift careers.
2. Maximize available resources by taking stock of various government-led training programs on digital literacies and competencies, evaluate overlaps and complementarities, and design a unified work plan. In addition, information campaigns to raise awareness on state-led initiatives, freeware, and other publicly accessible resources related to platform work must also be implemented.
3. Develop a school curriculum that is adaptive to the industry needs and changes; subjects that enhance digital competencies, digital citizenship, technological management, and entrepreneurship must be reinforced. Incorporate digital economy in the current K-12 curriculum, particularly in the ICT and economics subjects, to raise awareness, reduce ambiguities, and build trust in the industry. Industry practitioners should be tapped as teachers/formators to maximize learning and prepare students for the real world. For example, digital economy developments and platform work can be included in the senior high school curriculum's Media and Information Literacy, Entrepreneurship, and Applied Economics subjects. On the other hand, skills needed for platform work can be formed through ICT subjects.
4. Introduce platform work as a career option to K-12 students. Employment trends are affected by the disruptive change brought about by the Fourth Industrial Revolution. Platform work should be introduced properly to students and a decent career option. Incorporating information on platform work in the current K-12 curriculum, particularly in ICT subjects or during career orientation activities, would be a promising step to raise awareness.

With respect to e-commerce and online marketplaces, it is imperative to create resilient and competitive enterprises. To do this, there is a need to

1. Equip micro and small enterprises with knowledge and technical know-how in creating product and service portfolios suitable and adaptable to the market's needs. Skills

needed to create an impactful online presence, such as digital literacy and competencies in marketing and advertising, will help businesses become more competitive in online marketplaces. In addition, skills needed in management for strategic planning and finding market niches will help enterprises to respond immediately to the challenges and opportunities presented by shocks and disruptions.

2. Develop training materials in collaboration with technology companies like Facebook and Google and online marketplaces like Lazada, Payoneer, and Shopee.
3. Ensure that training programs are relevant, effective, and updated. Programs and training modules designed to increase digital competencies should undergo evaluations through pretest and posttest (Seráfica and Oren 2022). In addition, clear outcomes and monitoring of such add value in designing and implementing future training programs.

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