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ECLAC OFFICE
IN WASHINGTON, D.C.

Labour issues in the digital economy

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Abstract

Digital work platforms are transforming labor markets around the world. Firms that own, manage and deploy these work platforms have reframed employer–worker relations by defining their core business as the provision of the technology that enables certain services to be provided rather than the provision of those services, and offering their workers independent contractor arrangements rather than employee contracts. This has significant consequences in terms of wages, jobs security and other working conditions.

Digital work platforms such as Uber or Lyft have brought several efficiency gains to the economy. Besides the reduction in search costs and better use of resources they also create positive externalities in other markets. For instance, they reduce fossil fuels spent idling or waiting for passengers and traffic congestion for a given level of demand.

Digital work platforms also increase worker welfare by offering unparalleled flexibility in setting work hours and most permit a workday to be segmented, allowing certain parts of the population who otherwise would not be able to work (due to other commitments or constraints) to have some source of income (Berg, 2016).

At the same time, they pose significant challenges in the labor market. Companies replace employees with contract workers to control costs but this may lead to lower pay, benefits, and job security. Therefore, there is an urgent need for a policy debate on how to best prepare workers for this new reality. This document describes three main concerns: the issue of worker misclassification in digital work platforms, the lack of social security systems for workers in the gig economy that are not considered employees, and the problems that the isolating nature of on-demand work presents with respect to worker organization and the right to collective bargaining.

Introduction

Digital work platforms are transforming labor markets around the world. Firms that own, manage and deploy these work platforms have reframed employer–worker relations by defining their core business as the provision of the technology that enables certain services to be provided rather than the provision of those services, and offering their workers independent contractor arrangements rather than employee contracts. This has significant consequences in terms of wages, jobs security and other working conditions.

In the United States, economic activities carried out using online platforms such as Ebay and Etsy reflect an average yearly spending of \$57.6 billion, of which approximately \$22.1 billion comes from digital work platforms like Uber and Lyft (Colby & Bell, 2016). These platforms in the on-demand economy, also known as the gig economy, are characterized by their ability to leverage large amounts of real-time data to efficiently match a large number of suppliers and consumers.

Digital platform work typically entails self-contained tasks that can be performed relatively unsupervised, require short time commitments on the worker’s side, and are more cost-efficiently performed by a human being than a machine. This cost efficiency usually arises because the job consists of cognitive tasks that are difficult to program into an algorithm, e.g., verifying if a social media account is run by a real person or if it is a spam account, or because they consist of manual tasks that involve non-scripted adaptability, pattern recognition and social interaction, e.g., house cleaning or transporting people (Autor, Levy, & Murnane, 2003; Autor, 2015).

There are two forms of digital platform work: crowdwork, which works as an online service market where providers do not have to be physically present, and on-demand work via apps, where the service provider must be physically present.

The most well-known example of a crowdworking platform is Amazon’s digital work platform, the Amazon Mechanical Turk (AMT), fittingly named after Wolfgang von Kempelen’s chess machine¹. Reinforcing the notion of non-automatable tasks, Amazon refers to the work its workers perform as Human Intelligence Tasks (HIT) or —artificial artificial intelligence” tasks (The Economist, 2006). Other crowdwork

¹ The Mechanical Turk was a 18th century chess playing machine whose inventor claimed was fully autonomous. However, it was found that it was in fact operated by a hidden chessmaster (The Economist, 2006).

platforms similar to the AMT are Crowdfunder, Crowdfunder and Clickworker, which provide services ranging from survey filling to graphic design. Examples of platforms that require physical presence are Uber (transportation), Lyft (transportation), Postmates (delivery), Handy (home services), Taskrabbit (home services) and Care.com (home services) (Smith & Leberstein, 2015).

Although better data is critically needed, the data that exists points to a growing number of the population engaging in the workforce through these platforms. It has been estimated that the percentage of workers in the United States that participate in these platforms is currently low, around 715,000 workers at the end of 2015, or 0.5% of the U.S. labor market (Harris & Krueger, 2015; Katz & Krueger, 2016; Farrell and Greig, 2016). However, there is a growing body of evidence that these digital work platforms have increased in size at a rapid pace in the past decade. For example, Hathaway and Muro (2016) estimated that between 2010 and 2014 there was a 69% increase in independent contractor drivers in the United States (from 200,000 to 350,000) that coincided with the start of Uber’s operations in 2010. A survey conducted by the Pew Research Center between July and August of 2016 found that 8% of adults in the U.S. earned money in the last year working or performing a task on a digital platform. Farrell and Greig (2016) estimated that from late 2012 to late 2015, about 10.3 million people earned income on some form of digital platform—about 1.75 million more people than the population of New York City. In the case of transportation services in the United States, as of December 2014, Uber had around 160,000 active drivers² and an estimated 450,000 registered drivers in 2016 (McCormick, 2016) while Lyft had 51,000 drivers (Table 1). As a point of comparison, in 2014 there were 233,700 taxi drivers and chauffeurs in the United States (Bureau of Labor Statistics (BLS), 2015a).

Table 1
Largest digital work platforms by field, size of workforce and operating area, circa 2014
(Share of sample in percentages)

Company	Field	Size of Workforce	Operating Areas
Care.com	Home services	9,600,000 ^E	International
Crowdfunder	Crowdfunder	8,000,000 ^I	International
Crowdfunder	Crowdfunder	5,000,000 ^H	International
Clickworker	Crowdfunder	800,000 ^J	International
Amazon Mechanical Turk	Crowdfunder	500,000 ^G	International
Uber	Transportation	162,037 ^A	International
Lyft	Transportation	51,000 ^B	United States
Taskrabbit	Home services	30,000 ^D	International
Postmates	Delivery	10,000 ^F	United States
Handy	Home services	5,000 ^C	United States

Source: Adapted and updated from Smith and Leberstein, 2015, p. 3.

^A Active United States Uber drivers only. Hall & Krueger, 2015, p. 14. Registered drivers represent a much larger figure, around 450,000 (McCormick, 2016).

^B Newcomer & Picker, 2015.

^C The Economist, 2015a.

^D Zimmermann, 2015.

^E Care.com, 2016a.

^F O’Brien, 2015.

^G Fingas, 2014.

^H Chen, 2015.

^I Crowdfunder is now known as OneSpace. Crowdfunder.com, n.d.

^J Clickworker.com, n.d.

These digital work platforms have brought several efficiency gains to the economy. The use of IT and high speed internet allows platforms to efficiently match supply and demand for several industries in a way traditional allocation methods cannot.

In the case of transportation apps like Uber and Lyft, for example, having knowledge of the actual real-time supply and demand for rides allows the company to estimate and set a fare close to a market clearing price. As opposed to taxi fares, which are relatively fixed, Uber fares are increased during rush hour via surge

² Defined as drivers that had provided four or more rides in the month before the survey (Hall & Krueger, 2015).

pricing, i.e., a multiplier applied on top the base fare. This price-setting mechanism allows for a more efficient allocation of resources in the private transportation market. When demand increases, the work platform increases prices, which raises the supplied quantity of drivers.

It also allows for a more optimal capacity utilization. For example, in Los Angeles, it has been found that for every mile UberX drivers travel with a passenger, they travel 0.56 miles without one. Regular taxi drivers on the other hand drive about 1.46 miles without a passenger for every mile driven with one, meaning that using traditional radio or street hailing techniques they incur more miles without an active fare (Cramer & Krueger, 2016).

Besides the reduction in search costs and better use of resources, the efficiency gains from the real-time matching of supply and demand gains also creates positive externalities in other markets. For instance, it reduces fossil fuels spent idling or waiting for passengers and traffic congestion for a given level of demand.

These mechanisms open up the possibility to be scaled up to cover the needs of large populations. For example, using a real-time model to allocate rider demand, Alonso-Mora, Samaranayake, Wallar, Frazzoli and Rus (2016) estimated that 98% of total taxi demand in New York City could be covered with 3,000 4-person vehicles, as opposed to the city's current 14,000 taxis in circulation, implying that these methods could be implemented within an urban planning and policy context.

Digital work platforms also increase worker welfare by offering unparalleled flexibility in setting work hours and most allow a workday to be segmented, e.g., working a couple of hours in the morning, then resuming in the evening. There is also some evidence that these forms of work allow certain parts of the population who otherwise would not be able to work (due to other commitments or constraints) to have some source of income (Berg, 2016).

Digital work platforms allow efficiency gains by facilitating the matching between supply and demand of service industries such as transportation. At the same time, they cause significant challenges in the labor market because of the kind of jobs they create and the implications these work arrangements have for a growing segment of the population participating in them. For companies, the biggest incentive for replacing employees with contract workers is more control over costs. For workers, these changes may lead to lower pay, benefits, and job security. Therefore, there is an urgent need for a policy debate on how to best prepare workers for this new reality: new types of social security and reforming health and pension systems to accommodate on-demand employees. This document describes three main concerns. First, worker misclassification in digital work platforms. This is relevant because classification determines the extent of the work platform's³ obligations to the worker in terms of workers' benefits and protections and sets the legal basis on which disputes can be resolved. Second, the lack of social security systems for workers in the gig economy that are not considered employees. Third, the problems that the isolating nature of on-demand work presents with respect to worker organization and the right to collective bargaining.

³ For the effects of this document, whenever the term "digital work platform" is used in the context of worker-employer rights and duties, it will refer to the firm that owns and deploys the software. E.g., in the case of Uber, it refers to Uber, the firm that hires drivers, not Uber, the software that matches drivers and customers.

I. Labor issues regarding the on-demand economy

A. Non-standard employment and employee misclassification

Most digital work platforms classify their workers as independent contractors and not employees (De Stefano, 2016). The main benefit of being a contractor is that it offers a higher level of flexibility: contractors determine when, how and for whom work is performed, while employees do not. However, in the United States independent contractors are not protected under the Fair Labor Standards Act (FLSA) and as such, are not guaranteed a minimum wage, bear the full cost of social security contributions, and receive no workers' benefits such as holidays, insurance, maternity leave or paid sick leave. Independent contractors also have to cover their business expenses (De Stefano, 2016), which further reduces their take-home pay. In essence, the reduction in the firm's responsibilities to the worker leads to an increase in risk and independence for the worker.

On paper, there is a clear distinction between both forms of work. Independent contractors fall under self-employed work, i.e., they run their own business, can have their own employees, maintain separate business checking accounts, have more than one client, provide their own tools, set their own hours, and invoice and report payments to the Internal Revenue Service (IRS) using Form 1099-MISC. Employees, on the other hand, work for one employer and perform duties assigned and controlled by said employer. They are provided the tools to perform their job and file wages received to the IRS using Form W-2 (Department of Labor (DOL), 2014; IRS, 2017; U.S. Small Business Administration, n.d.). In essence, what distinguishes an employee from an independent contractor is that employees are economically dependent on their employer, while contractors are in business for themselves (DOL, 2015). In many cases, a contractor delivers a product or service to the clients' specifications, but the process in which this product or service is made is not under the clients' control. Employers, on the other hand, have control over the way an employee works. However, in practice, the distinction is not always as clear cut, particularly in the case of digital platform work, which leads to the risk of misclassification.

Misclassification occurs when work that should be considered standard is passed off as an alternative arrangement such as contracting. This increases risk to a worker who legally should be a regular employee

with the benefits that go with it. In the United States, it is estimated that around 10% and 20% of employers incorrectly classify a direct employee as an independent contractor, particularly in industries such as construction, trucking, housecleaning, in-home care, and most recently, digital platform work—industries where it is most profitable or harder to determine worker status, especially when work is performed in decentralized locations, in isolation, or remotely (Carré, 2015). If workers are incorrectly classified as independent contractors instead of employees, not only are workers affected by this increase in costs and reduction in benefits, but tax revenues for the government are reduced, legitimate business activity is reduced, and companies that misclassify obtain an unfair advantage with respect to companies that properly classify their employees (DOL, 2015).

In the context of firm-worker relationships in digital work platforms, misclassification has become one of the main points of contention. While it is clear that a person that provides a service to a digital platform is a worker, it is not clear whether or not some of these are in fact, employees. The argument employed by several digital work platforms is that they are software providers and not service providers. As such, they only provide a supply and demand matching tool and are not employers. Uber's 2015 user agreement, for example, stated: "You acknowledge and agree that Company is a technology services provider that does not provide transportation services" (Uber, 2015, para. 3)⁴. Most agreements explicitly mention that there is no employment relationship between the company that provides the software and the worker that performs the job, e.g., Amazon refers to its requesters and providers as third parties and states that their agreement does not constitute an "association, joint venture, partnership or franchise, employer/employee relationship between Providers and Requesters, or Providers and Amazon Mechanical Turk." (AMT, 2014).

Despite the wording in these contracts, in the United States the working relationship between a firm and a worker is not determined by what is stated in the agreement, but rather, on the reality of the working situation (DOL, 2014).

Several tests, referred to as economic realities tests, are employed in order to legally determine whether a worker is an independent contractor or an employee. According to guidelines published by the Department of Labor (2014; 2015), there is no dominating characteristic among these economic realities, but rather, it is up to a court to weigh all of these factors to determine the proper job classification of a worker.

The six key factors that are used to determine worker classification in the United States are:

1) the degree to which the work performed is a core function of the firm's operation: if a worker's job functions are part of the firm's production process or the service it is in business to provide, it is more likely that the worker is economically dependent on the firm. This does not depend on where the work is performed, given that telecommuters can perform work that is integral to a company. Also, the same task could be classified differently according to the firm's line of business. For example, performing janitorial work for a cleaning company would be considered an integral function of the company, but performing the same kind of work for a business consulting firm would not.

2) the extent to which a worker's managerial skills (i.e., hiring or investment skills) affect his or her opportunity for profit or loss: if the worker's hiring, advertising, or investment skills have a direct bearing on the profits or losses they perceive, it is more likely that the worker is an independent contractor.

3) the relative investment between the worker and the firm: if the worker's capital investment in equipment and facilities is similar to that of the firm, that hints at the fact that he or she is a contractor, since that means the worker bears some of the activity's risk. If a worker spends a significant amount in advertising in order to find more work, that hints that he or she is a contractor. It should be noted that owning tools or equipment in itself is not a determining factor, since they might be a requirement to work for an employer.

4) the type of skills and level of initiative required to perform the work: if a worker exercises skills that hint at independent business judgement (such as the managerial skills mentioned in point 2) or a high level of entrepreneurial initiative, it is more likely that he or she is an independent contractor. The prevalence of

⁴ Uber has since amended its user agreement for 2016 to simply state that "use of the services does not establish Uber as a provider of transportation" (Uber, 2016a, para. 19).

technical skills, on the other hand, is more common among employees. The level of skill itself does not determine the type of job, but rather, the nature of the skill.

5) the permanence of the worker-firm relationship: permanent or indefinite work arrangements suggest that the worker is an employee. However, it is not a sufficient condition, as some industries have non-permanent work arrangements but are not necessarily independent contracting positions. For example, harvesting, while seasonal in nature, is an essential part of an agricultural firm's production process and tends to be performed by seasonal employees.

6) the degree of control the firm exercises over the worker: firms determine wages for their employees while independent contractors set their own rates. Contractors also tend to set their own working hours, but as mentioned before, schedule or location flexibility does not necessarily imply that the job should be classified as an independent contractor position. If a firm has significant control over how a job is performed, e.g., determines procedures to follow, imposes a uniform or dress code, requires or provides job training, then it is very likely that the relationship between the firm and the worker is one of employment. For example, FedEx settled two recent cases in 2015 and in 2016, due to incorrectly hiring its drivers as contractors instead of employees (Esterl, 2016). One of the arguments used to support the level of control that FedEx exerted over its workers was the fact that drivers have to wear a FedEx uniform and adhere to strict workplace procedures.

These criteria have been utilized extensively in the realm of digital platform work to determine the job relationship between digital platforms and workers, particularly in the case of Uber (see *Alatraqui v. Uber Technologies, Inc.*, *O'Connor v. Uber Technologies, Inc.*, *Yucesoy v. Uber Technologies, Inc.*, and *Berwick v. Uber Technologies, Inc.*). In 2012, the California Labor Commissioner claimed drivers had the degree of freedom and flexibility characteristic of a self-employed worker, and that Uber was a software company, not a transportation company. However, in 2015 it ruled in favor of Barbara Berwick, stating she was Uber's employee and should receive reimbursement for the number of miles driven, given that drivers can choose when to work, but once they decide to do so, Uber strictly monitors and regulates their activity much like an employer would. In this case, the specific arguments used were that Uber determines which passengers a driver must transport and that transportation is the main line of business for Uber. Furthermore, Uber is involved in every aspect of the operation, from vetting drivers, to specifying the particular characteristics a car must possess. Uber also determines the payment made to drivers, and they have no formal means to negotiate a higher fee (Weber & Turcios, 2015).

More recently, the New York State Department of Labor ruled that two former Uber drivers were employees and as such, were eligible for unemployment payments (Scheiber, 2016). In this case, the determining factor was mainly the level of control Uber exerts on its drivers, which is very similar to the level of control New York black-car transportation companies exercise over their drivers. Black-car drivers have previously been found to be eligible for unemployment benefits.

In the United Kingdom, the Central London Employment Tribunal ruled that two Uber drivers were entitled to holidays, rest breaks, and minimum wage, but not sick pay nor protection against unfair dismissal (Adam, 2016). The winning argument in the case was that drivers cannot negotiate fees with passengers and can be penalized for refusing to transport a customer, whereas an independent contractor is able to set their own fees and can choose their clients.

It should be noted that these case decisions apply only to the workers involved and do not apply to all ridesharing drivers, but they do set a precedent for future cases involving the classification of workers in the on-demand economy. On a larger scale, two class action lawsuits have been brought up against Uber on the same topic in California and Massachusetts and were settled. In these cases, the settlement agreed to maintain independent contractor status, but Uber will pay between \$84 million to \$100 million to the plaintiffs (approximately 385,000) represented and will work with drivers in both states to create a driver's association (see Section C, "Collective bargaining").

In the European Union, the European Court of Justice has recently opened a court case to decide whether Uber would be considered a technology company or a transportation company in the entire E.U. (Scott, 2016). On this point, the U.S. District Court in the Northern District of California mentioned that "it is clear that Uber is most certainly a transportation company, albeit a technologically sophisticated one." (as cited

in Perritt, Jr., 2016, p. 24). The fact that the companies that own the digital work platforms provide software does not automatically exempt them from being employers. The digital work platform is in essence a means to an end—a mechanical matter—, not the end itself—a matter of substance. Uber’s end goal is not to provide the software, but rather to allow the transportation of customers. As the Northern District of California Court mentioned:

—Uber engineered a software method to connect drivers with passengers, but this is merely one instrumentality used in the context of its larger business. Uber does not simply sell software; it sells rides. Uber is no more a ‘technology company’ than Yellow Cab is a ‘technology company’ because it uses CB radios to dispatch taxi cabs.” (As cited in Perritt, Jr., 2016, p. 24).

In this regard, it can be seen that that the provision of software in itself—the argument employed by the digital work platforms—is not a determinant of job classification. Since the substance of the business is still to provide a certain service, such as transportation or house cleaning, the first economic realities test (whether or not the worker performs a core function of the business) hints that workers in these digital platforms are in many cases employees with all the attendant rights granted by the Fair Labor Standards Act.

Some authors argue that the six economic realities tests were designed for 20th century workers and do not really fit the modern labor situation. As a result, workers in the digital on-demand economy are neither independent contractors nor employees, and as such, a new legal classification with its specific set of workers’ protections and access to social security safety nets should be created (see Hall & Krueger, 2015). However, several authors argue that it is much simpler and beneficial to maintain existing classifications and make these workers full employees with all traditional rights (Eisenbrey & Mishel, 2016; De Stefano, 2016).

There is no overarching consensus in the discussion regarding worker classification in the on-demand economy. While many considerations are common across work in the gig economy, the variation in types of work and working conditions are rather large, and as such, some workers meet the legal criteria to be classified as employees and some do not. However, several conclusions can be drawn from the classification discussion. First, misclassification poses a large risk for rightful employees in the on-demand economy. It deprives them of legal protections such as those from the Fair Labor Standards Act and releases the employing firm of most associated responsibilities. Second, providing software to carry out a job does not exempt companies from being employers. Adopting productivity enhancing processes or tools does not alter the nature of a business. If taxi dispatches were to adopt new technologies to allocate taxi supply and match it with riders, it would not make them software companies overnight. In that regard, if the digital work platforms’ main argument for classifying their workers as independent contractors is that they are merely software providers, then they are likely misclassifying them.

B. Social security in the on-demand economy

According to the U.S. Government Accountability Office (2015), around 40.4% of the employed U.S. population in 2010 was under some form of non-standard employment. This means that there is a large share of workers that lack the social safety net standard employment provides. Workers’ benefits like unemployment insurance are necessary to allow individuals to smooth their lifetime income and improve their welfare under undesirable labor outcomes, such as unemployment, and incentivize job mobility, i.e., they allow a person to maintain consumption under frictional unemployment.

Within the context of digital platform work, the demographic decompositions of Uber and the Amazon Mechanical Turk have shown that they tend to have higher than average shares of younger workers, which are traditionally at a higher risk of being unemployed or having low quality employment. Providing a form of safety net for workers in digital work platforms would disproportionately favor this vulnerable segment of the workforce (see Box 1).

In the United States, independent contractors are entitled to retirement benefits like Social Security and Medicare just like regular employees. However, under an employer-employee relationship, half of the Federal Insurance Contributions Act (FICA) taxes for Social Security and Medicare are paid for by the employer while the employee pays the other half (6.2% each, for a total base tax of 12.4%). Independent contractors, on the

other hand, must cover the entire amount and pay a higher total tax rate of 15.3% (IRS, 2016a; IRS 2016b), but are entitled to certain business expense tax deductions.

Regarding health insurance, the Affordable Care Act's (ACA) individual mandate⁵ requires independent contractors to maintain a minimum level of health insurance coverage. For regular employees, the employer mandate requires all businesses to provide health insurance to at least 95% of their employees if they have 50 or more full-time employees. If the firm has 200 or more full-time employees the ACA requires it to automatically enroll new workers (IRS, 2016c).

In cases where on-demand workers are independent contractors, their workers' benefits will operate in the same manner as any other self-employed worker. The issue is that if worker misclassification is prevalent in the on-demand economy, the workers that should be considered employees will have to bear the entirety of their Social Security and Medicare taxes, bankroll their own health insurance, and will have no access to unemployment benefits.

Given the size of most digital platforms (see Table 1), it is very likely that most meet the criteria to fall under the ACA's employer mandate, meaning that they would be required to provide minimum health insurance coverage to their full-time workers. For example, according to Hall and Krueger (2015) around 17.5% of Uber drivers work more than 35 hours a week. This would imply that Uber would have to provide health insurance to anywhere between 26,934 (95% coverage) and 28,351 (total coverage) drivers, none of which are currently insured via Uber.

Given the current lack of safety nets for on-demand workers, several proposals have been made to improve their working conditions, particularly in terms of creating comprehensive and portable safety net systems involving individual accounts.

The New America Foundation (Portable Benefits, 2015; Hill, 2015) has proposed a portable benefits social security mechanism that has gained ground recently and has been endorsed by several digital platform CEOs and founders, academics, and public policy experts⁶.

The general guidelines of the portable benefits system proposed by the New America Foundation state that the model of workers' protection should be independent of income source, flexible and pro-ratable by money earned, number of jobs completed, or time worked, it should be portable, i.e., platform-agnostic, universal, and should be open to innovation, meaning that companies should be allowed to try different safety net models regardless of legal worker classification. In essence, it would apply the job to job portability that health care in the United States has under the ACA to other benefits such as pensions, workers' compensation and unemployment compensation. This model is based on the "hour bank system", a multiemployer benefits system used in the construction industry, where workers usually work for several employers per year. Employers pay a set amount per worker pro-rated by hours worked for that employer and those payments go into an "individual security account" that pays for each worker's safety net. This net includes health care, pension, unemployment benefits, holiday, sick leave, training, housing assistance, among others. Similar systems have taken place in Silicon Valley, where contracting is commonplace among technology companies.

⁵ "(a) REQUIREMENT TO MAINTAIN MINIMUM ESSENTIAL COVERAGE—An applicable individual shall for each month beginning after 2013 ensure that the individual, and any dependent of the individual who is an applicable individual, is covered under minimum essential coverage for such month." (Patient Protection and Affordable Care Act, 2010, Sec. 5000A).

⁶ Specifically, the signees of the Portable Benefits letter, "Common ground for independent workers" involved individuals with ties to New America, Opportunity@Work, Union Square Ventures, SEIU Local 2015, Peers, the Aspen Institute, the Roosevelt Institute, Etsy, the Institute for the Future, Lyft, the Bay Area Council Economic Institute, the Harvard Business School, Second Avenue Partners, Handy, the American Action Forum, the Freelancers Union, The R Street Institute, Care.com, Instacart, McKinsey & Company, Coworker.org, The National Economic Council, O'Reilly Media, Homebrew, SherpaShare, eBay, The Workers Lab, Greylock Partners, the National Domestic Workers Alliance, New America, the National Guestworker Alliance, Northwestern University, Columbia University, New York University, and the University of California Berkeley (Portable Benefits, 2015). Mark R. Warner, United States Senator from Virginia, has also supported the creation of a portable benefits system (Warner, 2015).

Box 1
Demographic Characteristics of AMT Workers and Uber Drivers

Both AMT and Uber workers in the United States tend to be younger than the general workforce or the service sector they serve. AMT workers have a median age of around 31 years versus the average of 41.9 years for the overall labor force (Ross, Irani, Silberman, Zaldivar & Tomlinson, 2010; BLS, 2015b). The largest group of Uber drivers in terms of age is between the ages of 30 and 39 (30.1%). In contrast, the mode for traditional taxi drivers is the 50-year-old to 64-year-old bracket (36.6%). Most AMT crowdworkers and Uber workers are highly educated. The largest share of workers in these platforms have some college education (37.3% for the AMT, 40% for Uber) or a college degree (34.1% for the AMT, 36.9% for Uber) (Table 2).

In terms of dependency on income from digital work platforms, AMT workers mostly use the platform as a source of complementary income—45% consider their income from AMT as a secondary income, while 38% consider it to be their primary income. Uber drivers are more evenly split, with a slight bias toward depending mainly on their income from Uber (40%) versus using it as a complementary income (38%).

38% of AMT workers and 40% of Uber drivers consider the earnings made on the platform to be their main source of income. Almost half (45%) of AMT workers and a little over a third (38%) of Uber drivers consider their earnings on the platform a source of secondary income.

While primary and secondary income are some of the main reasons for working in these platforms, there are some other non-monetary reasons. For example, for the AMT, 19.4% cited a preference for working from home as their main reason. Regarding flexibility, 73% of Uber drivers claimed to prefer flexible schedules and being one's boss to having a fixed schedule job with benefits and a fixed salary.

Despite being one of the main reasons for working in these platforms, there are few estimates of the earnings made on the AMT and Uber. In the AMT, Berg (2016) found hourly earnings were considerably below the federal minimum wage—gross median hourly pay was \$4.65 and mean gross hourly pay was \$5.55. For Uber, the heterogeneity in costs between drivers, the difference in fares between locations, and the lack of public data makes it difficult to find a definitive net hourly income figure. Hall & Krueger (2015) estimated that Uber drivers make \$19.19 per hour on average, compared to an average of \$12.90 for taxi drivers and chauffeurs. Uber drivers in New York and San Francisco showed the highest earnings per hour, \$30.35 and \$23.52, respectively, compared to \$15.17 and \$13.72 for taxi drivers in those cities. However, these estimates don't account for driver expenses and vehicle costs. O'Donovan and Singer-Vine (2016) used Uber internal data to estimate hourly income in the Denver, Houston and Detroit markets using several assumptions regarding driver expenses^A which were validated and recalculated by Uber. Based on those net hourly income calculations, in late 2015, Uber drivers in Denver earned approximately \$13.17, drivers in Houston earned \$10.75 and drivers in Detroit earned \$8.77. As a point of comparison, minimum wage in Colorado was \$8.31, \$7.25 in Texas and \$8.50 in Michigan, meaning that Uber drivers in Detroit were making just around \$0.22 more than minimum wage.

Table 2
Characteristics of Uber Drivers, Taxi Drivers, AMT Workers, and the General Workforce
(In percentages)

	Uber Drivers	Taxi Drivers and Chauffeurs	Amazon Mechanical Turk	General workforce
Age 18-29	19.1	8.5		21.8
30-39	30.1	19.9		22.5
40-49	26.3	27.2		23.4
50-64	21.8	36.6		26.9
65+	2.7	7.7		4.6
High School or Less	12.2	52.5	14.3	30.6
Some College	40	28.8	37.3	28.4
College Degree	36.9	14.9	34.1	25.1
Postgraduate Degree	10.8	3.9	11.1	16
N =	601	2,080	667	648,494

Source: Elaborated by ECLAC on the basis of Hall & Krueger (2015), & Berg (2016).

^A The authors assumed drivers used a \$16,000 vehicle with a 250,000 lifetime, gas prices of \$1.75 per gallon and a 25 mile per gallon efficiency, and insurance and maintenance costs that would add up to \$3,000 yearly.

Another company that has proposed a benefits system is Care.com, a company dedicated to domestic work and caregiving. It has recently implemented a new benefits system where it will take 2 percentage points out of the 12% fee it charges its clients and will put those funds into a caregiver's benefits, paid out in prepaid debit cards that can be used in medical, education, or transit related expenses (Care.com, 2016b). It should be noted that even without portability, a similar mechanism could be implemented where companies can withhold deductions from independent contractors and divert them to central funds in order to have access to paid sick leave or family leave (Smith & Leberstein, 2015).

It should be noted that the discussion of portability—or expansion of safety nets for non-standard workers for that matter—is not exclusive to workers in digital platforms. At the state level, California, Illinois, Maryland and Connecticut are already testing portable retirement plans for employees (Smith & Leberstein, 2015). For example, California's recently passed "Secure Choice" system will provide workers with the chance to make automatic payroll contributions to a personal Secure Choice IRA account that would stay with the employee from job to job, regardless of whether their employers provide retirement plans or not (California State Treasurer, 2016). Once operational, this would make California the first state to make retirement savings accounts a "near-universal benefit" (Koren, 2016). These systems could be amended to include workers under alternative work arrangements such as independent contractors in the on-demand economy.

For immigration, portable social security has been seen as a solution where international migrants could maintain benefits earned even when they move from one country to another (see Holzmann, Koettl and Chernetsky, 2005; Holzmann & Koettl, 2011). In this context, the main reason for a portable safety net is to reduce the disincentivizing effect of loss of social protection on the decision to migrate, i.e., workers in the margin would refuse to migrate to another country because they would lose the payments they have already made towards pension or some other workers' benefit. In the context of a digital platform, there is a similar benefit, since a portable workers' benefit system allows workers to move from company to company or work for several companies and accrue a consistently pooled set of benefits. This reduces dependency on a single digital platform, which would indirectly increase bargaining power for workers on the on-demand economy.

The other context in which portability has been used extensively has been in Latin American countries such as Argentina, Brazil, Chile, Colombia, Ecuador, Panamá, and Perú, particularly in the form of mandatory unemployment insurance savings accounts. In these, workers and/or firms regularly deposit funds to individual accounts. When the worker becomes unemployed, he or she can withdraw funds from the personal account to maintain consumption until another form of employment is found. This eliminates the moral hazard issue of government funded unemployment insurance, but creates the issue that some workers with lower wages might not accumulate enough savings to effectively pad their consumption, just like in on-demand work in the United States. In these cases, some form of risk pooling might protect workers with low savings. Chile, for example, uses individual savings accounts along with a common unemployment fund (Fondo Solidario) financed by the government and by the employers that can be accessed by the worker when their account balance becomes negative (Ferrer & Riddell, 2009).

A criticism of the proposed portable benefits systems for on-demand workers is that they do not consider minimum wage and overtime obligations (Berg, 2016). Since there is no pooling of funds, if a worker does not accumulate enough money in their individual account, the safety net will fail as an individual consumption-smoothing mechanism. Even if part of the funds is pooled, like in Chile's Fondo Solidario, if aggregate contributions are not enough to maintain a safety net, the feasibility of the social security system will be low.

In conclusion, if in the United States the classification of digital platform workers as independent contractors remains the norm, alternative social security systems for on-demand workers will be needed. In this regard, further study of the viability of these alternative systems is necessary, and the lessons learned from other countries might prove useful in the formation of safety nets for U.S. on-demand workers.

C. Collective bargaining

The right to organize and collectively bargain is one of the eight fundamental conventions of the International Labor Organization (ILO) that sets the international labor standards and principles. In the digital economy, collective bargaining has its own set of complications. Because the work is usually carried out in isolation there is no natural, easy way for workers to gather and voice their concerns. While they have the technology to communicate, they do not necessarily know who the other workers in the digital platform are, only the employing firm has this information. The lack of physical hubs where gig workers can congregate diminishes the likelihood of union formation or of joining an existing union, since communal ties and the presence of a union are strong factors associated with worker organization and union membership (Schnabel & Wagner, 2007). For example, traditional taxi drivers gather at a central dispatch location and know other drivers. This incentivizes the formation of taxi unions (Rogers, 2015). In addition, the fierce competition in crowdwork platforms revealed in Berg's (2016) survey of the AMT, may also reduce the incentives for workers to cooperate amongst themselves. There is also a demographic difference between traditional union workers and on-demand workers, which might be a barrier for on-demand workers to affiliate with preexisting unions.

In the United States, one of the hurdles is that under the National Labor Relations Act (NLRA) of 1935, employees are given the right to unionize or strike without legal retaliation, but this does not extend to independent contractors or the self-employed⁷ (Rogers, 2015). In order to allow gig workers to unionize without retaliation on-demand workers will have to receive employee status or some NLRA rights will have to be extended to independent contractors. Due to this, localized bills such as those in the city of Seattle have been implemented to allow some workers in the on-demand economy to unionize despite their independent contractor status (Wingfield & Isaac, 2015).

Despite these barriers, there have been efforts to gather on-demand workers in order to voice concerns over working conditions. In the case of transportation services in California and New York, Uber, Lyft, and Sidecar drivers have started App-Based Drivers Associations and some digital platform workers have used means such as Facebook to create organizational webpages, such as the Uber Drivers Network NYC page, which has organized strikes over fare cuts by Uber. Also, Uber has promised to fund the creation of drivers' associations where drivers can hold regular meetings and discuss issues pertaining the platform in California and Massachusetts as a result of previous lawsuits. These types of initiatives could allow the improvement of worker-platform relations and the creation of discussion and collective bargaining spaces, but still do not allow for the negotiation of worker's benefits or fares.

Another avenue that has been explored besides creating new unions or associations exclusively for on-demand workers has been the affiliation to preexisting unions. For example, in early 2016, Uber and the International Association of Machinists and Aerospace Workers (IAM) reached an agreement to create an affiliate group, the Independent Drivers Guild, to represent Uber drivers in New York City. It will provide a discussion forum for drivers to meet monthly with Uber management, along with the ability to obtain discounted legal services or insurance. However, it is not a union and will not allow drivers to bargain for better fares, benefits or protections (Scheiber & Isaac, 2016). While this provides some short-term benefits and increases the voice of drivers, it still does not provide the bargaining power drivers need to ensure fair remuneration or workers' benefits. The IAM has specifically mentioned that it will not encourage unionization, strikes, or for Uber drivers to pursue reclassification as employees. In other countries, however, preexisting unions such as Unite and GMB in the United Kingdom have taken a more active role in defending on-demand workers. For example, GMB took up the case for the drivers mentioned in Section A (Adam, 2016) which led to two U.K. drivers to have certain benefits such as holidays and minimum wage, and Unite has created a unit specifically to represent misclassification cases (Osborne, 2016).

⁷ –The National Labor Relations Act covers most private-sector employers. Excluded from coverage under the NLRA are public-sector employees, agricultural and domestic workers, independent contractors, workers employed by a parent or spouse, employees of air and rail carriers covered by the Railway Labor Act, and supervisors (although supervisors that have been discriminated against for refusing to violate the NLRA may be covered).” (Department of Labor, n.d.).

II. Looking forward

Digital work platforms such as Uber and the Amazon Mechanical Turk have brought several benefits to the overall economy: they have increased efficiency in several markets via supply and demand matching algorithms, have improved capacity utilization, and have improved worker welfare by allowing flexibility in some respects such as schedule choice. They also allow certain sections of the population that would not be able to find regular employment due to other commitments or constraints to participate in the workforce.

However, the use of these digital platforms also raises several labor issues, particularly in terms of the relationship between the firm that owns, manages and deploys the platform and the worker.

Looking forward, as the number of workers that participate in digital work platforms increases, these issues will pose a growing challenge for all actors involved—workers, businesses, and governments. For governments particularly, the policy challenge will be to act as a balance between workers' rights and companies' interests in win-lose situations. While job quality and safety nets for workers must be maintained, regulation cannot be as overreaching as to discourage innovation. However, it is also the government's role to take advantage of the fact that policy is not a zero-sum game, and to leverage these platforms and their technologies to improve aggregate welfare.

For example, the technology used in these platforms can be harnessed as a policy tool for unemployment reduction and more efficient job allocation, particularly for sectors that tend to rely on traditional means of job-seeking—such as blue-collar workers. While some private initiatives, such as WorkHands and Jobcase, have tried to replicate LinkedIn's success in matching white-collar workers to firms in a skilled trade context, the Department of Labor could make use of the Bureau of Labor Statistics' extensive employment projections to not only foresee which will be the next jobs in high demand and the skills needed to fulfill them, but as an input to determine where the geographical mismatches in labor supply and demand are and create incentives to reduce them. In cases where jobs do not require a physical presence, the technologies behind work platforms like the Amazon Mechanical Turk could be modified to include vulnerable sectors of the workforce and better serve the projected needs of the overall economy.

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