Initiatives to Measure the Size of Gig Workers and Online-related Occupations in the Philippines Using the Labor Force Survey

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Abstract

In recent years, "gig workers" and online-related occupations have been fast growing given the recent growth of technology-based businesses and availability of freelance and part-time work, it even grew exponentially since the onset of the COVID-19 pandemic because of the flexibility of work arrangements and the workers who lost their full-time jobs began undertaking temporary, or freelance jobs to sustain or afford their needs.

As the economy starts to embrace the new normal, even in workplaces, there is a need to have information about the nature and magnitude of gig work characterized by short-term employment and workers for different employers on a day-to-day or week-to-week basis. The information on the size of "gig workers" is crucial in labor market policy and regulatory purposes.

However, while there were concerted efforts from the policymakers and researchers in providing information on the nature of the gig economy, to our knowledge, conceptual or operational definitions and identification of occupational classification of gig workers vary across countries. Hence, the estimation of the size of the gig workers was incomparable among countries.

In response to the call for statistical information on the size of gig workers in the Philippines, we developed criteria for gig workers based on the nature of employment available in the Labor Force Survey (LFS). With the notion that gig workers were most likely engaged in digital labor platforms, we also supplemented questions related to the online-related occupations in the May and June 2021 rounds of the Labor Force Survey (LFS) to capture the gig workers engaged in digital labor platforms.

The average results of the May and June 2021 rounds of the LFS showed that 20 percent (8.7 million employed persons) of the 44.3 million employed labor force were engaged in an online platform and mobile application in the Philippines. Meanwhile, out of the total employed persons on average, 22 percent (9.9 million employed persons) were gig workers or workers in short-term/seasonal or worked for different employers on a day-to-day or week-to-week basis. Notably, of the total 9.9 million gig workers, 68 percent (6.7 million persons) were employed in private establishments, 22 percent (2.1 million) were self-employed, 6 percent (584 thousand persons) worked for private households, and 5 percent (463 thousand persons) worked for the government. In terms of engagement in digital labor platforms, of the total 9.9 million gig workers, 17 percent (1.7 million gig workers) were engaged in online platforms or mobile applications in their work. However, it is to be noted that the share of gig workers engaged in digital labor platforms in their work to the total employed persons was lower with four (4) percent share of the total employed persons in the Philippines.

To have a better understanding of the sizing up of gig workers and online-related occupations in the Philippines using the Labor Force Survey, this paper defined the scope and coverage of the universe under study and developed criteria to measure the size of gig workers and gig workers engaged in digital labor platforms. This paper further investigated the nature of gig workers by looking at their demographic and socio-economic characteristics.

Keywords: Gig workers, online-related occupations, digital labor platforms, short-term employment

I. Introduction

In recent years, several academicians, researchers, policymakers, and international organizations have shown great interest in understanding the so-called “gig workers” and online-related occupations for policy and regulatory purposes.

The International Labor Organization (ILO), for example, called for policies and measures that would regulate the “gig” or platform economy to achieve full and productive employment and decent work for all (ILO, 2021, p.10). Likewise, one of the National Economic and Development Authority (NEDA)'s major legislative agendas included in the Updated Philippine Development Plan (PDP) 2017-2022 was the approval of the National Digital Career Act. The said Career Act would help expand the economic opportunities in the service sector by establishing the legal framework for the gig economy (NEDA, 217-2022). Moreover, one of the Department of Labor and Employment (DOLE)’s concerns is to achieve decent work for all. Artajo and Mones (2021) of the Institute of Labor Studies (ILS) of DOLE studied the decent work situation in the Philippines. They posited that while the platform economy has potential for employment opportunities for all, independent workers give rise to decent work gaps.

Several academicians also raised concerns about studying the so-called gig economy. Soriano C.R (2021) recommended that it would be more viable for the government to regulate gig workers if there is a workable monitoring system for online platform labor. She also added that by having a monitoring system, the government could facilitate training related to online jobs, which could eventually improve the working conditions of workers. Likewise, to better understand the gig economy, Mia and Habaradas (2020) recommended defining the "gig economy"; studying the freelancers' profile by age, gender, and skillset, and identifying the industries that generate gig workers, among others. According to Esguerra (2019), while the Labor Force Survey has a limitation as a source of data on the gig, he referred gig economy as a non-standard or an alternative employment arrangement.

However, while there were concerted efforts from the policymakers and researchers in providing information on the magnitude and nature of the gig economy, to our knowledge, conceptual or operational definitions and identification of occupational classification of gig workers varies across countries. Hence, in response to the call for statistical information on gig workers in the Philippines, the Philippine Statistics Authority (PSA) conducted a pilot study on capturing and measuring the size of online-related occupations and gig workers using the Labor Force Survey (LFS).

The objective of the pilot study was to develop criteria for measuring the size of gig workers, online-related occupations, and the gig workers who were engaged in digital labor platforms in the Philippines using the LFS. Following several works of literature and studies, we proposed the inclusion of questions in the LFS related to the engagement of household members on digital labor platforms. We also examined the socio-economic characteristics of gig workers based on the available variables in the LFS.

The paper is organized as follows: Chapter 1, includes the introduction; research objectives, and limitations of the study. Chapter 2 includes the review and synthesis of related studies. This paper contributes to the body of literature by providing a synthesis of reviewed studies as to how the size of gig workers and online-related occupations are being measured. Chapter 3 is the research methodology, discussion of the proposed rider questions in LFS, the definition of the universe of the study, and criteria in sizing up the gig workers, online-related occupations, and gig workers who used digital platforms. Chapter 4, includes the presentation and discussion of statistical results on the size of gig workers, online-related occupations, gig workers who are engaged in a digital platform, and characteristics of gig workers by sex, age group, education (highest grade attainment), and by Industry. Chapter 5. Includes ways forward and policy recommendations.

II. Review of Related Studies

A. Concepts and Definitions

According to the International Labor Organization (ILO), the term “gig” was similar to the platform economy, which is composed of digital labor platforms categorized as online web-based platforms and location-based applications (ILO, 2021). An online web-based platform was a platform used to outsourced work through an open call to a geographically dispersed crowd "crowdwork"—workers were dispersed in different geographic areas connected with employers using an online platform, i.e., Upwork, Fiverr (ILO, 2021). On the other hand, a location-based application is an application that allocates work to individuals in a specific geographical area—individuals who typically perform local, service-oriented tasks such as driving, delivery and home services (such as a plumber or electrician), domestic work like running errands or cleaning houses and care provision, i.e., Delivery Platforms: Lalamove, Food Panda, Pickaroo; Taxi Platforms: Grab Car, Toktokgo.

Likewise, Woodcock and Graham (2020) regarded the ‘gig economy’ as labor markets that were characterized by independent contracting that happens through, via, and on digital platforms. They described the kind of work in the gig economy as contingent, with variable hours, involving payment on a piece-work basis.

Similarly, World Bank (2019) viewed the term “gig economy’’ as a state “in which organizations contract with independent workers for short-term engagements”.

Likewise, Schwellnus C. et al. (2019) also viewed the Gig economy platforms as two-sided digital platforms that match workers on one side of the market to customers (final consumers or businesses) on the other side on a per-service "gig" basis. Based on their study, the following were the occupations with platform presence:

Unit Group	OCCUPATIONAL DESCRIPTIONS
1221	SALES AND MARKETING MANAGERS
2166	GRAPHIC AND MULTIMEDIA DESIGNERS
2221	NURSING PROFESSIONALS
2264	PHYSIOTHERAPIST
2359	TEACHING PROFESSIONALS NOT ELSEWHERE CLASSIFIED
2411	ACCOUNTANTS
2431	ADVERTISING AND MARKETING PROFESSIONALS
2511	SYSTEMS ANALYSTS
2512	SOFTWARE DEVELOPERS
2514	APPLICATIONS PROGRAMMERS
2519	SOFTWARE AND APPLICATIONS DEVELOPERS AND ANALYST NOT ELSEWHERE CLASSIFIED
2642	JOURNALISTS
3221	NURSING ASSOCIATE PROFESSIONALS
3313	ACCOUNTING ASSOCIATE PROFESSIONALS
3323	BUYERS
3511	INFORMATION AND COMMUNICATIONS TECHNOLOGY OPERATIONS TECHNICIANS
4311	ACCOUNTING AND BOOKEEPING CLERKS
4312	STATISTICAL, FINANCE AND INSURANCE CLERKS
5141	HAIRDRESSERS
5142	BEAUTICIANS AND RELATED WORKERS
5151	CLEANING AND HOUSEKEEPING SUPERVISORS IN OFFICES, HOTELS AND OTHER ESTABLISHMENTS
5221	SHOPKEEPERS
5311	CHILD CARE WORKERS

Unit Group	OCCUPATIONAL DESCRIPTIONS
5321	HEALTH CARE ASSISTANTS
5322	HOME-BASED PERSONAL CARE WORKERS
7126	PLUMBERS AND PIPE FITTERS
7131	PAINTERS AND RELATED WORKERS
7411	BUILDING AND RELATED ELECTRICIANS
7412	ELECTRICAL MECHANICS AND FITTERS
8322	CAR, TAXI AND VAN DRIVERS
9111	DOMESTIC CLEANERS AND HELPERS

Note: Schwellnus C. et al., (2019) used ISCO 2008 in coding the Platform presence by occupation. In this paper, we provided the corresponding code using the 2012 Philippine Standard Occupational Classification

Source: Schwellnus C. et al., (2019)

BLS (2018), on the one hand, regarded gig work as "electronically mediated work" or "online platform work. BLS (2018) modified the Contingent Worker Supplement Survey to measure the gig work as follows:

> *"workers who a) use a company's website or mobile app to connect to clients or customers and obtain short jobs, projects, or tasks; b). paid by or through the company that owns the website or mobile app; c). choose when and whether to work; and d). may do the short jobs, projects, or tasks in person or online. Contingent Worker Supplement is a set of questions that has periodically been appended to the nation's monthly labor force survey"*

Torpey and Hogan (2016) of the United State Bureau of Labor Statistics (BLS), regarded the Gig workers as contingent or alternative employment arrangements, or both, and defined them as follows:

> *"contingent workers were those who don't have an implicit or explicit contract for long-term employment. Workers in alternative employment arrangements were those independent contractors (also called freelancers or independent consultants), on-call workers, and workers provided by temporary help agencies or contract firms"*

Using the 2018 Labor Force Survey conducted by the Department of Statistics Malaysia (DOSM), Harun et al. (2020) also estimated the size of gig workers. Harun et al. (2020) defined gig workers as employed persons in primary jobs with respect to the status in employment (employees & own account workers), hours worked [Employees who worked less than 30 hours per week (part-timer); Own account workers with all hours worked], and occupation who were categorized as free-lancers and technology-based.

Caro et al. (2021) measured the prevalence of gig workers among the employed population, by country in Europe. They included questions in a survey about whether respondents worked in (or searched for) online platforms through which they provide services from their home, online platforms providing local services, or online platforms connecting people who need transport with a car and driver. They also categorized gig workers as full-time (the ones who report doing gig work every day) and part-time (those who do not do gig every day). They found that gig workers in Europe ranged from 8.1 percent in the Netherlands to 27.9 percent in Italy.

B. Synthesis of Related Studies

While there was no standard definition of "gig economy" and "gig workers" across countries, to our findings, there was one way or another a little comparison in the scope and coverage being studied. Several studies described gig workers as "contingent" or in "alternative employment arrangements" who are most likely engaged in an "online platform". However, while several "contingent" or "alternative employment arrangements" were engaged in digital labor platforms, there were still workers whose nature of employment

is short-term or who work for different employers on a day-to-day or week-to-week basis were not engaged in an online platform or mobile application to perform tasks or jobs.

In this study, offline contingent workers were considered gig workers because the term is also defined as a per-service ("gig") by (Schwellnus C. et al., 2019) and (Woodcock and Graham, 2020).

To capture the gig economy" and gig workers, several questions were added to the Labor Force Survey. Table 1 shows the data items added in the LFS to capture the gig workers.

Table 1. Questions or Data Items Included in the Labor Force Survey to Measure Gig Worker

Country/ Proponent	Questions/Data Items Included in LFS	Estimate
United States Current Population Survey staff US BLS 1995, 1997, 1999, 2001, and 2005	Contingent Worker Survey (Contingent jobs) - Alternative employment arrangements: independent contractors, - on-call workers, - temporary help workers, and - contract company workers.	
United States Current Population Survey staff (2018) of U.S. BLS	Contingent Worker Supplement (CWS) - is a set of questions that has periodically been appended to the nation's monthly labor force survey, the Current Population Survey (U.S. BLS, 2018) Q1 *Some people find short, IN-PERSON tasks or jobs through companies that connect them directly with customers using a website or mobile app. These companies also coordinate payment for the service through the app or website.* *For example, using your own car to drive people from one place to another, delivering something, or doing someone's household tasks or errands.* *Does this describe ANY work (you/NAME) did LAST WEEK?* Q1a *Was that for (your/NAME's) (job/(main job, (your/NAME's) second job)) or (other) additional work for pay?* Q2 *Some people select short, ONLINE tasks or projects through companies that maintain lists that are accessed through an app or a website. These tasks are done entirely online, and the companies coordinate payment for the work.* *For example, data entry, translating text, web or software development, or graphic design.* *Does this describe ANY work (you/NAME) did LAST WEEK?*	1.0 of total employment in May 2017

Country/ Proponent	Questions/Data Items Included in LFS	Estimate
	Q2a *Was that for (your/NAME's) (job/(main job, (your/NAME's) second job)) or (other) additional work for pay?*	
Malaysia Harun et al. (2020)	- employees and own account workers - employees, those who worked less than 30 hours per week as a proxy for part-time employees - Occupation category which was considered freelancers and technology-based occupations	18.4% of employed as part-time private employees and own account workers. They identified 218 gig occupations.
Canada Statistics Canada (2017)	Peer-to-peer ride services, such as Uber or Lyft: Services that connect riders and drivers through a mobile application that acts as an intermediary and processes the payment from the rider to the driver. Private accommodation services, such as Airbnb or Flipkey: Services that connect travellers and hosts through a mobile application or website that acts as an intermediary and processes the payment from the traveller to the host.	9.5% of persons aged 18 and older engaged in digital platform 9 (peer-to-peer ride services and private accommodation services)
Finland Statistics Finland (2018)	- Have you during the past 12 months worked or otherwise earned income through the following platforms: 1. Airbnb, 2. Uber, 3. Tori.fi/Huuto.net, 4. Solved, 5. Some other, 6. None of the above." - If the answer is 5. "some other" , they asked to specify the platform in question - They also asked how large share of earnings the income received through platforms	0.3 per cent of Finns aged 15 to 74 years had earned at least one-quarter of their income through various digital platforms during the previous 12 months
Europe Caro et al., (2021)	worked in (or searched for) online platforms through which they provide services from their home; online platforms providing local services or online platforms connecting people who need transport with a car and driver.	Ranged from 8.1 per cent in the Netherlands to 27.9 per cent in Italy.

The LFS was examined to determine if the criteria set by the reviewed works of literature were captured. In reference to the definitions adopted by the reviewed studies, the following were observed:

- gig workers defined as contingent workers and workers who performed task through website and mobile app using the Contingent Worker Survey and Contingent Worker Supplement of U.S. BLS. can be captured in the May and June 2021 LFS using the data item on nature of employment and question on the engagement on digital labor platforms;

- Contingent Workers such as freelancers, independent consultants, on-call workers, and workers provided by temporary agencies or contracts can be captured in the LFS using the data item on the nature of employment such as short-term or work for different employers on a day-to-day or week-to-week basis;

- Harun et. al (2020) defined gig workers as employees and own account workers and employees who worked less than 30 hours per week as a proxy for part-time employees. This definition can be considered given that the data items on the number of hours worked in a week and the class of worker, specifically on whether an employed person worked for private household, establishments, government or government corporation and self-employed without any paid employee are being captured in the LFS.

- Statistics Canada (2017) and Statistics Finland (2017) have specific questions on whether respondents offered or worked in the past 12 months on a ride services platform or private accommodation services platform. Similarly, Caro et al. (2021), also considered three questions in a survey to measure gig workers. They asked whether respondents worked in (or searched for) online platforms through which they provide services from their home, online platforms providing local services, or online platforms connecting people who need transport with a car and driver. Using the LFS, the Philippines can only capture this information using the data item on the kind of business/industry or occupation and the data item on the use of digital labor platforms for at least an hour in their work.

C. Conceptual Framework

Considering the criteria used in defining gig workers in the available literatures and examining contingent workers or workers in alternative employment in the national context, this study defined gig workers based on the class of work of the employed persons, engagement in digital labor platforms, nature of employment and the number of hours worked in a week.

- This paper defines gig workers as those wage and salary, and own-account workers that are engaged in digital labor platforms or **online work or onsite,** work for less than 30 hours in a week (part-time worker) or full-time worker (more than 30 hours) but want additional hours of work, on a contract basis through short-term or seasonal casual job/business or work for a different employer on day to day or week to week basis.

Hence, this paper decomposed gig workers as **gig workers engaged in digital labor platforms and as contingent or in alternative employment arrangements.**

- **Gig workers engaged in digital labor platforms** are those wage and salary, and own-account workers that are engaged in digital labor platforms, work for less than 30 hours in a week (part-time worker) or full-time worker (more than 30 hours) but want additional hours of work, on a contract basis through short-term or seasonal casual job/business or work for a different employer on day to day or week to week basis.

On the other hand, gig workers on a contingent or in alternative employment arrangement are those wage and salary, and own-account workers that are not engaged in any digital labor platforms or online work for less than 30 hours in a week (part-time worker) or full-time worker (more than 30 hours) but want additional hours of work, on a contract basis through short-term or seasonal casual job/business or work for a different employer on day to day or week to week basis.

For further illustration, below are the criteria for estimating the gig worker using LFS in the Philippines.

Class of Worker	Engaged in Digital Labor Platforms?		Nature of Employment			Hours worked		Remarks
	Yes	No	Permanent Job/Business	Short-term or seasonal casual job/business	Work for Different Employer on day to day or week-to-week basis	Part-time worker (Less than 30 Hours per week)	Full-time Worker (More than 30 Hours of Work per week)	
Worker for Private Household	✓			✓	✓	✓		Gig worker
		✓		✓	✓	✓		Gig worker
	✓			✓	✓		✓	Gig worker
		✓		✓	✓		✓	Gig worker
Worker for Private Establishments	✓			✓	✓	✓		Gig worker
		✓		✓	✓	✓		Gig worker
	✓			✓	✓		✓	Gig worker
		✓		✓	✓		✓	Gig worker
Worker for Government/ Government Corporation	✓			✓	✓	✓		Gig worker
		✓		✓	✓	✓		Gig worker
	✓			✓	✓		✓	Gig worker
		✓		✓	✓		✓	Gig worker
Self-employed without any paid employee	✓			✓	✓	✓		Gig worker
		✓		✓	✓	✓		Gig worker
	✓			✓	✓		✓	Gig worker
		✓		✓	✓		✓	Gig worker

In this paper, we considered employees whether in a private household, establishments, government, and even self-employed, part-time workers or looking for more than 40 hours of work, in a short-term or seasonal casual job or work for a different employer on a day-to-day or week-to-week basis with or without digital presence as gig workers. We considered them as gig workers because they worked on a per-service basis or company contract workers.

III. Methodology

A. Additional Question in the 2021 LFS

Currently, to our knowledge, there is no standard operational definition of “gig workers” in the Philippines to measure its size. However, following several related studies, there is a possible way to identify and develop criteria for the scope and coverage of gig workers in the Philippines.

This pilot study followed the work of the U.S. BLS, which viewed gig employment as workers in alternative working arrangements (U.S. BLS, 2015; U.S. BLS 2018). We also followed the seminal work of Laß and Wooden (2019) and Harun et al. (2020) who considered gig employment as non-standard work. We also

considered gig workers who worked for private establishments, private households, the government, and the self-employed.

Furthermore, many researchers regarded gig workers as workers who used digital or online platforms—an online-web-based or mobile application to connect with customers or clients and perform tasks or jobs and get paid. In this regard, we followed ILO's (2021) explanation that gig or platform economy is composed of digital labor platforms.

In May and June 2021, we proposed additional online-related questions in the Labor Force Survey (LFS), to capture the online-related occupations and gig workers. In the first quarter of 2021, the PSA convened a meeting with the concerned statisticians and statistical specialists regarding the possibility of capturing emerging occupations such as the delivery of food, Transport Network Vehicle Service (TNVS) workers, and seller who are engaged in an online or mobile application. The group noted two-pronged approaches to consider; a) Inclusion of questions in the LFS related to online-related occupations and b) Updating the 2012 PSOC index to include those online-related occupations. While the group noticed the difficulties in identifying all gig occupations in PSOC, a consensus was made by incorporating a question in the LFS. In developing the question, the group considered the estimation of gig workers and workers who belong to the digital economy. The group arrived with the proposed question as follows:

"Did ___engage in an online platform or mobile application, for at least an hour, in his or her work/job or business in the past week?"

1 – Yes
2 – No

One of the considerations of this question was to measure not only the size of gig workers but also the size of online-related occupations. However, we noticed that one of the limitations of the proposed question was the identification of gig occupation as the primary source of income. Likewise, the estimation of the size of freelancers and independent consultants is not covered. Mainly the generalization on the number or size of gig workers, online-related occupations, and gig workers who are engaged in digital labor platforms are reported in this paper.

B. Defining the universe of the study.

The reference period of this pilot study was the May and June 2021 rounds of the LFS. The paper covered all populations 15 years old and over excluding overseas workers.

The paper studied the characteristics of employed and underemployed persons and defined them in the Labor Force Survey (2021) as follows:

> *"Employed Persons include all those who, during the reference period, are 15 years old and over as of their last birthday, and are reported either: a. At work, i.e., those who do any work even for one hour during the reference period for pay or profit or work without pay on the farm or business enterprise operated by a member of the same household related by blood, marriage or adoption; With a job but not at work, i.e., those who have a job or business but are not at work because of temporary illness or injury, vacation, or other reasons. Likewise, persons who expect to report for work or to start operation of a farm or business enterprise within two weeks from the date of the enumerator's visit are considered employed."*

"Underemployed persons include all employed persons who express the desire to have additional hours of work in their present job, or an additional job, or to have a new job with longer working hours. Visibly underemployed persons are those who work for less than 40 hours during the reference period and want additional hours of work. Invisibly underemployed persons include employed persons who worked for 40 hours or more during the survey reference period and want additional hours of work in their present job."

C. Scope and coverage of gig workers on a contingent or in an alternative employment arrangement

In view of limited information or data on the number of contingents and alternative working arrangements in the LFS, this paper considered the nature of employment as a proxy variable for gig workers. The nature of employment is defined in the LFS as follows:

1. Permanent job/business/unpaid family work
2. Short-term or seasonal or casual job/business/unpaid family work
3. Worked for different employers on day to day or week-to-week basis

Excluded in the estimation of gig workers are workers with permanent jobs/businesses/unpaid families. Included in the estimation of gig workers are workers in short-term or seasonal or casual jobs/business/unpaid family work and worked for different employers on day to day or week-to-week basis. To our knowledge, freelancers, independent consultants, on-call workers, self-employed, and workers provided by temporary help agencies or contract firms (whether private households, private establishments, or government or government corporations) were considered under the categories of short-term or seasonal, or casual job/business/unpaid family work and worked for a different employer on day to day or week to week basis.

Hence, the definition of gig workers is as follows:

- gig workers are those wage and salary, and own-account workers that are engaged in digital labor platforms or **online work or onsite,** work for less than 30 hours in a week (part-time worker) or full-time worker (more than 30 hours) but want additional hours of work, on a contract basis through short-term or seasonal casual job/business or work for a different employer on day to day or week to week basis.

Moreover, **Gig workers on a contingent or in alternative employment arrangement** are those wage and salary, and own-account workers that are not engaged in any digital labor platforms or online work for less than 30 hours in a week (part-time worker) or full-time worker (more than 30 hours) but want additional hours of work, on a contract basis through short-term or seasonal casual job/business or work for a different employer on day to day or week to week basis.

The criteria for measuring gig workers **Gig workers on a contingent or in alternative employment arrangement** were as follow:

- Employed/Underemployed persons who are fifteen (15) years and over, with work at least an hour, including telecommuting/working from home during the past week;

- Workers in a private household, establishments, government, and/or self-employed;

- Not engaged in an online platform or mobile application for at least an hour in his/her work or business in the past week;

- Part-time worker (less than 30 hours) or full-time worker but want additional hours of work (more than 30 hours); and/or
- Whose nature of employment is short-term or work for a different employer on a day-to-day or week-to-week basis

D. Scope and coverage of the online-related occupation

Many researchers regarded gig employment as workers who used an online platform to connect with customers or clients to deliver tasks or jobs. Following the definition of a digital labor platform from ILO (2021), this paper covers all workers engaged in an online platform or mobile application for at least one hour of his/her work.

This paper also covers all workers who used online or social media platforms to connect with customers or clients and get paid.

Hence the scope and coverage of online-related occupations are:

- Employed/Underemployed persons who are fifteen (15) years and over, with work at least an hour, including telecommuting/work from home during the past week;
- Engaged in online platform or mobile application at least an hour in his/her work or business in the past week;

E. Scope and coverage of gig workers who are engaged in a digital labor platform

This paper recognized the importance of determining the occupation of the gig workers engaged in digital labor platforms for skills fitting and facilitation of training.

Hence, this paper defined the **gig workers who are engaged in digital labor platforms** as follow**:**

Gig workers who are engaged in digital labor platforms are those wage and salary, and own-account workers that are engaged in digital-platform or online work for less than 30 hours (part-time) or more than 30 hours (full time) a week on a contract basis through short-term or seasonal casual job/business or work for a different employer on day to day or week to week basis.

The criteria for **Gig workers who are engaged in digital labor platforms** are as follow:

- Employed/Underemployed persons who are fifteen (15) years and over, with work at least an hour, including telecommuting/work from home during the past week;
- Workers in a private household, establishments, government, and self-employed;
- Engaged in an online platform or mobile application for at least an hour in his/her work or business in the past week;
- Part-time worker (less than 30 hours) or full-time worker but want additional hours of work (more than 30 hours); and/or
- Whose nature of employment is short-term or work for a different employer on a day-to-day or week-to-week basis

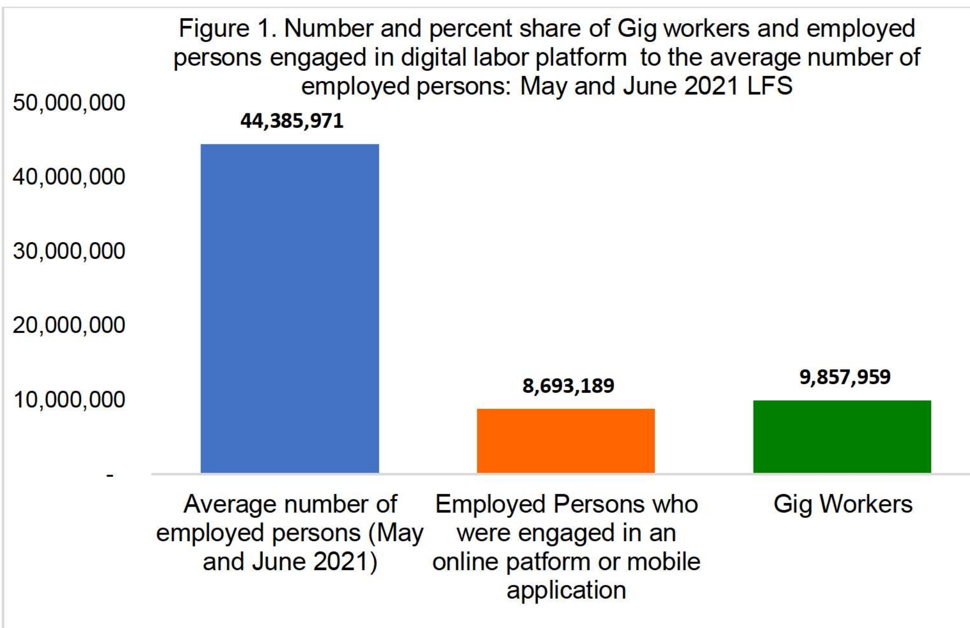
To better understand the characteristics of gig workers, this paper grouped the gig workers into two categories: a) gig workers who were engaged in digital labor platforms, and b). gig workers who were not engaged in digital labor platforms.

Using the 2012 Philippine Standard Occupational Classification (PSOC), the paper identified the gig workers who were engaged in digital labor platforms by a major group of occupations.

The paper used descriptive statistics to analyze the demographic and socioeconomic characteristics of gig workers by sex, Age group, educational attainment, occupation, and industry.

IV. Statistical Results

In May and June 2021, the average number of employed persons in the Philippines was about 44.3 million. Out of the 44.3 million employed persons, 20 percent (8.7 million employed persons) were engaged in an online platform or mobile application in their work for at least an hour or work in the past week (*see Figure 1*). This further means that approximately 20 per 100 employed persons in the labor force used digital labor platforms in their work.



Source: Author's estimates based on the May and June 2021 rounds of the Labor Force Survey

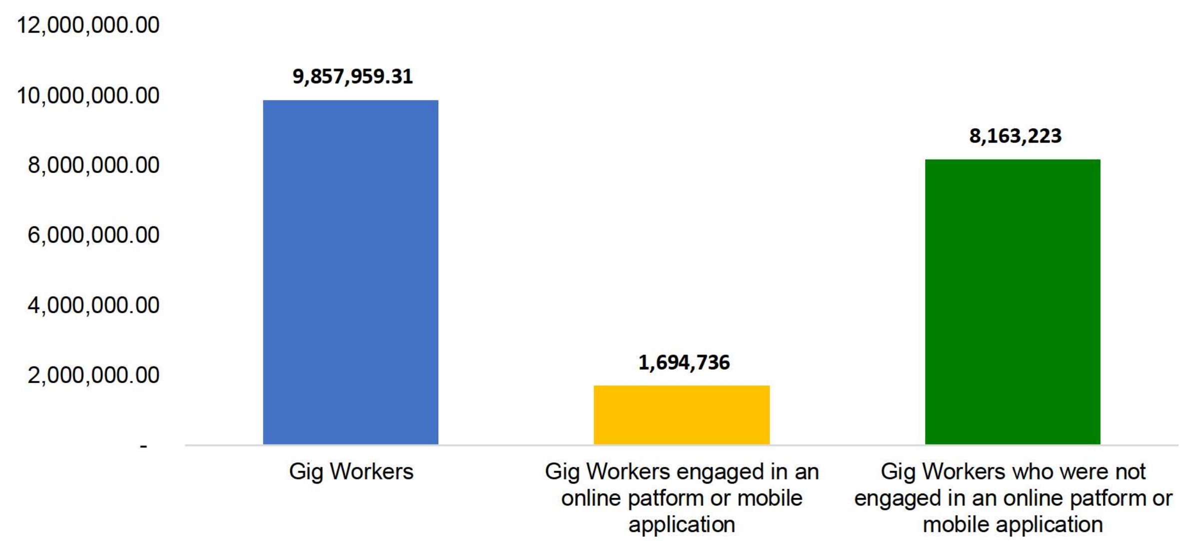
Remarkably, of the 8.7 million employed persons engaged in digital labor platforms, 69 percent (6 million employed persons) were employed persons working in the default place except at home. Not surprisingly, at the height of the COVID-19 pandemic, people used online platforms or mobile applications not only for business transactions but also for communication, meetings, and forums. Meanwhile, of the total 8.7 million employed persons, 13 percent (1.1 million employed persons) were home-based workers, 11 percent (991 thousand employed persons) were on telecommuting/work from home, 6 percent (491 thousand employed persons) were on a mixed mode working arrangement, and less than 5 percent were on job rotation and reduced hours.

Interestingly, this pilot study considered all employed persons engaged in an online platform or mobile application even used for communication, meetings, and forums. The said coverage would be an essential indicator to estimate all workers engaged in an online platform or mobile application as far as the digital economy is concerned.

Meanwhile, out of the total employed persons, 22 percent (9.9 million employed persons) were gig workers or workers in short-term/seasonal or worked for different employers on a day-to-day or week-to-week basis (*see Figure 1*). Notably, of the total 9.9 million gig workers, 68 percent (6.7 million persons) were employed in private establishments, 22 percent (2.1 million) were self-employed, 6 percent (584 thousand persons) worked for private households, and 5 percent (463 thousand persons) worked for the government.

In terms of engagement in digital labor platforms, of the total 9.9 million gig workers, 17 percent (1.7 million gig workers) were engaged in online platforms or mobile applications in their work. However, it is to be noted that the share of gig workers engaged in digital labor platforms in their work to the total employed persons was lower with four (4) percent share of the total employed persons in the Philippines. On the other hand, 83 percent of the total gig workers, or 8.2 million employed persons were not engaged in an online platform or mobile application in their work(*see Figure 2*). Likewise, it should be noted that the share of gig workers who were not engaged in an online platform or mobile application in their work to the total employed persons was only 18 percent.

Figure 2. Number and percent share of gig workers engaged in digital labor platforms to the total gig workers: May and June 2021 LFS



Source: Author's estimates based on the May and June 2021 rounds of the Labor Force Survey

In terms of educational attainment, most gig workers attained Junior High School, Elementary Education, and College Education with 46 percent shares (4.6 million employed persons), 26 percent shares (2.5 million employed persons), and 18 percent shares (1.7 million employed persons) of the total 9.9 million gig workers, respectively.

Interestingly, most gig workers engaged in digital labor platforms attained college education, with 37 percent shares to the total gig workers engaged in digital labor platforms (1.7 million employed persons). On the other hand, most gig workers not engaged in digital labor platforms in their work attained Junior High School and Elementary Education, with 49 percent shares (4 million employed persons) and 28 percent shares (2.3

million employed persons) of the total gig workers not engaged in digital labor platforms, respectively. Not surprisingly, employed persons in the labor force with elementary and junior high school education have lower technological skills, hindering them for looking jobs and getting a permanent job. Hence, short-term employment or working with different employers were alternate ways of their living. Moreover, to our knowledge, digital labor platforms require the aid of computers and mobile phones. Thus, we viewed that lack of capital (computers and mobile phones) was another concern for gig workers not engaged in digital labor platforms.

Among males and females, gig employment was higher among males with 65 percent shares of the total gig workers (6.4 million employed persons) than females with 35 percent shares of the total gig workers (3.4 million employed persons). Likewise, male gig workers engaged in digital labor platforms shared a bit higher with 54 percent (909 thousand employed persons) compared to females with 46 percent shares of the total gig workers (708 thousand employed persons).

The breakdown of gig workers by age group showed that the 35 to 54 years age group recorded the highest share with 36 percent shares of the total gig workers (3.6 million employed persons). The 23 to 34 years age group posted second with 35 percent shares of the total gig workers (3.5 million employed persons). Meanwhile, the 15 to 22 years age group posted third with 17 percent shares of the total gig workers (1.7 million employed persons). The 55 years and older posted the lowest with 12 percent shares of the total gig workers (1.2 million employed persons).

Interestingly, gig workers who were engaged in the digital platforms were higher among the 23 to 34 years age group with 45 percent shares of the total gig workers with digital presence (762 thousand employed persons). The 35 to 54 years old posted second with 32 percent shares of the total gig workers with digital presence (537 thousand employed persons). The 15 to 22 years age group posted third with 273 thousand or 16 percent of the total gig workers with a digital presence. The 55 and over years old posted the lowest share with 123 thousand or 7 percent of the total gig workers with a digital presence.

In terms of occupational group, results showed that elementary occupations have the largest share with 45 percent of the total gig workers (4.5 million employed persons). Services and sales workers posted second with 19 percent shares of the total gig workers (1.9 million employed persons). Craft and related trades workers ranked third with 10 percent shares of the total gig workers (993 thousand employed persons). Other major occupations posted less than 10 percent shares of the total gig workers.

Notably, in terms of occupations that were engaged in digital labor platforms, services and sales workers occupations posted the largest share of gig workers with 29 percent shares of the total gig workers who were engaged in digital labor platforms (486 thousand employed persons). Elementary occupations ranked next with 28 percent shares of the total gig workers with a digital presence (474 thousand). Clerical support workers occupations ranked third with 12 percent of the total gig workers with digital presence (199 thousand employed persons). All other major occupations engaged in digital labor platforms posted less than 10 percent of the total gig workers with a digital presence.

In terms of industry breakdown, gig workers were higher among Crop and Animal Production, Hunting and Related Service Activities with 22 percent of the total gig workers (2.2 million employed persons), Construction of Buildings with 20 percent of the total gig workers (2 million employed persons), Retail Trade, Except Motor Vehicles and Motorcycles with 16 percent of the total gig workers (1.6 million or), Other Personal Service Activities with 7 percent of the total gig workers (728 thousand employed persons), Public administration and defense; compulsory social security with 4 percent of the total gig workers (400 thousand

employed persons), and Food and Beverage Service Activities with 3 percent of the total gig workers (297 thousand employed persons). All other industries posted less than 3 percent of the total gig workers.

In our analysis, it should be noted that those industries identified with higher shares of all gig workers were almost the same industries that generated gig workers who were engaged in online platforms or mobile applications. Ranked from highest to lowest share, the top industries that generated gig workers and engaged in online platforms or mobile applications were: 1. Retail Trade, Except Motor Vehicles and Motorcycles with 28 percent of the total gig workers who were engaged in digital labor platforms (478 thousand employed persons), 2. Crop and Animal Production, Hunting and Related Service Activities with 14 percent (243 thousand employed persons), 3. Construction of Buildings with 11 percent (187 thousand employed persons), 4. Office Admirative, Office Support and Other Business Support Activities with 6 percent (107 thousand employed persons), 5. Other Personal Service Activities with 5 percent (93 thousand employed persons), 6. Public administration and defense; compulsory social security with 5 percent (85 thousand employed persons), 7. Education with 3 percent (56 thousand), 8. Food and Beverage Service Activities with 3 percent (52 thousand employed persons) and 9. Land Transport and Transport Via Pipelines with 3 percent (45 thousand employed persons).

V. Policy Recommendations

Since the onset of the COVID-19 pandemic in May and June 2021 and given the recent growth of technology-based businesses and the increasing demand on the social media platform, online web-based platforms, and mobile applications, gig workers and online-related occupations have contributed significantly to about 22 percent (9.9 million employed persons) and 20 percent (8.7 million employed persons) of the total workforce in the Philippines, respectively. With the estimated size of gig workers and online-related occupations, the government and policymakers may now have an idea of the size of vulnerable workers about social protection, stability of job, statutory benefits, and provision of social services such as credit opportunities and training, among others.

The findings that gig workers engaged in digital labor platforms were highly educated (college level) and aged 23 to 34 years old signaled that government should formulate policy on sustaining their job by conducting job matching (skills fitting) and platform-based job fairs. The proposed platform-based job fair is an activity or project in which the government should connect or match the highly digitally skilled gig workers with a company that owns an online website platform and mobile or location app.

On the other hand, the findings that most gig workers not engaged in digital labor platforms in their work attained Junior High School and Elementary Education indicated the government should conduct training and advocacy campaigns on promoting the use of digital labor platforms. Moreover, it is suggested that government should invest in computers or mobile phones or technology that would be used by gig workers from job recruitment to performing tasks or jobs. According to ILO (2021), digital labor platforms have the potential to provide workers, with income-generating opportunities.

The findings that gig workers engaged in digital labor platforms were higher in the Retail Trade, Except Motor Vehicles and Motorcycles, Crop and Animal Production, Hunting and Related Service, Construction of Buildings, Admirative, Office Support, and Other Business Support Activities, Other Personal Service Activities, Public administration and defense; compulsory social security, Education, Food and Beverage Service Activities, and Land Transport and Transport Via Pipelines indicated that government should conduct job matching (skills fitting) and platform-based job fairs by industry, with a high priority on the industries identified in this pilot study.

V. Recommendation and Ways Forward

The estimation of the size of gig workers in the Philippines was based on the additional questions included in the May and June 2021 rounds of LFS. These include the additional question on working arrangements and engagement of respondents in the online platform and mobile application. While there was a limitation in identifying the freelancer, and independent contractor in the LFS, the categories on the nature of employment and class of workers in LFS were utilized as proxy variables for gig workers.

In this pilot study, we found that 20 percent of the total employed persons (8.7 million employed persons) engaged in digital labor platforms in their work. However, we found that there is difficulty in identifying if engagement in digital labor platforms is a primary or secondary source of income. Based on the findings, we suggest that the question of the uses of digital labor platforms shall be supplemented in the monthly LFS. The uses of digital labor platforms are vital information to determine if engagement in digital labor platforms is a primary or secondary source of work or income. The proposed questions are as follows:

1. Did ____ use social media platforms, mobile applications, and/or online web-based platforms for the following? (answerable by yes or no)
   a. Connect with clients and/or potential clients and obtain short jobs, projects, or tasks
   b. Providing customer services
   c. Trade goods and services
   d. Tools for communication, forums, and training
   e. Accessing banking or financial services
   f. Play to earn mobile games
   g. Live streaming/vlogging
   h. Purchases goods and/or services
   i. Receive orders for goods and/or services
   j. Recreation/Entertainment/ Research
   k. Others, Specify____________________

2. Did ___use the social media platforms, mobile applications and/or online web-based platforms for the following? (Check box)
   a. Main source of job/income
   b. Secondary job/income
   c. Not a source of job/income, e.g., For Recreation/Entertainment/ Research/Communication etc.

3. What percent of the total income was generated by _____via social media, mobile applications, and online web-based applications, buying and selling via the internet? ________%

Another difficulty encountered in this study is the mapping of unit group gig occupations with emerging industries. Our estimation and analysis were based mainly on the major occupation of the Philippine Standard Occupational Classification (PSOC) and the Major Division of the Philippine Standard Industrial Classification (PSIC).

In order to determine the prevalence of gig employment by specific industries and in view of the development of the criteria, scope, and coverage of the digital economy, it is suggested that in the future LFS, the five (5) digit code of the updated PSIC shall be used in classifying the kind of industries did the respondents worked.

Questions on the name of the employer and the name of the digital labor platforms the respondents' using in his/her work would also be useful in the identification and validation of gig workers and gig industries.

Another improvement from this study could be the development of estimates based on the Family and Income and Expenditure (FIES), Census of Population and Housing, and administrative data like Social Security System (SSS) members registration in order to widely cover the freelancers and independent contractors.

Meanwhile, with the given status quo, it is suggested that several Technical Working Groups related to labor and occupations and Technical Committee on Statistical Standards and Classifications shall formulate definitions/ criteria or scope and coverage of gig workers based on this pilot study.

Note

The paper is preliminary and subject to discussion and further revisions. It is being circulated for the purpose of soliciting comments for further improvement. The content of the paper is unedited and for further review. The views and opinions expressed are those of the author(s) and do not necessarily represent the official views of the PSA. Citation is subject to permission from the author (s) and the PSA.

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