The What and How of Measuring Digital Platform Work

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Introduction

The widespread availability of high-speed internet starting in the early 1990's and the introduction of the iPhone in 2007 have brought sweeping changes in how US commerce is conducted and US labor markets function. With the advent in 1995 of both Craigslist and eBay the selling of goods, particularly used items, has become more efficient and geographically dispersed. Although services to match people have existed as far back as 1100 BC marriage markets during China's Shang dynasty, the use of smart phone apps and websites have created an unprecedent means of rapidly matching people across a diverse range of work and personal activities.

It is widely recognized that in 2005 Amazon Mechanical Turk ushered in electronically mediated work arrangements by allowing the outsourcing of small, often repetitive tasks to a large pool of workers. The provision of in-person personal services started in 2008 during the Great Recession when Taskrabbit was established as an on-line market place to match freelance labor with people looking to hire help for small tasks in their local area. These tasks include personal assistance, furniture assembly, moving, delivery, and handyman work. Fivver in late 2013 and early 2014 established an online two-sided market for people to buy and sell a variety of digital services. These services, typically offered by freelancers, include writing, translation, graphic design, video editing, and programming.

Electronically mediated work arrangements entered the personal transportation industry in 2010 and 2011. In 2010 Uber launched a publicly available mobile app in San Fransico to hail black

¹ Under the auspices of the Department of Defenses' Advance Research Project Agency (ARPA) an interconnected computer network for communications - ARPAnet - was developed in the early 1970's. Throughout the 1970's and the 1980's, there were several advances in the linking of computer networks using a common protocol both within the military and academics. However, widespread use of linked computer networks and thus the advent of the internet did not occur until the 1990's with the development of the World Wide Web by British computer scientist Tim Berners-Less in 1989-1990 and the roll out of fiber optic cables in the mid-1990's.

² Craiglist is a privately held American company operating as classified advertisement website. Originally it was founded by Craig Newmark as an email listing to friends of local events in the San Fransico Bay area. Craiglist now includes sections and content devoted to items for sale, items wanted, housing, jobs, gigs, services, community service, discussion forums and dating.

³ eBay is an e-commerce company based in San Jose California. eBay allows users to buy or view items for sale through an electronic marketplace. Sales occur either via online auctions or "buy it now" instant sales, The company charges sellers a commission for each sales transaction. eBay was founded as AuctionWeb by computer programmer Pieere Omidyar as a hobby to make some extra money.

luxury cars. The first ride-sharing website using regular drivers and cars was established by Wingz in 2011 and Sidecar was established in 2011 as a "vehicle for hire" company.

Although the use of websites to arrange for the ordering and delivery of food started in the 1990's with Pizza Hut (1994), followed by World Wide Waiter (1995) and Seamless (1999), wide scale electronic mediated work arrangements in the food delivery sector did not start until the mid 2000's with Instacart, SkiptheDish, TapinGo and Foodpanda starting in 2012, Dilveroo, and Doordash starting in 2013 and Grubhub and UberEats starting in 2014.

These electronically mediated types of employment -where there is a worker, a customer and some sort of app or website mediating (3 party relationships)- are often referred to as digital platform employment (DPE) and the apps or websites that facilitate the intermediation as digital labor platforms. Workers involved in this type of employment have been referred to alternately as DPE workers, digital platform workers or simply platform workers.⁴

Although estimates differ there is no question that since the introduction of electronic mediation into labor markets, the number of platforms engaged in digital platform employment has skyrocketed. The ILO in the 2021 World Employment and Social Outlook Report estimated that globally the number of digital labor platforms increased fivefold in the second decade of the 2000s; with the number of online and in-person (location based) platforms increasing from 142 in 2010 to over 777 in 2020. Splitting out just online platforms, the ILO estimates that the number of online labor platforms tripled between 2010 and 2020 reaching 283 in 2020.

Using web searches, a literature review, and individual platforms' search functionalities Kässi, Lehdonvirta, and Stephany (2021) of the Oxford Internet Institute (OII),, estimated there were 351 online digital labor platforms at the end of 2020 globally. Using a broader definition of web-based online platforms than other studies⁵ and a data science methodology based on website traffic to supplement existing data bases, the World Bank (Datta et al.) estimated that there were 545 online digital platforms globally in 2022, with headquarters in 63 countries and platform workers and clients located in 186 countries.

The rapid growth of digital employment platforms and correspondingly digital platform workers has garnered a great deal of attention from the media, policy makers and the general public. Despite this interest, what constitutes a digital platform worker has been ill-defined and ambiguous. This lack of clarity has led to non-transparent, inconsistent and widely varying estimates of the number of digital platform workers. In turn, this has made it difficult to obtain a firm and justifiable estimate of the number of digital platform workers and their characteristics. It

⁴ Although international standards documents classify those involved in volunteer work and own use production work as workers, throughout this paper, the term workers will be confined to those who are employed.

⁵ For example, the ILO study restricted their estimates to platforms that algorithmically matched workers and the EU study restricted their analysis to platforms with headquarters in the EU.

also has made it difficult to compare estimates across regions, countries and various other domains. .

The purpose of this paper is to lay out what factors those interested in studying electronically mediated work should consider when developing a conceptual definition of what constitutes digital platform employment and implementing an empirical measure of digital platform workers. The presentation of these factors will include a discussion of the implications decisions on these factors will have on the size of the digital platform work force and issues concerning platform workers. After presenting these factors the conceptual decisions several National Statistical offices have consciously or unconsciously made in their attempts to measure DPE workers will be discussed.

What to Measure: Conceptual Definition of Digital Platform Employment

General Conceptualization and Scope

The first task to undertake when conceptualizing digital platform employment is to have a general idea of what is trying to be measured. Although there is no agreed upon definition, several organizations have broad conceptual definitions of digital platform employment. For example, the ILO via the ICSE -18 (International Classification of Status of Employment established in 2018) describes digital platform employment using the following language

Digital platform employment includes workers carrying out work through, or on, digital platforms (ICSE-18)

The OECD Handbook on Measuring Digital Platform (OECD 2020) defines digital platform employment as

- any productive activity performed by persons to produce goods or provide services carried out through or on a digital platform

The OECD Handbook on Measuring Digital Platform Work (OECD 2020) also describes digital platform employment⁶ as

-Digital platform employment, is work performed for others on or through digital platforms with the intention to generate pay or profit

⁶ The OECD Handbook in a more extensive discussion also includes the language that the digital platform or a phone app controls and/or organizes essential aspects of the activities, such as the access to clients, the evaluation of the activities carried out, the tools needed for conducting the work, the facilitation of payments, distribution and prioritization of the work to be conducted; and the work is for at least one hour in the reference period The 2024 UN Handbook On Measuring Digital Platform Employment and Work also includes these additional aspects in its definition.

The U.S. Bureau of Labor Statistics using the term Electronically Mediated Employment⁷ defined digital platform employment as⁸

short jobs or tasks that workers find through websites or mobile apps that both connect them with customers and arrange payment for the tasks. (Current Population Survey Staff, 2018)

As can be seen from these definitions there is general agreement at a high level of what constitutes digital platform employment. It is work for pay or profit where an app or website (a digital platform) plays an integral role in connecting workers to customers. Implicitly there also is general agreement that digital platform employment is a subset of the digital economy and not all parts of the digital economy and not all digital activity should be classified as digital platform employment. Using the OECD definition of the digital economy as:

all economic activity reliant on, or significantly enhanced by the use of digital inputs, including digital technologies, digital infrastructure, digital services and data. It refers to all producers and consumers, including government, that are utilizing these digital inputs in their economic activities

this means there are a broad range of activities that should be excluded from a definition of digital employment. For example, work where digital technology such as word processing or video conferencing is used as part of a person's job, work using internal company software such as scheduling or internal customer assignment software, financial transactions mediated through platforms, and the use of supply chain and production control software all should be excluded from being classified as digital platform employment.

Even within digital technologies that connect workers with potential customers or employers, the high level definitions outlined above seem to exclude several types of activities from being considered digital platform employment. For example, electronic job searches of online job boards listing permanent jobs(such as Indeed or Monster,com) or the posting of resumes and other information about oneself on social media platforms (such as LinkedIn) would be excluded.

⁷ In 2017 when BLS was starting to measure and describe digital platform employment, there was no commonly used term. BLS adopted the term electronically mediated employment (EME) because it was thought this best described the type of work activity being engaged in. BLS has subsequently replaced the term Electronically Mediated Employment with Digital Platform Employment (DPE) and describes workers engaged in Digital Platform Employment (DPE) as (either) Digital Platform Workers with Digital Platform workers sometimes (often) being shortened to Platform Workers (or Platform Workers or Platform Workers for short, which is sometimes shortened to Platform Workers).

⁸ In a more extensive discussion in the Monthly Labor Article about Electronically Mediated Employment, BLS noted in this type of employment arrangement, workers use a company's website or mobile app to connect to clients or customers and obtain short jobs, projects, or tasks; are paid by or through the company that owns the website or mobile app; choose when and whether to work; and may do these short jobs, projects, or tasks in person or online.

The activity also has to be done for pay or profit; excluding activities such as participation in unpaid online contests or tournaments and volunteer activities conducted online.

Despite the general agreement on a high level definition, there still are several factors that need to be considered when defining digital platform employment and digital platform workers. In what follows, 9 questions are presented that need to be addressed when conceptually defining and measuring digital platform employment and digital platform workers. As will be shown, many of the answers to these questions depend on whether one wants to construct a definition of digital platform employment and platform workers that encompasses a broad digital marketplace or whether one wants a definition that concentrates on the employer/ customer worker relationship. The answer to these questions also will depend on why digital platform workers are being measured and how the measure will be used

Questions to Consider in Defining Digital Platform Employment and Digital Platform Workers

1. Does the mode/location of work matter?

As was illustrated in the introduction, digital platform work can either be done completely online or it can be done in person, off line. For example, workers engaged in online DPE work can select short term tasks to do online such as tagging pictures or translating a document, can arrange to work as online freelancers developing computer code for companies, or can provide a service completely online such as online tutoring.

In contrast for other tasks, while the work is arranged through a digital platform, the work itself is actually performed off line, in person. For example, workers can use an app or a website to arrange to provide personal care for people in their homes, pick up and deliver restaurant or groceries orders, or drive people in their personal cars.

Whether work is done online or offline in person sometimes is referred to as the mode of work. Alternatively, it sometimes is referred to as the location of work.

The first question to consider when constructing a definition of digital platform workers is whether the location of where the work is done matters. Some people may want to include digital platform work regardless of where it is conducted and not make a distinction between online and in-person work. Others may want to include both modes of work but make a distinction between online and in-person offline work. Still others may want to focus only on online work or only on inperson offline work.

How people choose to define digital platform work along the mode/location dimension can be influenced by why and what they are trying to capture. If, for example, people are concerned about the application of national or regional laws such as legislation affecting unemployment insurance benefits, minimum wages, or overtime pay, they may want to restrict their definition of digital platform workers to those who are only doing in person work. At a minimum, these people may want to make a distinction between in person work and online work when measuring digital platform workers. Similarly, if people are interested in the effect of digital platform work on local

labor markets, they may want to restrict their definition and measurement of platform workers to just in-person work.

In contrast, if people are interested in studying the effect of Artificial Intelligence (AI) on the long term sustainability of digital platform work, they may want to concentrate on just online platform work -with the reasoning being that in person services are much more difficult to replace with AI and automation than online work. If people are interested in the effect of digital platform employment on the economies of developing countries, they also might want to focus just on online platform work or at least make a distinction between online platform work and in-person platform work.

Those interested in obtaining a comprehensive measure and are only interested in the number of digital platform workers may want to include both online and in person platform work without making a distinction based on where the work is done.

2. How much labor is there in the activity and much of it is mediated by the platform?

Digital platform employment, like all work, consists of a variety of combinations of worker's labor services and capital owned by the worker. These combinations occur along a spectrum, with some work consisting of just the provision of labor services and other work being very capital intensive. With regards to digital platform employment, this spectrum can be conceived of as going from work that just consists of the provision of labor services to just capital via the provision or obtaining of financial capital with the intent of receiving financial renumeration in the future . Pictorially this spectrum can be represented as follows (with the left-side representing activities with the least amount of capital and the most amount of labor services and the right-side representing activities with the least amount of labor and the most amount of capital)

Labor Services and Capital Spectrum



Platform mediates labor services

Platform does not mediate labor services involved

Those constructing a definition of digital platform employment and a measurement of digital platform workers may want to make a cut off at various points along this spectrum. Even for

activities that do involve labor services, one needs to make decisions about how much of that labor needs to be mediated by the platform for a person to be defined as a digital platform worker.

Those interested in the narrowest definition may want to restrict their definition to only those providing labor services via a digital platform. Moving from left to right, others may want to add in additional types of work. .

Where people land on this spectrum when constructing a definition of platform work is based both on how much labor is involved in the activity and how involved the digital platform is in the mediation of labor services that are included in those activities. For example, the selling of goods online could involve a great deal of labor to produce, but the labor involved in the production of the good is not itself mediated by the platform and is incidental to the online transaction. Decisions about where to make the cutoff along this spectrum depends on whether one wants the concept of digital platform workers to concentrate on worker customer/employer relationships or whether one wants the concept to be more expansive and includes types of work involving the broader digital marketplace

Less in the abstract, the decision about where to make the cut off really is a decision about what types of activities to include and count as digital platform employment. A definition and measurement restricted to just workers providing only labor services via a digital platform would restrict the measurement to people whose work involved a great deal of labor services and almost all of the labor was mediated by the platform. For example, it would include workers who connect to customers to provide personal care, childcare, pet services, tutoring, and translation services . This type of work uses no or minimal physical capital. The work involves just labor services and the labor service is integral to the online transaction.

Slightly more expansively in terms of the labor services capital spectrum, people may want to include in their definition, work mediated through a platform that involves the combination of labor services and capital of significant value that the worker owns or rents. This would include ride-share driving and delivery of food and groceries. Again labor services is integral to the online transaction. What is being mediated by the platform is a person's services, albeit using the person's own capital.

Moving more into the digital market place, people may want to expand their definition to include work that involves the production of goods offline that are sold online. For example, people using digital marketing platforms such as Etsy or Ebay to sell handcrafted items or used goods specifically procured for resale would be counted as digital platform workers. These activities could involve a significant amount of labor, but this labor is incidental to the online transaction. The platform is not involved in the intermediation of this labor. What is being intermediated is the good.

More broadly when considering transactions that take place in the digital market place, people may want to consider including the rental of assets that people own. For example, the definition and measurement of digital platform workers could include people who rent their homes or tools using a digital platform such as AirBnB or Rentatool. This would include people who did little or no work with regards to their to property - using their property primarily as an investment-- along with those who did an intensive amount of maintenance work on their property. This means that there could be very little labor services involved in what is being transaction. In addition, what labor is involved is not being mediated by the platform. Most of the work would be done offline and separate from the digital platform. The platform is not involved in mediating a person's labor services. What the platform is mediating is a service associated with a good.

Along the labor services capital spectrum, an activity that is likely to involve even less labor services is the selling of a person's own used goods online (such as used textbooks, used clothing, or used sporting equipment). This activity is likely to involve little labor services because people often just sell a few things online intermittently. Even for those instances where the selling of ones used goods online did involve a significant amount of labor, the work would not be what was being mediated by the platform, the good being sold would be what is being mediated.

Finally, if one wanted a very inclusive definition of platform employment where activities with little labor services were included, one might want to include people providing or receiving financial capitol to help start up companies or creative projects (such as Kickstarter). The inclusion of financial platforms would push the definition of digital platform employment into the realm of income-generation as opposed to earnings for a return on labor, however. It should be noted that in general as one moves up the labor capital spectrum, one is more and more likely to include activities that generate income, but are not related to people being employed or earnings associated with that employment.

Where people make the demarcation along the labor capital spectrum when constructing their definition of digital platform workers depends on whether people want to include all income generating activities conducted using the digital platform or whether people want to focus more on employment and work activities conducted via the platform. A more comprehensive measure would provide a better picture of all activity and income being generated using a digital platform. A more narrow definition would focus on the earnings people generate from work using a digital platform. In addition, a definition that focused more specifically on work done on or through digital platforms would be more relevant for people interested in issues related to the conditions of work and worker, employer relationships.

3. How much control does the platform need to exhibit over worker-customer matching?

The next several factors people need to consider when constructing a definition of digital platform employment center around the amount of control the digital platform has over workers. .Much of the discussion surrounding these factors will again focus on how much of the digital market place the definition should cover versus having a definition more focused on an employment relationship and the type of relationship within an employment relationship. .

The first dimension of platform control that needs to be considered when constructing a definition of a digital platform workers is the platforms' control over worker customer matching. Specifically, how much control over the matching does the platform need to have for a worker to be considered a digital platform worker. The amount of control platforms have over worker customer matching varies considerably from none or minimal to very extensive. Examining it from the perspective of workers' control over whom they work for, pictorially this spectrum of control and what it entails is presented below (With the right side representing extensive control by the platform over whom a worker works for and the left side representing minimal or no control.

Platform Control over Whom Workers Work for

| ≪ Minimal | | | | | <u>Extensive</u> |
|---|---|--|--|---|--|
| Workers advertise on bulletin boards | Customer posts job, workers bid, customer selects | Platform maintains list of tasks on site, worker selects | Platform provides tasks available when worker has app on | Customer describes job to platform, platform provides list of workers to choose | Algorithmic assignment of customers to workers |

On the minimal side of the spectrum are job bulletin boards where workers advertise their skills and availability. Other than agreeing to the platform's terms of service, the platform has no control over the worker-customer match and whom a worker works for. Customers go to the platform, read workers' postings and contact a selected worker on their own. In a non-electronic form this is equivalent to a person placing an ad in a newspaper, where the newspaper would be the platform. Examples of digital platforms with this kind of limited control are Angi's and Craig's list.

On the other end of the spectrum are platforms that use computer programs to algorithmically match workers to customers. On platforms where algorithmic matching has the most extensive

control, workers and customers have little or no control over the match. Workers are algorithmically matched to a customer when they have the platform's app on and customers have no control over the worker they are assigned. Both workers and customers, with only minimal exceptions, must accept who they are assigned. Examples of platforms with this extensive algorithmically matching control are ride-share companies such as Uber and Lyft.

Slightly, further down the spectrum of platforms having control over workers assignments are platforms where customers first provide a description of their job or task to the platform. The platform then algorithmically generates a list of potential workers (along with their profiles) and presents it to the customers. Customers then select a worker from the list. Under this form of algorithmic matching, workers still have no control over whether they are on the list and thus who they potentially will work for, but customers have at least some control over who completes their tasks. Examples of platforms with this kind of algorithmic matching and control of worker assignment include personal care and health service platforms such as Care.com and pet sitting platforms such as Rover.

In the middle of the spectrum are platforms that do not algorithmically match workers, but the platforms still exercise at least some control over the matching process. Within this realm, the next level of control viewed from the perspective of the worker's control are platforms where when the worker has the platform app on, the platform provides a short list of tasks in the workers geographic area from which the worker can select.

Workers do not have control over what tasks they are shown, but they are able to select tasks they would like to do, or select none of the tasks being presented to them. Whether a worker selects a task can depend on who is posting the task, for whom the task would be completed, and where the task would be done. In this scenario, while workers have some control over whom they work for, the customers who posted the task have little or no control over who will be performing the work. Examples of these kind of platforms in the US are food and grocery delivery platforms such as Grubhub and Doordash.

Situations where workers have similar, but slightly more control over whom they work for are platforms where customers post tasks on the platform they would like to be completed and workers then go online to select tasks they are interested in. The list of tasks on these platforms typically are more numerous than the postings on the platforms described above and the tasks often can be completed online. While it can take a considerable amount of time for workers to sort through tasks they would be interested in, workers are free to choose any task they would like to complete, Customers can require workers to have limited qualifications such as having completed a set number of previous tasks with a minimum rating, but customers have relatively limited control over who accepts their posted tasks. Well known platforms that functions in this manner are Amazon's MTurk and Clickworker.

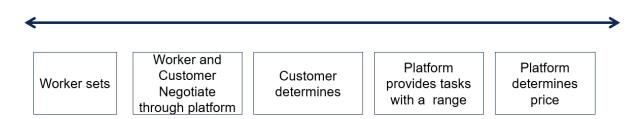
An even more collaborative worker-customer match experience exists on platforms where workers can bid on jobs. On these platforms customers post jobs that they would like to complete. Workers examine these jobs and place bids on the ones they would like to work on. These bids often include the price workers would like to be paid and their qualifications. Customers then select a worker with a winning bid. Well known platforms that function in this manner include Upwork, Fivver Taskrabbit.

Again decisions about where to make the demarcation along the spectrum of platform control over matching is a decision about whether people want a definition of platform workers that centers on the platform being a marketplace or people want a definition that concentrates on worker-employer relationships. Even if one wants to concentrate on worker-employer relationships, where one's definition lands along the control spectrum to some extent may depend on the purpose of the measure. People concerned about whether algorithms are being discriminatory may want to concentrate only on platforms that algorithmically match customers and workers and platforms that provide customers with an algorithmically generated list of workers who can be selected. People who are concerned about relationships between workers and the digital platforms- perhaps considering the platform to be the employer may want to add in platforms where customer involvement in what workers they can select is minimal.

4. How much control does the platform need to exhibit over the price workers can charge?

A second dimension of platform control that needs to be considered when constructing a definition of platform employment is how much control the platform has over the price a worker can charge. Because digital platform workers typically are paid by the tasks, this amounts to a discussion of how much control the platform has over a worker's wage. The amount of control a platform has over the price workers receive for their services often is related to how much control the platform has over the worker customer matching process, but this is not always the case However, similar to the discussion of control of the worker customer matching process, how much control a platform has over the price a worker can charge does occur along a spectrum. This spectrum is presented pictorially below.

Platform Control Over Price/Wage Worker Receives



On the right end of the spectrum where the platform exhibits the most control, the platform completely sets the price platform workers can charge. Slightly less rigidly, platforms can provide a range of prices that a worker can be paid or a range of tasks workers can select for which they will receive a fixed price. In the middle of the spectrum customers set a price on tasks workers can select. More towards the end of the spectrum where workers have complete control over the charged price are platforms where workers bid on tasks and the customer and the worker negotiation a price. The far left end of the spectrum where workers have complete control of the price they charge are electronic platforms where workers advertise their services. On these type of platforms either the posting (ad) lists the price workers will charge or potential customers reach out to the worker to determine the price being charged. This is most often associated with platforms that serve as job posting and advertising boards, but it also includes platforms where workers bid on jobs posted online. Platforms where workers sell goods or rent properties also would typically fall in this realm.

If the interest is in studying work that is digitally enabled when defining platform workers, one would want to define digital platform workers over the entire spectrum of control presented above. If instead one wanted to restrict one's definition of platform workers to those where workers could be considered an employee of the platform, one would only include in the definition of digital platform workers those where the platform had strict or fairly strict control over the price workers received.

5. How much control does platform need to exhibit over a worker's use of a platform?

The final dimension of control one may want to consider in constructing a definition of platform employment is how much control the platform exhibits over workers' use of the platform and their behavior while using the platform. Platforms can have extensive control over workers. For example, platforms can require workers to maintain a minimum customer rating to continue using the platform. Platforms can require workers to accept customers as long as the worker has the platform's app on. Platforms can also restrict the times workers can access the platform, perhaps restricting access to when there is high demand for the platform service being offered. In contrast, platforms can have almost non-existent control over workers and their use of the platform. For instance, some platforms only require workers to post legally permitted work. Similarly, platforms where people sell goods online or rent property typically have little control over what is posted for sale or rental.

6. Does the type of customer matter?

Unrelated to the control of workers, another factor people may want to consider when constructing a definition of platform work is who is being linked via the platform. In other words, who is the customer and who is the provider. Many of the early platforms in what was dubbed "the sharing economy" were designed to connect workers to personal customers. They are what

are referred to as peer-to-peer platforms (P2P) . For example, ridesharing or the rental of property are considered peer-to-peer platforms. .

As the types of platform employment expanded, so too did the types of customer and provider relationships. Within the realm of worker to customer connections, now in addition to peer-to-peer platforms, there are peer-to-business (P2B) platforms and platforms that connect customers to businesses, business to workers and then workers back to the original customer (C2B2W2C)⁹.

Platform employment also might be considered to include platforms facilitating business to business transactions, business to business platforms (B2B) However, given that the focus is on defining digital platform workers and there is general agreement that the measure of digital platform employment is a subset of and does not encompass all of the digital economy most definitions probably would want to exclude B2B platform transactions and the workers associated with them. .

It could be expected, however, that most definitions of platform workers would want to include all of the other types of customer to worker relationships. People may want to make a distinction between the type of customer to worker relationships, however. Making these distinctions could be particularly important when trying to address issues about who is the employer and who can set the terms of employment and determine when they are violated. For example, with Peer-to-peer relationships, the platform might determine the conditions of work. In peer-to-business relationships the businesses who the worker ultimately provided the good or service to might determine when the product or service provided meets their requirements.

7. How intensively and consistently does a worker have to have used the platform?

A question that is solely related to the behavior of workers is how intensively and consistently does a person have to engage in platform employment to be counted as a digital platform worker.

Digital platform employment is set up so that workers can engage in platform work whenever they want to and for however many hours they choose. This means that for some digital platform workers their digital platform employment is intermittent and engaged in very infrequently. .On the other hand, some digital platform workers may engage in digital platform employment very intensively, perhaps 5 to 7 days a week for 8 to 10 hours a day relying on it to be their full job.

Given that how intensively workers engage in platform work can vary brings up the question of whether one should make a distinction based on the intensity which with workers use the platform when defining digital platform workers. Should the definition include those who more

⁹ Although all of these connections really should be dubbed as connecting workers to various customers rather than peers (workers to businesses -W2B and customers to businesses to workers to business's customer- C2B2W2C)

casually engage in digital platform employment (almost treating it as a hobby). Or should the definition be restricted to those who intensively use the platform. Further, if the definition were restricted to those who intensively use the platform should it also be restricted to those who consistently engage in platform work treating it as their job or is having worked intensively for a short period of time sufficient

More concretely, when constructing a definition of platform workers, as a lower bound one could include everyone who is currently or has ever signed up to work on a platform regardless of whether the person has ever engaged in any platform work or is currently engaged in platform work. Under this definition, people would be counted as digital platform workers even if they had never done any platform employment. It would include in the definition people who have recently signed up to do platform work with the intention of engaging in platform work in the near future and people who signed up with platforms almost experimentally with only a vague notion of engaging in platform work at some point if their situations warranted it.

Slightly more restrictively one could define platform workers as those who engaged in platform work at least once, regardless of when the digital platform work was done. This would include in the definition, people who have engaged in platform work very recently, and those who engaged in platform work at some point in their life, perhaps as far back as the 1990's when platform work was just at its inception.

If there was a desire to restrict the definition of platform workers to those with more recent platform work experience, one could restrict the definition of platform workers to those who have engaged in platform work in the last year, If one wanted the definition to involve even more recent work one could restrict the definition of platform workers to those who engaged in platform work within , the last month or the last week depending on how current one wants the work on which the definition of platform workers is based .

When defining platform workers using these time frames there also is a question of the frequency and consistency with which workers need to have engaged in the platform work during the chosen time period. For longer time periods one may want to restrict the definition to those who did platform work more than once, although perhaps not consistently throughout the period. For example, if one chose a 1 year time period, to be defined as a platform worker one could require people to have done platform work 2 or 3 times in the last year or for a minimum number of hours. In addition to having done the platform work more than once, one also may want the work to be done consistently. For example, one may want to restrict the definition of platform workers to those who did platform work once a month in the last year or once a week in the last month, if a monthly time frame is chosen.

When considering the frequency and consistency with which platform work needs to be done when defining platform workers, one also might want to incorporate the number of hours platform work is engaged in. There are various frequency and hours combinations one may or may not want to include in the definition. One may want to exclude a person who engaged in platform work

for 40 hours once in the last year; arguing that this person did not engage in work on an ongoing basis and thus their platform work would not be considered a job and the person should not be defined as a platform worker. Similarly, one may want to exclude a person who engages in platform work for 1 hour once a month; arguing that the amount of platform work even though done repeatedly was minimal. .

As can be seen from the discussion above, there is a broad range of recency, frequency, consistency and hours combinations one could use when constructing a definition of digital platform workers. How one combines these various aspects to define platform workers may depend on the purpose of the measurement of platform workers. If one wants a definition and measure that encompasses the potential digital platform work force one may want to include in the definition everyone who currently is registered to work on a digital labor platform regardless of whether they have ever done any platform work. If one is interested in people's experience with digital platforms or have a measure of people's digital work experience one might want a definition that includes everyone who has ever engaged in digital platform work, even if it was only once many years ago. If one is interested in a definition more centered around the concept of a worker or even more restrictively a worker with a job, one might want to impose some restrictions on the frequency and intensity with which the platform work is done. In the most restrictive approach to a definition based on this focus, one might want to construct a definition of digital platform workers that incorporates the notion of repeated work, in a short recent time period, and for a minimum number of hours within that time period.

8 .Does the proportion of a worker's earnings from platform work matter?

Another question to consider when defining digital platform workers is whether the proportion of a workers' total earnings earned from platform work matters. People may want to consider defining platform workers based on the proportion of their total earnings that come from platform work for two reasons.

The first reason is that including a requirement that a certain proportion of a person's earnings come from digital platform work may help to identify whether platform work is a person's primary work activity. Concentrating on defining as platform workers people who earn a substantial proportion of their earnings from digital platform employment would exclude counting as platform workers people who occasionally engage in platform work to supplement their earnings from other work- essentially just earning pocket money through their platform work. Another way to think about this is restricting the definition of platform workers to those who earn a substantial proportion of the work earnings from platform work would define as platform workers only those who are economically dependent on their platform employment. Indirectly, restricting the definition of platform workers to those who earn a substantial part of their earnings from platform work also could exclude, or at least differentially exclude, those who engage in platform work as a second or third job from being classified as platform workers.

The second reason one may want to restrict the definition of platform workers to those who earn a substantial proportion of their earnings from platform work is that it would eliminate people who use a platform to obtain some of their customers or work, but who obtain the majority of their work or customers to do the same kind of work through some other means. For example, doctors who obtain some patients via a telemedicine platform, but who see the majority of their patients in their physical office, plumbers who own plumbing companies, but pick up a few customers by checking online postings of people requiring plumbing services, or music teachers who obtain some customers through online postings, but obtain the majority of their students through personal referrals all would be excluded if there was a requirement that a person's platform work constitute a substantial proportion of a person's earnings.

If one decides to use the proportion of their earnings individuals derive from digital platform employment as a criterion in defining platform workers, one would need to decide on a threshold proportion, For example, people might only be defined as digital platform workers if at least 50% of their earnings comes from platform employment or at least 75% of their earnings came from platform employment,

It should be noted that uses of these thresholds would, however, skew the measurement of platform workers to lower earning workers, as it would be easier for a smaller amount of platform earnings to constitute a larger proportion of a person's earnings for lower earning workers. Measurement also could be skewed by the sale of a few high value items such as a used car, (if the definition of platform workers included the sale of used items).

In general when defining platform workers, people need to decide if they want to concentrate on people whose livelihood depends on platform work or instead whether people want to define as platform workers anyone who is engaged in platform work. If there is a concern about work that is tied to health insurance, unemployment insurance benefits or the precarity of workers, one might want to concentrate on defining platform workers with regards to people's primary jobs. If this is the focus it would require workers to earn a substantial proportion of their earnings through platform employment. If instead, the desire was to obtain a broad measure of platform workers, one might want to define as platform workers anyone who had any earnings from platform work no matter how negligible. With regards to measurement, people may want to take a middle stance, defining platform workers as those who obtain a substantial proportion of their work earnings from digital platform workers, but still capture in their measure everyone who is involved in platform employment, but not count them as digital platform workers.

9. What reference time period should be used?

The final question to consider relates primarily to the measurement of platform workers, but answers to the question also impact the definition of platform workers. This question is what time reference period should be used when collecting data about platform workers.

One could choose a very short reference period of one day or one week. The use of one day would correspond to data collected in many Time Use Surveys. A one week reference period would

correspond to the reference period used in many national statistical offices' labor force surveys. If the collection of information about platform work is done as an addition to national labor force surveys, aligning the reference periods would permit data already collected in the labor force survey about a person's job(s) to be efficiently used. The use of a short reference period would mean that only people who are currently and actively engaged in platform work would be included in the measurement and thus the definition of platform workers.

Given that workers can engage in platform work intermittently, one may want to select a longer reference period - for example, one month, 6 months or a year. As shown in the discussion about defining platform workers with regards to the frequency with which workers engage in platform work, the use of a longer time would capture those who might be minimally involved in platform work and workers who briefly experimented with platform work before abandoning it. This would be particularly true if additional questions were not added asking about how frequently people engaged in platform work during the reference period and how many hours they spent on it.

It should be noted, in collecting data about platform workers, one could have more than one reference period. For example, in a National Labor Force Survey, one could ask about digital platform work both in the last 12 months and in the last week. In terms of defining digital platform workers, one would still have to make a decision about how to define digital platform workers based on when it occurred, however. (e.g. excluding or including "In the last year, but not in the last month or week")

II. How to Measure Digital Platform Employment

Whether consciously or unconsciously, the questions concerning how to conceptually define platform workers are addressed by how information to measure digital platform workers is collected and compiled. This section will illustrate how several decisions made for data collected in household surveys have embedded answers to the conceptual questions outlined in the previous section. Household surveys are focused on because the majority of the measurements of digital platform workers have been made using household surveys, and because there will always be a place for household surveys in the measurement of platform workers. But answers to the conceptual questions outlined above will be embedded in the measurements of digital platform work, no matter what the data source

<u>Identifying digital platform workers -</u> Conveying a common understanding of digital platform employment

One of the primary challenges in household surveys is conveying to respondents the concept that is being measured and this has been particularly true in identifying digital platform workers. Broadly speaking 5 methods have been used to identify digital platform workers in household surveys. These methods are 1) using the term digital platform directly in the question, 2) asking about the use of specific platforms by name, 3) asking about specific tasks workers could have done on or through a digital platform 4) asking whether a person's work entails specific attributes

of platform work and 5) combining methods such as asking about specific tasks and asking about specific attributes of platform work.

1. Using the term digital platform in the question

Early surveys such as the ONS Pilot, Eurobarameter, and the Finish LFS Pilot simply used the term digital platform or the term in combination with a few examples of common platforms in the question. For example, the ONS Pilot Survey asked:

In the last 12 months have you used a digital platform to find work on a short term, payment by task basis?

And the Swedish Labor Force Survey asked:

Have you ever tried during the past year to get an assignment via digital platforms (e.g. Uber, Urb-it, Taskrunner, Offerta etc.)

Testing of these questions and examination of the collected data using them revealed that the term "digital platform" was poorly understood by respondents. Consequently, this approach to identifying platform workers has largely been abandoned. Although the term platform continues to be used in the introduction to questions using other methods of identifying digital platform workers.

2. Asking About the Use of Specific Platforms

Another approach to identify platform workers that has been used in household surveys is to ask whether people had done any work through specific, named platforms. Typically, in this approach each named platform represents a different kind of platform activity. This approach is what was used in the 2017 Finnish labor force survey, where people were asked:

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

As discussed, in a methodological note about the Finish survey, this approach was chosen to avoid including in the question a long definition of what was meant by platform work. (Sutela, 2018) It should be noted, however, that this approach may result in respondents just concentrating on the platforms listed. It also risks missing new platforms that arise, and platforms changing names or going out of business.

3. Asking about specific tasks that workers do through platforms

Rather than asking about the use of specific platforms that cover a variety of tasks, another related approach is to ask about specific tasks that people can do through an app or website. In this approach, tasks are asked about separately and sometimes the names of one or two platforms are provided as examples when the task is asked about. This approach was used in

very early surveys about digital platform work, but it continues to be one of the most common ways of identifying digital platform workers.

The number of activities asked about have evolved and expanded over time, however. For example, very early surveys only asked about two activities -providing ride services and offering private accommodation services. In contrast the EU 2022 pilot module specifies 15 activities where the 15 activities were taxi services; delivery of food or another other good; renting out a room, house or any accommodation; selling or advertising to sell any good through the internet, platform, or phone; cleaning services; handiwork; child or elder care; medical or health care services; tutorials or teaching services; translation services; programming/coding; web or graphic design; online support or checks for online content; data or text entry; and creating content such as videos or texts.

In addition to expanding the number of tasks asked about, later surveys using this approach further try to focus respondents on the concept being asked about, by providing an introduction to the questions specifying that the work needs to be mediated through a platform, cannot include telework, and must be done for pay.

The advantage of asking about specific tasks is that it is very direct and clear. On the other hand, surveys using this approach have found that customers using the service being asked about sometimes reply yes to the question. Survey designers and analysts have also found that it is important to collect the name of the platform being used in order to screen out workers who were not digital platform workers. An example of a more recent survey that has used this approach is the 2024 module to the Canadian Labor Survey. The introductory paragraph and question asking about the first tasks in this survey is

Intro

Now, we would like to ask you a few questions about work that can be carried out or received through an Internet platform or app.

We are referring to work **done for income or profit**, provided through or mediated by online platforms, such as Uber, SkipTheDishes, or Upwork.

This **does not include** remote work or the use of software to make phone or video calls (<u>e.g.</u>, Zoom or MS Teams).

In addition, this **does not include** using the platforms as a customer....

Q1 In the **last 12 months**, did you use an Internet platform or an app to **provide paid taxi** or ride services in order to earn income?

As can be seen from the evolution of this approach; when asking about specific tasks, those interested in measuring platform workers need to be aware that the types of activities that might be considered digital platform work can change and expand over time. For example, when many of the early surveys were conducted using this approach the renting of one's car on a digital platform was generating a great deal of interest. However, the platforms that facilitate this activity have largely gone out of business. On the other hand, other forms of digital platform work such as telemedicine did not exist until the mid 2000's

4. Asking whether work involved particular attributes of platform work

A completely different approach to identifying whether a person is a digital platform worker is to ask about the attributes of a person's work. This approach involves identifying several features of work that are associated with digital platform work and then asking questions about whether a person's work has these features. This approach, although it could, does not have to involve the use of specific platform names. It also is not restricted to a certain set of activities. Surveys that have used this approach include: BLS's 2017 and 2023 Contingent and Alternative Work Arrangement supplements to the Current Population Survey (the CWS), the California Work and Health Survey, the ad hoc module to the French Labor Force Survey. and the COLLEEM survey.

Several attributes could be selected that are indicative of platform intermediation. The most common attributes that have been selected in previous surveys are whether an app or website connects workers to customers, and whether people are paid through the app. Other attributes that could be used to identify platform workers are whether a person can be rated through the website or app, whether the app or website controls the price a worker can charge, whether workers are free to reject work and questions about how much control the platform has in the matching process.

In the 2023 CWS, the attributes to identify people as a digital platform worker that were asked about in separate questions were, whether workers obtained short term tasks or projects through an app or website, whether customers paid workers through this app or website, the duration of the typical task, whether customers could rate workers through the app or website the worker used, and whether a worker had to set up a profile prior to accepting work on the app or website. In addition, to screen out potential false positives the name of the primary platform that workers used was collected.

An advantage to this approach is it is relatively resistant to changes in and expansions in the type of digital platform employment. It also has a lower risk of customers who used a specific platform or service being identified as platform workers. However, the attribute approach is not completely immune to changes in how digital platforms function. For example, how workers have been paid by digital platforms has evolved over time.

5. Hybrid approaches

Finally, surveys trying to identifying platform workers can use a combination of approaches. For example, a survey could ask whether specific tasks were done using an app or website and then ask about attributes of the reported work. This is the approach that was taken in the December 2024 Module to the Canadian Labor Force Survey. For 10 different activities, people were first asked, whether they used an app or website to provide the specified good or service for money. If people said yes to any of these activities, they were then asked questions about how the platform operated. These attributes included whether the platform assigned clients to the worker, determined how workers were paid, determined or influences the price workers received, and whether the platform managed a rating system ...Canada uses these attributes in identifying and defining platform workers. Other household surveys collect this type of information too, but do not use it in defining platform workers, but rather consider them conditions of work.

The decision about what approach to take with regards to identifying digital platform workers in of itself is largely independent of and does not directly address any of the conceptual questions presented in the previous section. The content of specific approaches taken does however embody answers to some of the conceptual questions. For example, when asking about specific tasks done on platforms the types of tasks included will reflect decisions about the amount of labor services that need to be in the work to define a worker as a digital platform worker. Asking about attributes of work that are indicative of platform work can incorporate decisions about the amount of control platforms need to have over workers in order for the worker to be classified as a platform worker.

For ease of explication the remainder of the discussion about the choices made for household surveys will be illustrated using 5 household surveys. These are 1) the 2017 Collaborative Economy and Employment Survey conducted by the European Union's Joint Research Center (COLLEEM), 2) the 2023 Contingent Worker Supplement to the Current Population Survey- U.S's labor force survey (CWS), 3) the 2024 supplement to the Canadian Labor Force Survey, 4) the 2023/2024 supplement to the Australian Labor Force Survey and 5) the 2022 EU Pilot Survey attached to 18 EU countries' labor force survey coordinated by the EU statistical office Eurostat.

The COLLEEM was chosen because it was a stand alone survey specifically designed to measure digital platform workers. The other surveys were chosen because the measurement of digital platform workers has been evolving overtime, and these surveys represent relatively recent implementations of the measurement of digital platform workers. .

Reference Period, Frequency and Consistency of Work

Another decision that needs to be made when designing the measurement of digital platform workers in a household survey is what reference period or periods to use. The selection of a reference period and the inclusion or exclusion of questions asking about frequency, intensity and consistency of platform work within the chosen reference period will directly impact the definition of digital platform workers.

The most common reference period used in the 5 surveys highlighted but also other household surveys is the last 12 months. The exception is the 2023 CWS which uses the last week as the reference period and the COLLEEM which initially asks if people have ever engaged in digital platform work prior to asking about the last 12 months.¹⁰

Several of the surveys that use a 12 month reference period, also use a second reference period of the last month to ask additional questions. The questions using a monthly time frame include inquiries about hours of work, earnings and conditions of work. These surveys also sometimes use a third reference period of last week – asking if any digital platform work had been done in this week. The exception to this is the Canadian labor force survey module which retains a 12 month reference period throughout the survey.

Two of the 5 surveys being highlighted explicitly ask about the consistency of platform work- the Australian 2023/2024 labor force module and the COLLEEM. Both of these surveys using a 12 month reference period ask whether people have completed digital platform work at least once: a week, month, every 3 months, every 6 months, or the last year. They both also ask how many hours per week people usually spend doing platform work, although the COLLEEM survey asks for the last year while the Australian 2023/2024 survey ask for the last 4 weeks.

Although additional information is collected in most of the surveys that use 12 months as the reference period, none of the analysis using the data, except the COLLEEM, have used this additional information in defining platform workers. This means in all of these surveys that use a 12 month reference period except the COLLEEM the definition of digital platform workers that has been chosen is one where the intensity and consistency of platform work is quite low. People who have only engaged in platform work for 1 hour in the last year are counted as digital platform workers.

In contrast, in a summary report written using data from the COLLEEM one definition that was constructed defines platform workers as those who engage in platform work for at least 10 hours

 $^{^{10}}$ The Australian 2022/2023 supplement to the Australian Labor Force Survey used the last 4 weeks as the reference period.

a week in the last year. This definition of digital platform workers is one where workers frequently and consistently engage in digital platform employment with a fair amount of intensity.

The 2023 CWS, which uses a 1 week reference period, does not collect any information about the frequency or consistency with which platform workers do platform work. The platform work would have to have been engaged in very recently, however, as it needs to be done in the reference week. To be included in this measurement a person also would have to have worked for at least one hour during the reference week with this hour of work being associated with a person's main or second job. Given this structure, the implicit definition of digital platform workers embedded in the CWS with regards to the intensity with which people engage in platform work is open to interpretation. It is safe to say, however, that the implicit definition embedded in the CWS imposes no constraints on the frequency or the consistency of the platform work and thus is quite broad with regards to this factor.

Amount of Labor Services and Amount Mediated

As was shown above, another key decision that needs to be made when operationalizing a definition of digital platform workers is how much labor services needs to be embodied in the platform employment for a worker to be counted as digital platform worker and how much of this labor needs to be mediated by the platform.

The 5 surveys being highlighted are fairly evenly split on where they made the demarcation along the labor services, capital spectrum. Three-the 2023 CWS, the 2023/2024 Australian labor force survey and the COLLEEM- restricted their measurement to people whose platform work involved labor services or labor services with assets. Two the 2024 Canadian labor force module and the 2022 EU Pilot Survey include the selling of goods and the rental of accommodations.

The 2023 CWS and the 2023/2024 Australian labor force surveys both start their measurement of digital platform workers by asking whether people's work involved short term tasks or projects. This will inherently focus respondents on platform work that involves labor services. In addition, the 2023 BLS CWS in follow up questions explicitly asks whether the platform work previously reported involves the selling of hand made or used goods, or the renting of property. These follow up questions were included in the survey in order to exclude these activities when defining DPE workers.

The Australian surveys after the initial question, asks about specific tasks people could engage in through or on an app or website. This set of tasks does not ask about the selling of goods or the rental of accommodations or other assets, although an other category is included. The set of tasks specifically asked about further indicates a desire to focus on labor services that are mediated by the platform in the definition of digital platform workers.

The COLLEEM survey in addition to asking about in person and website on-line platform work also asks if people have ever earned any income online selling goods, renting property, leasing assets, Crowdfunding, or lending money on peer-to-peer platforms. Therefore, the COLLEEM survey

could implicitly have the most expansive definition of digital platform workers because it could include the provision of financial services. However, the follow up questions in the COLLEEM survey only ask about the online and web based work and these are the only two income sources included in their definition of platform workers.

In contrast the 2022EU pilot and the Canadian labor force modules that identify platform workers by asking whether workers engaged in specific tasks through or on a platform do include the selling of goods and the rental of property in the types of activities asked about. The EU 2022 pilot tries to determine whether someone's rental of property involves labor services by asking a follow-up question- specifically whether the person provided accommodation services such as cleaning, advertising the property or catering to tenants. The EU 2022 pilot also include a follow up question for those who said they sold things on line asking if the goods were produced by the person or explicitly obtained to be sold online. The Canadian labor force modules also instructs respondents to exclude the selling of second hand goods that are no longer needed. Therefore, these measures of platform workers try to restrict the definition of platform workrs to those whose activity involved a significant amount of labor. These measures do not, however, have any restrictions with regard to the amount of labor mediated by the platform.

Platform Control Over Workers

Another set of decisions that have been made is what questions to include about the control platforms have over workers and whether to use these in defining digital platform workers.

Again, for ease of discussion, the presentation of decisions that have been made on this factor will be based on the same 5 surveys used in the discussion about the reference period. These decisions have been both explicit and implicit.

The 2023 CWS does ask whether customers pay through the app or website the worker used to obtain customers (which implies workers are paid by the platform) and whether workers are rated by customers through the same app or website. These two questions could be indicative of platforms having some control of workers, but it is not necessarily so. Being paid by the platform is not indicative of whether the platform has control over the price a worker is paid, how workers are matched to customers or whether the platform controls workers' behavior in other ways. Also while customers may rate workers, this is not indicative of the platform using those ratings to control whether and what work people receive. Both the questions about whether customers pay through the app or website and the existence of a rating system were included in the CWS to identify platform workers, not to measure whether platforms have some control over workers. One could conclude, however, workers posting on a website and being paid offline would be excluded from the CWS definition of platform workers.

In contrast, the COLLEEM survey identifies platform workers as those who have been digitally matched to customers. This could be interpreted as workers being algorithmically matched. If this assumption is true, the COLLEEM measure would be one where platforms have a great deal of control over the worker. In a set of questions about the conditions of work the COLLEEM

survey also asks whether the platform constantly monitors a worker and how important the rating system is for a worker obtaining work. However, answers to these questions were not used in defining platform workers. If they were this also would result in a definition of platform workers, where platforms have a large amount of control over workers.

The other 3 surveys highlighted do contain explicit questions about platform controls over workers. However, only researchers at Statistics Canada have used answers to these questions to try to define platform workers (Hardy 2024). The other surveys have included the questions to obtain a sense of how platforms operate and as a condition of work. In addition, what controls platforms have over workers that have been asked about has varied.

The EU2022 pilot asks how work is assigned, whether a worker is free to reject offers without repercussions, how working hours were set, how the price was set and whether there was a rating system through which customers could rate workers that influenced the work customers received. The 2023/2024 Australian labor force module asks a subset of these questions, excluding the question about whether workers are free to reject offers and the questions about a rating system.

If in defining platform workers based on answers to these questions were used, the resulting definition of platform workers would be one where platforms exhibited a large amount of control over workers. If they are not, the implicit definition of digital platform workers underlying the 2022 EU pilot, and the 2023/2024 Australian labor force survey is quite broad with the platform exhibiting no control over workers. It is anyone engaging in work to earn money using an app or Internet platform.

The December 2024 Canadian labor force module also includes very explicit questions about the amount of control platforms have over workers. In addition to asking about how workers were paid, the survey includes questions centered around whether the platform determines or influences the price workers receive, manages a rating system, assigns clients to the worker or imposes rules on how a worker can do the work or what the worker can say. Using this information Statistics Canada developed 3 definitions of digital platform workers which they argued varied with the level of control exercised by the app or website (Hardy,2024) Their narrowest definition of digital platform workers with platforms having the most control was one where platforms paid workers directly. Their intermediate definition was one where platforms exercised some control over the work process, and their broadest definition was one where platforms did not exercise any control beyond offering a tool for workers and customers to connect.

Proportion of Earnings

Whether information about the proportion of earnings a worker derives from platform work is collected in the 5 surveys being highlighted is quite dichotomous. In the 2023 CWS and the Canadian labor force surveys this information is not collected. These surveys are however, able to identify whether digital platform work is a person's main job. Platform work being a person's main

job would seem to be indicative of a person earning a sizeable proportion of their earnings from platform work

In the modules to the Australian labor force surveys, the 2022 EU pilot and the COLLEEM survey the proportion of a person's monthly income that comes from platform work is collected. In the analysis of the COLLEEM survey data the proportion of monthly income derived from platform work is used in the definition of platform workers. Specifically, the COLLEEM's main definition of platform workers is people who earn 50% or more of their income via platforms and/or work via platforms more than 20 hours a week. For the other surveys that collect this information, the proportion is not used to define platform workers. Rather the information is collected to determine how dependent workers are on their platform work

Mode of Work/Location and Type of Customer

The other decisions about the type of customer and location of work have been made fairly uniformly across the 5 surveys highlighted. All the surveys have collected information for both modes/location of work - in-person platform work and online web platform work. All the surveys also have excluded business to business transactions from the measurement of digital platform workers.

As can be seen from the description of the decisions various household surveys have made with regards to measuring digital platform workers, when combining all of the factors outline in the conceptual section none of the surveys have implemented a more restrictive measure on all of the factors, and what factors surveys have been strict on has differ. For example, the 2024 Canadian labor force survey emphasized incorporating a measure of platform control in their measure of digital platform workers, while the COLLEEM emphasized incorporating a measure of consistency and intensity of the work.

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