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Income security in the on-demand economy: Findings and policy lessons from a survey of crowdworkers

Janine Berg

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Inclusive Labour Markets, Labour Relations
and Working Conditions Branch

***Income security in the on-demand economy: Findings
and policy lessons from a survey of crowdworkers***

Janine Berg

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Abstract

This article assesses the validity of many of the assumptions made about work in the on-demand economy and analyses whether proposals advanced for improving workers' income security are sufficient for remedying current shortcomings. It draws on findings from a survey of crowdworkers conducted in late 2015 on the Amazon Mechanical Turk and Crowdflower platforms on workers' employment patterns, work histories, and financial security. Based on this information, it provides an analysis of crowdworkers' economic dependence on the platform, including the share of workers who depend on crowdwork as their main source of income, as well as their working conditions, the problems they encounter while crowdworking and their overall income security. Drawing on these findings, the article recommends an alternative way of organizing work that can improve the income security of crowdworkers as well as the overall efficiency and productivity of crowdwork.

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*“Amazon Mechanical Turk is the core of our business. We are in a people-hungry business. All of our work is done by people. It's not mass-production; but individual hand-crafted work. **Our entire workforce is Mechanical Turk.** There are vast amounts of service-oriented businesses on this planet, and all of these businesses could leverage the sort of hand work that is doable on Mechanical Turk.”(emphasis added)*

– Nathan McFarland, Co-founder, Casting Words

“In the end, I am happy that I can actually work at least in some small way, but I am overall dissatisfied with the way workers are treated, and just how difficult it is to make this job 'work'.”

– AMT worker

1. Introduction¹

Crowdwork is a type of work performed remotely on on-line platforms. It emerged in the second half of the 2000s with the growth of the internet and the need to have human input into a range of tasks needed for the smooth functioning of web-based industries. Workers perform the tasks as ‘independent contractors’ and are paid for task that they complete, so long as their work is accepted by the requester. They may work from anywhere in the world, depending on the decisions of the platform and as long as they have a reliable internet connection. Although crowdwork and other jobs in the ‘gig’ or ‘on-demand economy’ comprise a small proportion of the labour force — in the U.S., one estimate is 600,000 workers or 0.4 percent of the labour force (Harris and Krueger, 2015) — it is a growing sector. Thus, the organization of work and the conditions of the workforce have implications for the future world of work.

Crowdwork shares many similarities with other forms of non-standard employment such as temporary work, part-time work or temporary agency work. In addition to the casual and unstable nature of the work, crowdwork as well as other work in the ‘on-demand economy’, is often portrayed as additional income for secondary earners, and thus, not real work, or work that merits traditional labour protections. But crowdwork faces other unique challenges. Because it is digital work, dependent on recent technological innovations, it is argued that the traditional employment relationship cannot apply or is outmoded and thus there is a need to create a new intermediate category to provide some limited protection for on-demand economy workers (Harris and Krueger, 2015).² Moreover, crowdwork platforms have chosen to hire workers as independent contractors leading to many high profile lawsuits in the U.S. of plaintiffs seeking recognition of employee status and compliance with the Fair Labour Standards Act (FLSA) (Cherry, forthcoming). Likely because of this litigation, there has been a push to reframe the debate away from labour protections in the job to protecting the worker, regardless of the job. In November 2015, a group of U.S. tech companies, policy think-tank heads, academics and activists signed an open letter on *Medium* arguing for the establishment in the U.S. of a portable safety net independent of

¹ The views expressed in this article are my own and do not necessarily reflect the views of the International Labour Office. This article is forthcoming in the *Comparative Labor Law and Policy Journal*.

² For a discussion of the debate on creating an intermediate category, see De Stefano (2016).

workers' employment status.³ The proposal is to create individual security accounts to protect the worker as they move from 'gig' to 'gig.' No mention is made of improving the working conditions of the on-demand economy jobs.

In this article, I assess the validity of the many of the common assumptions made about the on-demand economy and analyse whether the proposals advocated for improving workers' security are sufficient for remedying the current shortcomings of work in the on-demand economy. I draw on findings from a survey undertaken in November and December of 2015 by the International Labour Office (ILO) of crowdworkers on the Amazon Mechanical Turk and Crowdfunder platforms. The survey goes beyond basic demographic and earnings information and gathers information on crowdworkers' employment patterns, work histories, and financial security. I present some of the main survey results with a view to assessing the crowdworkers' economic dependence on the platform, including the percentage of workers who depend on crowdwork as their main source of income, as well as their working conditions, the problems they encounter while crowdworking and their overall income security. The article begins with an analysis of the crowdwork market and some of the problems faced by users ('requesters') of the platform. This is followed by a discussion of the survey findings, which reveals the motivations workers have for pursuing crowdwork and the many concerns they have in their work. I then discusses the merits of policy proposals to provide income security for crowdworkers and in the last section, I recommend an alternative way of organizing work that can improve the income security of crowdworkers as well as overall efficiency and productivity.

2. Demand and supply in the crowdwork market

Crowdwork platforms such as Amazon Mechanical Turk (AMT) and Crowdfunder allow businesses to post small tasks that can be completed by workers remotely. Crowdwork platforms can be 'internal', meaning they are used for a company's in-house operations and workers of the company complete the tasks, or they can be 'external', whereby the work is posted for workers across the globe to complete. AMT originated as an internal platform posting tasks to Amazon workers, when the company realized they could open it externally to workers outside of Amazon. In 'external' crowdwork, there are typically three parties: the crowdsourcer (known as the requester or client), the intermediary (the platform) and the workers. However, there can also be a direct relationship between the crowdsourcer and the crowdworker (Durward, Blohm et al., 2016).

Crowdwork platforms are ideal for 'micro-tasks' that are quick to do and which do not require much instruction or supervision. There are six principal categories of tasks that appear on micro-task platforms: (1) information finding, such as looking for information on the web; (2) verification and validation, such as identifying whether a tweeter is a real person; (3) interpretation and analysis, consisting of tasks that categorize or classify products; (4) content creation, such as summarizing a document or transcribing an audio recording; (5) completing surveys, many of which are academic; and (6) content access, usually accessing another website in order to consume content (Gadiraju et al., 2014). On the AMT platform, content creation is the most popular task posted, and in particular, audio transcription (Difallah et al., 2015).⁴ On Crowdfunder, on the other hand, 'interpretation and analysis' and 'verification and validation' appear to be the most common tasks available. Of the tasks (known as HITs,

³ Available at: <https://medium.com/the-wtf-economy/common-ground-for-independent-workers-83f3fbcf548f#.1b3ux0o90>

⁴ Based on a classification of 2.5 million batches constituting 130 million HITs taken from <http://mtrucker.com>, analysed over 2009 and 2013.

or ‘human-intelligence tasks’) posted on the AMT platform, 89 per cent did not require any specific worker location. Of the 11 per cent that did require a specific location, 86 per cent were limited to U.S.-based workers (Difallah et al., 2015). These tended to be surveys, allowing one to deduce that surveys accounted for a minimum of 10 per cent of the HITs posted, since not all surveys were limited to U.S.-based workers.

Since its inception in 2005, Amazon Mechanical Turk has steadily attracted new ‘requesters’ at the rate of 1,000 new requesters per month over past two years. Approximately 10,000 new tasks are published and 7,500 are completed per hour (Gadiraju et al., 2015). Yet while the number of requesters has grown, it is also true that a main feature of AMT is the heavy or exclusive use by a few requesters. Indeed, the top 0.1 per cent of requesters account for 30 per cent of activity (measured in dollar value of tasks) and 1 per cent of requesters post more than 50 per cent of dollar-weighted tasks (Ipeirotis, 2010). The beginning of this article started with a quote from the CEO and founder of Casting Words, an audio transcription company, stating that their entire workforce was AMT. Indeed, during January 2009-2010, Casting Words was the top requester, posting 73,621 HITs (Ipeirotis, 2010).

As a result, crowdwork has become the organizational model for some firms. Traditionally audio transcription would be done by a company with a dedicated (and trained) staff of waged employees. Yet microtask platforms offer a different opportunity for organizing work, with profound implications for the individual workers doing the job as well as long-term trends in the labour market. With other forms of non-standard employment, such as temporary workers and temporary agency workers, there are similar trends of intensive use by a small number of firms that have made non-standard employment arrangements central to their organization of work. For example, a study of U.S. businesses found that among the top 5 per cent of firms using non-standard arrangements, 66 per cent of the workforce was part-time and 39 per cent were in temporary work arrangements (Cappelli and Keller, 2013). More strikingly, the World Bank Enterprise Survey of 135 developing countries revealed that one per cent of firms accounted for 30 per cent of all temporary employees in the multi-country sample (Aleksynska and Berg, forthcoming).

With respect to labour supply on the platforms, although there is significant churning among the workforce, there appears to be a stable workforce of approximately 20,000 people.⁵ Nonetheless, labour supply is highly elastic such that despite surges in available HITs, completion times do not extend much (Difallah et al., 2015). However, like requesters, there appear to be many workers who complete just one or a few HITs in a batch of work, while a small number will complete most of the HITs (Difallah et al., 2014). This observation, coupled with concerns about quality of work,⁶ have led to a burgeoning computer science literature on how to price tasks on the platforms and whether, and when, to give bonuses. For instance, Difallah et al. (2014) test three different methods of pricing tasks to improve worker retention and find that milestone bonuses, punctually given to workers who reach a predefined goal in terms of completed number of HITs in the batch, are most successful in retaining workers (Difallah et al., 2014, p.8). Gadiraju et al. call for using custom task-pricing schemes, gaming techniques and competitive task designs for retaining workers, and for monitoring performance, they recommend using “advanced result aggregation techniques or supervised

⁵ Based on interview with P. Ipeirotis, 12 November 2015.

⁶ For example, Gadiraju et al. (2014) found that 44 per cent of workers surveyed on Crowdfunder incorrectly answered simple attention check questions. Similarly, Mason and Watts in a series of experimental tasks posted on the AMT platform, found that higher pay motivated participants to do more work, but did not increase the quality of the work. The Mason and Watts (2010) findings are, however, disputed in worker forums. See <http://turkernation.com/showthread.php?21352-The-Myth-of-Low-Cost-High-Quality-on-Amazon-s-Mechanical-Turk>

machine learning approaches” as well as routing tasks to workers who have previously performed well (Gadiraju et al., 2015, p.5) In response to concerns over quality but also inefficiencies created for requesters and workers in independently posting, explaining and monitoring tasks, Iperiotis and Horton call for a ‘standardization’ in many of the common tasks posted on on-line markets (Iperiotis and Horton, 2011).

Thus, despite the ease of posting tasks and finding workers on crowdwork platforms, there are important concerns for firms on how to ensure quality work, how to retain workers’ interest in batches of tasks, and at what level tasks should be priced. All of these concerns have impact on the earnings and the overall working conditions for the workers on the platform. In the next section, we provide information on who these workers are and their crowdworking experience.

3. Crowdworkers’ employment patterns, work histories and financial security: Survey findings

The ILO Survey of Crowdworkers, undertaken in November and December 2015 on the AMT and Crowdfunder platforms, included standard socio-demographic questions, questions about work on other crowdwork platforms, as well as questions that are common to labour force surveys, including occupation, tenure, multiple job holding, hours worked, earnings, and previous work experience. In addition, the survey included questions on pension contributions, health insurance, household income and savings.⁷ The survey was divided into two parts (and thus two separate ‘tasks’ to be completed by the worker). Survey 1 captured basic demographics along with some additional measures of crowdwork experience, as well as a few questions to identify the quality of the responses. Survey 2 included the more detailed questions about work experience and work history. Both surveys ended with questions on what, if anything, the workers would change about crowdwork if they could, as well as offering an opportunity to the respondents to raise any other thoughts that they wanted to share and their views on the survey. These textual answers provided a rich source of qualitative information that I draw from in this paper in addition to the quantitative findings of the survey.

Survey 1 had 1,167 eligible responses of which 814 were from AMT and 353 were from Crowdfunder. Because the Crowdfunder platform does not allow identifying workers through a unique identification, it was not possible to invite these workers to complete Survey 2. From AMT, 789 respondents who completed Survey 1 with sufficient attention were invited to participate in Survey 2. Of these, 661 (83.8 per cent) completed Survey 2 fully, 17 (2.2 per cent) partially completed the survey and 111 (14.1 per cent) did not respond. Workers were paid USD 1 for completing Survey 1 (mean completion time of 10.36 minutes) and USD 3 for completing Survey 2 (mean completion time of 18.14 minutes).

Although there is no universal database of crowdworkers that allows drawing a random sample, the demographics of Amazon Mechanical Turk workers have been tracked for several years and are available on the MTurk tracker website.⁸ The website provides data on key

⁷ A survey research company, Soundrocket, was hired to provide assistance with the survey design, programming and administration of the pilot and final surveys, as well as the compilation and cleaning of the database. I am grateful to Scott Crawford and his team at Soundrocket for their work on the project.

⁸ Available at <http://www.mturk-tracker.com/#/general>. The website was set up and is maintained by NYU computer science professor, Panos Iperiotis. See also Iperiotis, 2010.

demographic variables, based on an on-going six question survey, as well as information on requesters and tasks. At the time of the survey, Indians accounted for approximately 15 per cent of workers and Americans accounted for close to 85 per cent.⁹ We therefore stratified the sample in order to capture this country breakdown. Crowdfunder, unlike AMT, accepts workers from any country, as long as they have a PayPal account, and has a geographically diverse labour pool. Of the 353 Crowdfunder respondents, 10 (2.8 per cent) were from the U.S., 30 (8.5 per cent) were from India and 313 (88.7 per cent) were from other countries (See Map 1). Table 1 gives a detailed description of the sample by survey, platform and for AMT, by country. The rest of this section gives information from the survey on the demographics of crowdworkers and their reasons for crowdworking (Section 3.1), their working conditions, including pay, regularity of work and communication with requesters and platforms (Section 3.2), ending with an analysis of their financial security and levels of social protection (Section 3.3).

Table 1. Survey sample by platform and country (number of respondents)

Platform	All	Crowdfunder	AMT	
			U.S.	India
Survey 1	1,167	353	686	128
Survey 2	677	--	573	104

Source: ILO Survey of Crowdworkers.

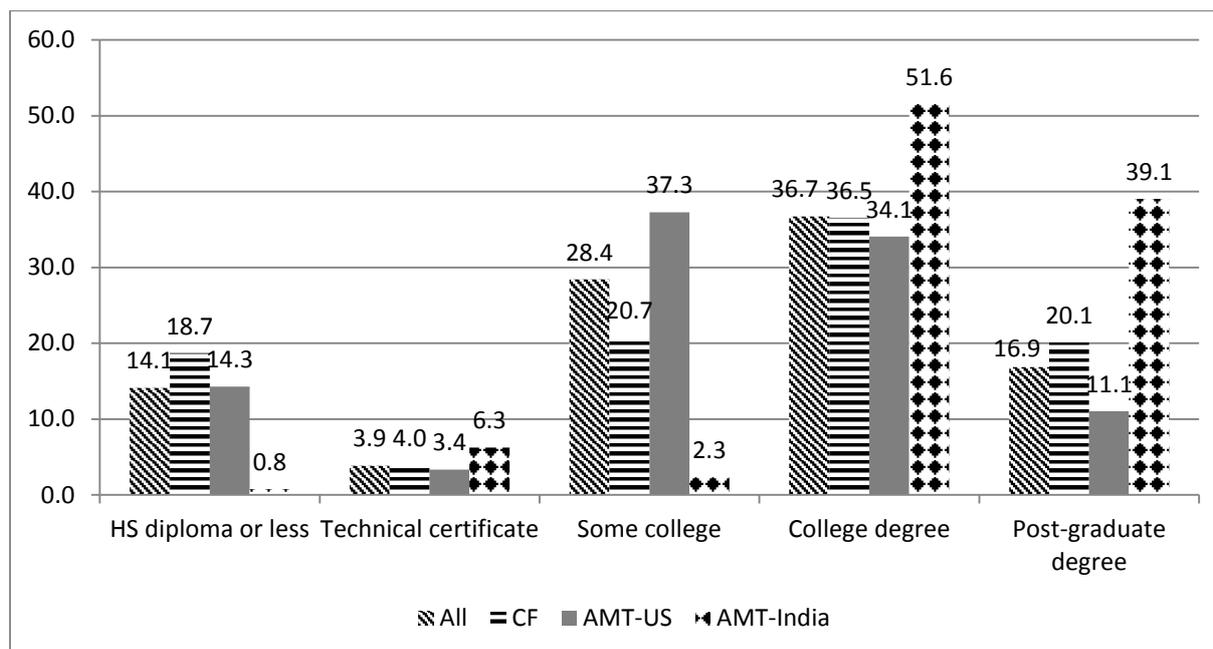
3.1 Who are the crowdworkers? And why do they crowdwork?

The demographic information gleaned from the survey confirmed findings from other recent surveys (for example Brawley and Pury, 2016). There is gender balance among AMT workers based in the U.S. (52 per cent male, 48 per cent female), but in India and in the 51 countries represented by Crowdfunder, there are more men than women crowdworkers (73 per cent for Crowdfunder and 69 per cent for Indian AMT workers). Indian workers were on average younger than American workers at 31.9 years, compared with 35.5 years in USA and 34.3 years for other countries. Crowdworkers are almost equally split between those who have never been married (47 per cent), and the 46 per cent who are either married or co-habiting, although Indian AMT crowdworkers have a higher rate of marriage/co-habitation (61 per cent) than American AMT crowdworkers (45 per cent) or Crowdfunder workers (43 per cent). In addition, 41 per cent of the workers (or 482 out of a total of 1,165 respondents) report having children living in their household, of which 86 per cent report that it is their children. Amongst the 414 respondents who had children of their own, 61 per cent had children under six years of age.

Education. Crowdworkers are well-educated. Only 14.1 per cent of crowdworkers have a high school diploma or less (1.1 per cent have less than a high school diploma) and most workers have either ‘some college’ (28.4 per cent), a college degree (36.7 per cent) or a post-graduate degree (16.9 per cent). Of workers reporting they have ‘some college’, 29 per cent are currently pursuing a degree. Overall, students make up 14.5 per cent of survey respondents. Indian AMT workers are the most highly educated with 90.7 per cent reporting having completed a college or post-graduate degree, compared with 56.7 per cent of Crowdfunder respondents and 45.1 per cent of American AMT respondents. (See Figure 1).

⁹ There is also a small percentage of workers from other countries (ranging from 1 per cent to 5 per cent depending on the day), but as these workers are not eligible for cash payments and only earn Amazon credit for the U.S. Amazon site; we did not include them in the study.

Figure 1. Educational level of crowdworkers (percentage by category)



Note: Some college includes associate’s degree holders.

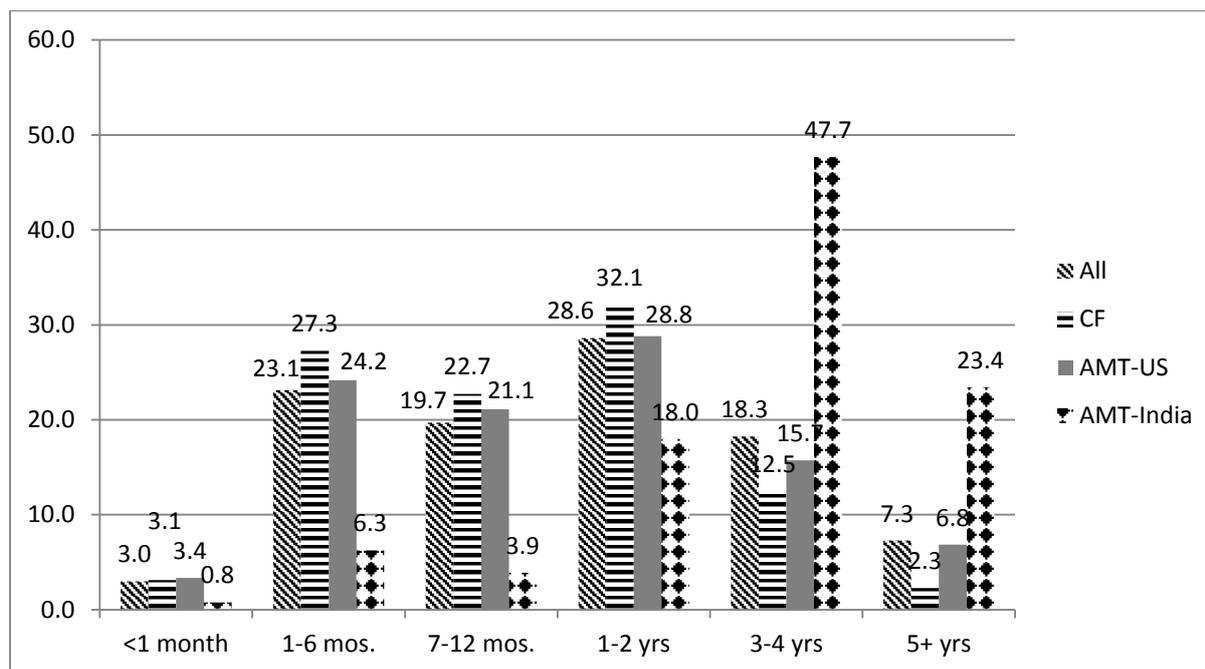
Source: ILO Survey of Crowdworkers.

Tenure. While there is significant churning amongst crowdworkers with many trying microtasking only to leave after discovering that it is not a good fit for them, there is also an important core group of workers who have performed crowdwork for several years. Overall, 54 per cent of survey respondents have crowdworked for at least a year, with an average of 47 per cent for Crowdfunder workers, 51 per cent for American AMT workers and 89 per cent for Indian AMT workers. The long tenure of Indian-AMT workers is due to Amazon’s 2012 decision to restrict new accounts for non-US workers.¹⁰ As a result, there are few new Indian workers, and over 71 per cent report working on the platform for more than 3 years. There are as well a few restrictions on the Crowdfunder and American AMT workers’ sample, as the AMT sample was limited to workers with a 95 per cent approval rating and a minimum of 500 HITs (minimum of 5 days of work) and the survey of Crowdfunder workers was limited to those with at least a Level 2 badge.¹¹ Nonetheless, even with the truncated sample (which was necessary in order to ascertain views about workers’ experience as a crowdworker), the data does indicate that there are many workers who have done this work for extensive periods of time (See Figure 2).

¹⁰ In 2013, Amazon stated that it shifted to an invitation-only registration for non-U.S. workers. This explanation is not confirmed in mTurk forums which argue that there has been an explicit policy of not allowing new international workers, likely in response to financial liabilities incurred from fraud. As a result, most Indian AMT workers began crowdworking prior to the 2012 policy shift. See <http://turkrequesters.blogspot.fr/2013/01/the-reasons-why-amazon-mechanical-turk.html>

¹¹ This was done following the repeated suggestion of the Crowdfunder staff. According to the Crowdfunder website, workers with Level 2 badges “have completed over a hundred test questions across a large set of job types, and have an extremely high overall accuracy.” The company does not disclose their criteria for assigning badges, thus it is not clear how much time on the platform is necessary for achieving the level 2 badge. See: <http://crowdfundercommunity.tumblr.com/post/80598014542/introducing-contributor-performance-levels#sthash.HCFpMwu2.dpuf>

Figure 2. Tenure of survey respondents (percentage by category)



Source: ILO Survey of Crowdworkers.

Reasons for crowdworking. The survey asked workers about their reasons for doing crowdwork and, if several reasons were selected, the survey then asked them to identify their most important reason. There were important differences among the groups of respondents. For American AMT workers, the most important reason was ‘as a complement to the pay from other jobs’, with 45 per cent of workers indicating this reason. (See Figure 3). This was also the most important reason given by Crowdflower workers, albeit at a much lower, 26.4 per cent. For Indian AMT workers, the most important reason was that they preferred to work from home (31.7 per cent); only 9.8 per cent indicated that they crowdworked to complement pay from other jobs. A preference for working from home also ranked highly among American AMT workers (19.4 per cent) and among Crowdflower workers (18.4 per cent).

In addition to those crowdworkers who prefer to work from home, there was also workers who indicated that they could only work from home. Yet there were strong differences by gender for this reason. Among Indian AMT workers, 16.2 per cent of women gave this reason compared with 7 per cent of men; among US AMT workers, 15.8 per cent of women gave this as a reason compared with 4.8 per cent of men and for Crowdflower workers, 6.4 per cent of women gave this as a reason compared with 2.8 per cent of men. Of the workers who stated that they can only work from home (94 in total), 26 per cent have children under the age of six. Indeed, in the textual answers many respondents cited care obligations as a reason for why they performed crowdwork.

“I am unable to work because I take care of my ill mother and being a crowd worker gives me the flexibility and means to make some money while I am confined to home.”
– AMT worker

“I couldn't afford childcare for my kids.” – AMT worker [on most important reason why they do crowdwork].

“Because I have 5 kids, it is very hard to work outside the home. Even though I average about 4-5 dollars an hour, I have the flexibility to work when I want. After taking into consideration that I don't have to spend money on gas, food, clothes, or day-care.... it evens out in my eyes.” – AMT worker

In addition to care responsibilities, some workers needed to work from home because of their own poor health or disability. Of the workers who stated that they could only work from home, 36 per cent indicated that they have a health problem that affects the kind of paid work they can do. Overall, 9 per cent of crowdworkers (109 workers) report having a physical or mental health condition or illness lasting or expected to last 12 months or more that affects the kind of paid work that they can do. The incidence was higher among American AMT workers (12 per cent). Not surprisingly, these workers are more likely to rely on crowdwork as their main source of income as their disability may preclude them from working outside the home. As some workers explained,

“[Crowdwork] has been a lifesaver for me, I have a disability but cannot get benefits so this is one of the few things I can do without having to stand or walk.” – AMT worker

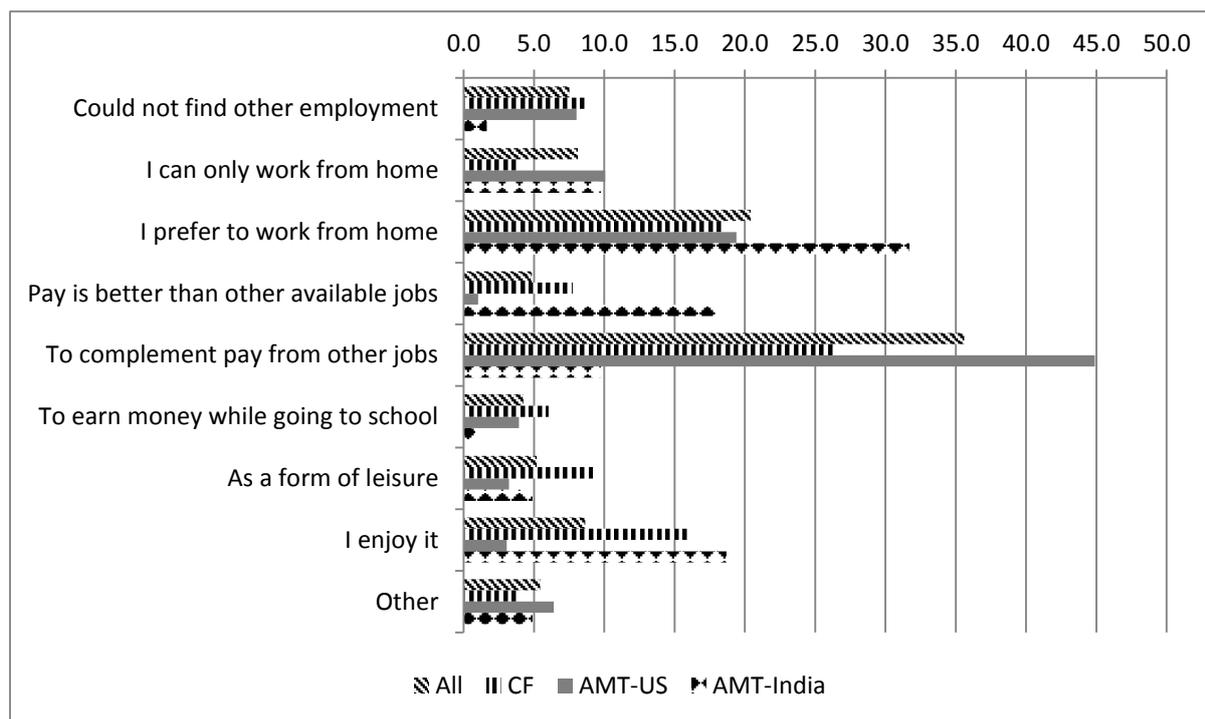
“...I have a severe social anxiety that prevents me from working a normal job, and this is the only way I can make money otherwise.” – AMT worker

“Due to my health I am not able to work outside the home. When I discovered mTurk it was a godsend as our household income is very limited.” – AMT worker

There was considerable divergence among the groups for the other reasons specified. Amongst Indian AMT respondents, 18 per cent indicated ‘pay being better than other available jobs’ as an important reason for why they crowdworked, as did 8 per cent of Crowdflower respondents. Only 1 per cent of American AMT workers shared this view. As one Venezuelan Crowdflower worker explained: *“Working as a crowd worker has given me the opportunity to obtain an extra income in USD that actually in my country is very profitable. I have been able to quit my day job and make my main income from this work.”* Not surprisingly, this view differed among countries as the response of this Hungarian Crowdflower worker indicates: *“The payments you receive as a crowd worker are very low and the availability of these jobs are limited in amount and in time.”*

There were also differences with respect to leisure or enjoyment as the prime motivation for crowdwork. Amongst Crowdflower respondents, 9 per cent indicated that they crowdworked as a form of leisure and 16 per cent did so because they enjoyed it. Similarly, 19 per cent of Indian AMT workers stated they did it for enjoyment with an additional 5 per cent doing so as a form of leisure. However, only 3 per cent of American AMT workers indicated that enjoyment was their main reason and only 3 per cent indicated “as a form of leisure” as a main reason. Nonetheless, a previous question allowed workers to choose multiple reasons and for this question, 42 per cent of Americans indicated enjoyment as one of the reasons why they crowdworked.

Figure 3. Most important reason why you do crowdwork? (percentage)



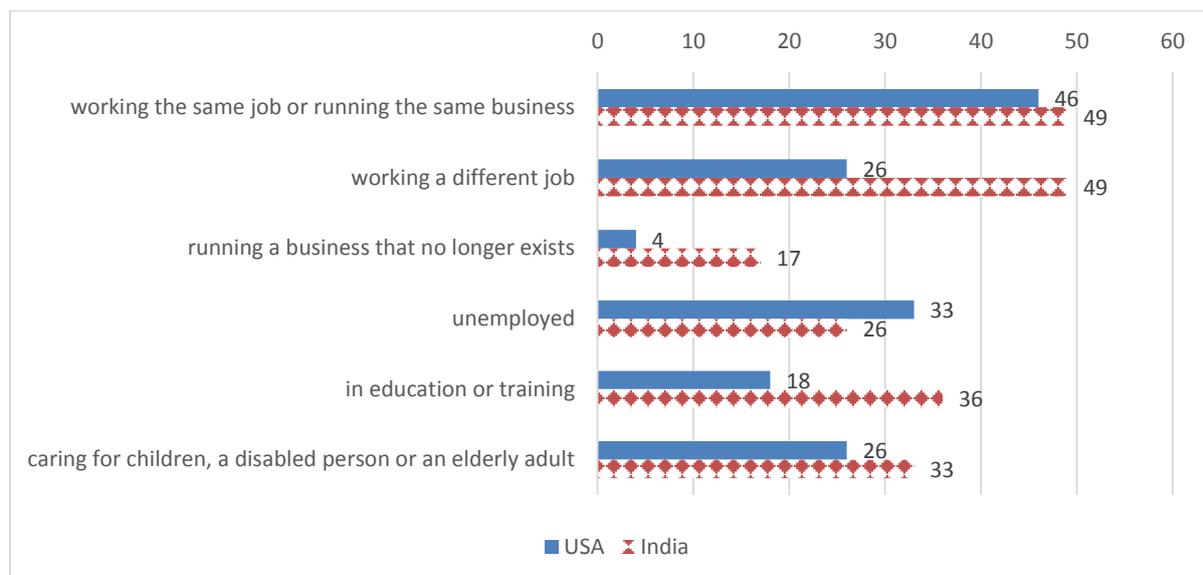
Source: ILO Survey of Crowdworkers.

Main job. As Figure 3 revealed, many people crowdwork to complement pay from other jobs, yet there is also an important group of workers who rely on crowdwork as their primary source of income (or main job). Overall, 37 per cent report that it is their primary income,¹² with a higher incidence among Indian AMT workers (49 per cent), a still significant portion among American AMT workers (38 per cent), and a somewhat lower percentage amongst Crowdfunder workers (31 per cent). A related question from Survey 2 asked AMT workers whether they had any other paid jobs or businesses besides crowdwork. Forty per cent did not, whereas 60 per cent did have other paid jobs or businesses.

Entering crowdwork. Survey 2 contained questions on what crowdworkers were doing prior to beginning crowdwork. Of the AMT workers, close to half (46 per cent of Americans and 49 per cent of Indians) were working a job or running a business that they are still doing now. Others were working a different job (Americans, 26 per cent; Indians, 49 per cent), running a business that no longer exists (Americans, 4 per cent; Indians, 17 per cent), while others were either unemployed (Americans, 33 per cent; Indians, 26 per cent), in education or training (Americans, 18 per cent; Indians, 36 per cent), caring for children, a disabled person or an elderly adult (Americans, 26 per cent; Indians, 33 per cent), or a combination of the above (See Figure 4).

¹² The findings are similar to Brawley and Pury (2016), in their study of job satisfaction among 357 AMT workers. Amongst the 225 Americans surveyed, 39 per cent crowdwork as their main source of income, as did 41 per cent (54 out of 132) of the Indians.

Figure 4. Main activity prior to beginning crowdwork (percentage)



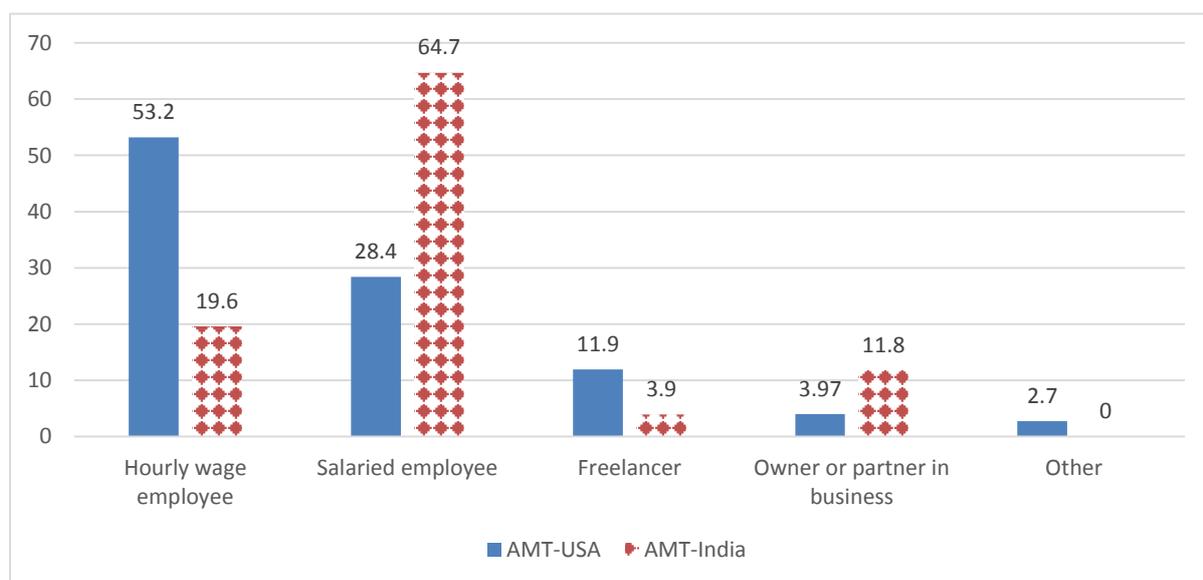
Note: Totals do not sum to 100 per cent as some workers were involved in multiple activities.

Source: ILO Survey of Crowdworkers.

Unemployment, particularly among Americans, appears to be an important motivator for why workers began crowdworking. Indeed, this proportion is much higher for those who report that crowdworking is their primary source of income (main job). Of this group, 57 per cent report being unemployed prior to beginning crowdwork.

Multiple Job Holdings. For the 60 per cent of AMT workers who do hold other jobs besides crowdwork, most of these are employees (81.6 per cent of Americans and 84.3 per cent of Indians), indicating that the dependent employment relationship is still highly relevant for many workers in the on-demand economy. Only 11.9 per cent of Americans and 4 per cent of Indians report that their other job is another form of ‘freelance’ work, and only 3.4 per cent have other jobs in the ‘gig’ or ‘on-demand economy’. (See Figure 5).

Figure 5. Employment status of AMT workers who hold another job (percentage by category)



Source: ILO Survey of Crowdworkers.

An interesting finding about crowdworkers with other jobs is that 40 per cent perform crowdwork during the working hours of the other job (though only 5 per cent exclusively perform crowdwork while at this other job). Moreover, 55 per cent report that their employer would be accepting of them performing crowdwork while at their other job. As one worker remarked about their experience crowdworking, *“The pay is low, but since I do it while I do my other job it is like getting paid a little extra at my other job.”*

3.2 Working conditions of crowdwork

The ILO Survey of Crowdworkers asked workers about reasons for their satisfaction or dissatisfaction with crowdwork as well as what, if anything, they could change about crowdwork if they could. The responses to these questions revealed four main concerns, including the pay of the tasks, the ability to get tasks on a consistent basis, unfair treatment by requesters, and the lack of responsiveness of the platforms to the workers’ concerns.

Low pay. Low pay was a recurring theme amongst survey respondents, including from respondents outside of the U.S. The survey asked respondents how much they made during a typical week performing crowdwork and how time, during the same typical week, they spent working on actual tasks that were paid for and how much time was spent on unpaid work, such as looking for tasks, taking qualification tests, and researching requesters. To arrive at average hourly wages, workers’ earnings were divided by total hours (paid and unpaid) worked. In a typical week, workers averaged 28.4 hours of work, of which 21.8 hours were for ‘paid work’ and 6.6 hours were for ‘unpaid’ work.¹³ This means that nearly a quarter (23.2 per cent) of the time working was spent doing unpaid tasks, or put differently, for every hour of paid work, workers’ spent 18 minutes searching and doing unpaid preparatory work.

Depending on the platform and the country of the worker, workers earned on average between \$1 and \$5.5 per hour. American AMT workers earned the most, with average earnings of \$5.55 per hour and half of the workers earning either below or above \$4.65 per hour (the median).¹⁴ Indian AMT workers had average earnings of \$3.17 and median hourly earnings of \$1.65, and Crowdfunder workers earned on average \$1.77 an hour, with median earnings at just under \$1 per hour (See Table 2). The lower earnings of Crowdfunder respondents is likely due to the lower pay of the tasks posted on the platform.¹⁵ These figures are gross earnings and do not reflect any taxes that may be paid.¹⁶ Ten percent of AMT workers, both in the U.S. and India, report relatively high earnings, in excess of \$10 per hour on the AMT platform, though most workers’ earnings concentrate around their respective means (See Figure 6).

¹³ Outliers were removed for the calculations. Workers who stated that crowdworking was their main job worked on average 36.5 hours per week (27.5 hours on paid tasks and 9 hours on unpaid task) compared with average hours of 23.5 hours for those who crowdworked as a secondary form of income (18.3 hours on paid tasks and 5.2 hours on unpaid tasks).

¹⁴ The findings confirm Iperiotis (2010), who estimates an hourly wage of \$4.80 based on a queuing model.

¹⁵ Before December 2013, Crowdfunder used to post its task on AMT and it was well known in on-line worker forums for its low pay. Crowdfunder was also the subject of a lawsuit, *Otey v. Crowdfunder*, for paying below the minimum wage (non-compliance with the Fair Labor Standards Act). The case was presented in the Northern District of California in 2012 and after two tries a settlement was approved by the Court.

¹⁶ As independent contractors, U.S. workers are required to pay social security taxes as self-employed on their earnings, in addition to income tax.

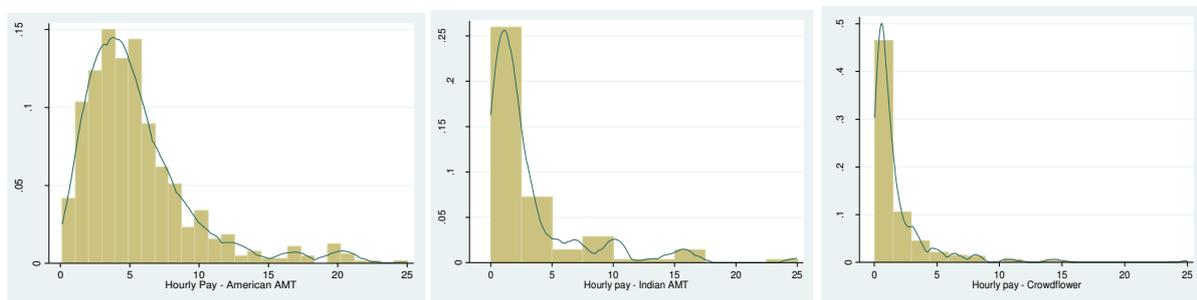
Table 2. Hourly pay by platform and country (USD), November/December 2015

	Crowdflower	AMT - USA	AMT - India
Median hourly pay	0.94	4.65	1.65
Mean hourly pay	1.77	5.55	3.17
Standard deviation	2.61	3.97	4.24
Observations	315	667	111

Note: Trimmed at 99 per cent and \$0 responses removed. Results are from Survey 1. The standard deviation measures the dispersion from the mean, which in this example is the average hourly pay.

Source: ILO Survey of Crowdworkers.

Figure 6. Distribution of pay among American AMT, Indian AMT and Crowdflower workers



Note: Data trimmed at 99 per cent and \$0 responses removed.

Source: ILO Survey of Crowdworkers.

Low pay was a recurring complaint amongst workers, appearing in 488 of the text answers on what workers would change on the platform if they could as well as in the textual answers to the question on job satisfaction.

“The pay. I don't expect it to be a great wage, but it should strive to be close to the current minimum. \$2-6 an hour is just too low.” – AMT worker (USA)

“Fairer pay – a bare minimum of 10 cents a minute is barely acceptable, but anything under that is just greed. I put in a lot of thought and work into each HIT and deserve to be compensated fairly.” – AMT worker (USA)

“Minimum task [payment] should be .02 [cents]” – Crowdflower worker, Qatar

“Pay must be more!” – Crowdflower worker, Turkey

“HITs should pay at least the minimum wage.” – AMT worker (USA)

“I am satisfied because I do not have high expectations from being a crowd worker. It is possible to save up some grocery money from a few months’ work. However if one approaches it from the perspective of how much one can earn in an hour -i.e. minimum wage, then one is likely to be very disappointed. Some tasks are well compensated but they are not the norm. Crowd work is for those who need to stay at home or for those who have a lot of spare time at work. To earn a decent 'wage' from crowd work, one would probably have to approach it like a 9-5 office job and that would make it very unrewarding because you would probably be earning less than minimal wage.” – Crowdflower respondent (UK)

“I'm making enough money to pay my bills, which is my primary goal in crowd work. However, I'm working slightly longer hours than I would want and can't help but think about how much money I'd be making by working somewhere else. I could make twice as much money tomorrow with a retail job involving similar hours. However, the trade-off there would be that I wouldn't have the flexibility that I have with crowd work. As it stands, I'm doing the crowd work and it's accomplishing my goals but it's far from ideal.” – AMT worker (USA)

A feature of platform-based work is the ability of requesters to limit tasks to workers of specific countries. On AMT, restrictions generally favour American workers, leading to much resentment amongst Indians on the platforms, and likely contributing to the difference in earnings between American and Indian AMT workers. Geographical blocking is also a feature of the Crowdfunder platform. Not surprisingly, many non-American workers expressed dissatisfaction with this practice:

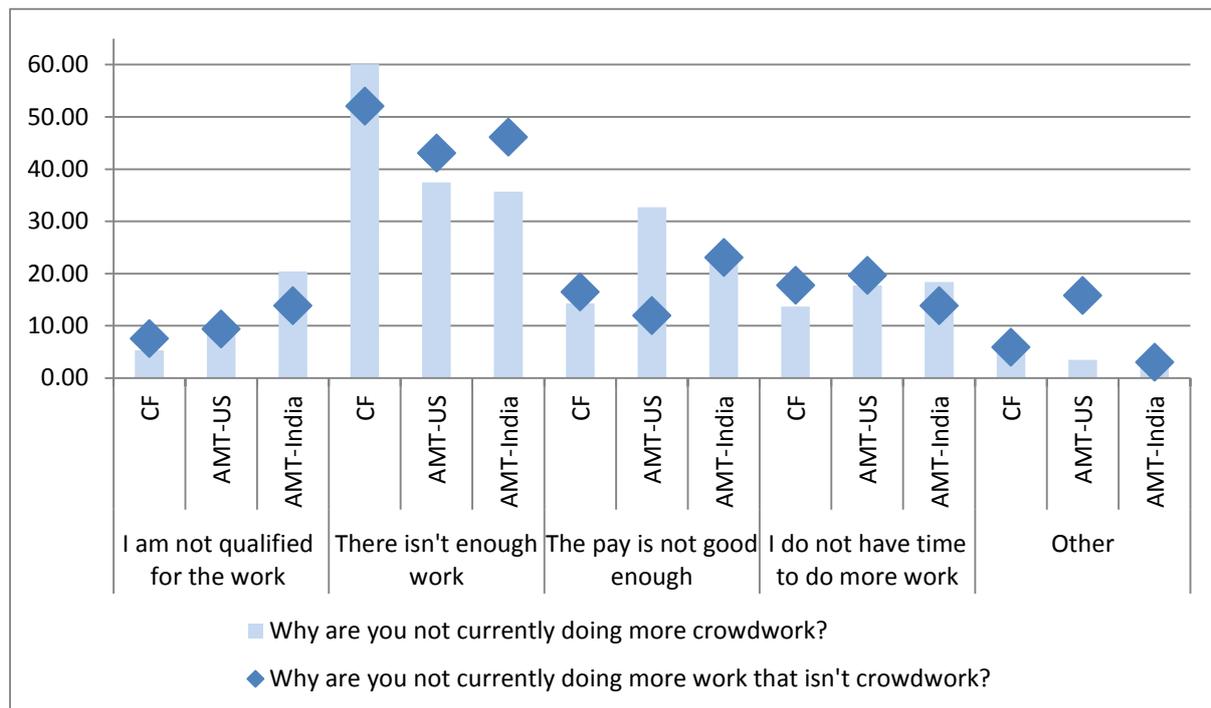
“Most of the requesters typically do not allow Indian workers to work on their HIT. I consider this as a discrimination, they should allow equal access to Indian workers as well. If they feel the quality may not be up to the mark they should have a qualification test for Indian workers. Currently, this is not the situation, the requesters favor American worker over Indian worker.” – AMT worker, India

“The availability of fairly paid and interesting work is a problem for me being from India. A lot of requesters on mturk post work only or mostly for U.S. turkers.” – AMT worker, India

“...And accessibility of some work for us workers outside USA” – Crowdfunder worker, Bosnia & Herzegovina

Insufficient work or underemployment. Another important concern among crowdworkers was insufficient work, with 90 per cent reporting that they would like to be doing more crowdwork than they are currently doing now (Crowdfunder, 96 per cent; AMT-US, 85 per cent; AMT-India, 97 per cent). When asked why they are currently not doing more crowdwork, 60 per cent of Crowdfunder respondents answered that ‘there isn't enough available work’, as did 38 per cent of American AMT workers and 36 per cent of Indian AMT workers. Insufficient pay (‘pay isn't good enough’) was the reason for 14 per cent of Crowdfunder workers, 33 per cent of American AMT workers and 24 per cent of Indian AMT workers. Moreover, 71 per cent of Crowdfunder workers, 61 per cent of American AMT workers and 64 per cent of Indian AMT workers also indicated that they would like to do more work that isn't crowdwork. But like crowdwork, the majority report they are not doing more because of a lack of available jobs. Indeed, 46 per cent of Crowdfunder workers, 23 per cent of American AMT workers and 46 per cent of Indian AMT workers actively searched for other work besides crowdwork during the past four weeks. It is thus clear that underemployment is a severe problem for many crowdworkers around the world (See Figure 7).

Figure 7. Why are you not currently doing more crowdwork or non-crowdwork? (percentage by category)



Source: ILO Survey of Crowdworkers.

Amongst the 321 Crowdflower workers who would like to do more crowdwork, the mean amount of additional hours that they would like to crowdwork per week is 13 and for the 236 who report that they would like to work additional hours of non-crowdwork, the mean amount of hours desired is 9.¹⁷ Amongst American AMT workers, the mean amount of time is 10.5 hours (458 observations) and for non-crowdwork it is 11.9 hours (340 observations). For Indian AMT workers, they would like an average of 11.2 additional hours of crowdwork (98 observations) and 11.4 additional hours of non-crowdwork (65 observations). The desire for more work is surprising, but also indicative of insufficient pay, as 49 per cent of respondents to Survey 2 (665 observations) indicated that they crowdworked for more than 10 hours during at least one day in the past month. Moreover, 60 per cent report that they regularly work at least six days per week (with 21 per cent regularly working six days and 39 per cent regularly working seven days per week).

“The toughest part of turking for a living is actually finding the jobs, for every hour I spend working I most likely spend 2 hours monitoring the various scripts I have running to see what jobs show up.” – AMT worker

“I would like to change how hard it is to find the jobs to work on. I often have some time to do a task, but cannot find anything to work on.” – AMT worker

“...half of the key to making money on MTurk is being on the site 24/7 with your scripts running so you can catch all the best jobs as they come out.” – AMT worker

“I would very much like if the tasks would open one after another for specific jobs, other than to wait great amount of time for them.” – Crowdflower worker (Serbia)

¹⁷ The following calculations exclude outliers (trimmed at 99 per cent).

“There should be a way to have many jobs offered based upon ratings rather than all the activity time I must spending looking for jobs.” – AMT worker

“So far it's been a relatively positive experience; I just wish I didn't have to spend so much time looking for work versus actually doing the work.” – AMT worker

“It's an extremely unstable existence....I cannot say to myself I'm going to log in from 9 to 5 today and do enough work to make X amount of dollars. Sometimes there is work you can do, sometimes there isn't....So it becomes right time, right place, and fighting other workers for the better paying tasks/work if/when they are available. If you want to be successful, you can't stop. You can't log out....” – AMT worker

Indeed, the pressure to be on-line to find work appears to erode the flexibility that is so coveted in the job. As one AMT worker stated in response to what they would change about crowdwork if they could, “*I would want to know when tasks are up so I can plan my day.*”

Unfair treatment by requesters and disinterest from platform. A main complaint of crowdworkers is mistreatment by requesters, including refusal to pay or rejection of work. Added to this is the frustration among workers with the platforms, which they found to be unresponsive to their concerns, both in regard to mediating disputes with requesters, but also in the way they ran the platforms. Of the crowdworkers surveyed, 94 per cent have had work rejected or were refused payment. A follow-up question asked workers whether the rejections were justified, and although they were in many instances, with workers readily admitting they had made mistakes, 34 per cent stated that only a few of the rejections were justified and 19 per cent stated that they were not justified. In many instances, rejections were the result of unclear instructions on the part of requesters, compounded by an inability of the workers to communicate with the requesters. As they explained,

“I would like for requesters...to be more lenient about there being a learning curve for all types of work. When you work at a real job, you are given time to learn and make mistakes and are given feedback, but in crowdwork, the first time you make a mistake (usually for a task that has vague instructions) you are rejected and maybe even blocked” – AMT worker

“I'm not dissatisfied with the work but the system in place. Lack of controls in place that exploit workers because requesters can reject submitted work arbitrarily. No repercussion to requesters who frequently get free work and data. Lack of customer service when we do experience problems such as delayed monetary transfers.” – AMT worker

“I recently received a block from a requester after I sent him an email suggesting politely that he could pay a tiny bit more for the work he was asking people to do. He replied and was very condescending and rude. When I reported it on turkopticon, he created an account in an attempt to disparage my character AND used my real name in public. After I refused to reply to his condescending emails....he blocked me. He emailed me to let me know that since he was unable to reject my work that he'd already approved, blocking was the next best option since it would put my account in jeopardy. This is unreal. I reported it to Amazon, but they have done nothing.” – AMT worker

“You cannot expect people to spend time on 'test questions' and then not give them paid work when they have finished - yet this happens every day, the forums are full of complaints. If there is no work left on a job, the job should be removed from the task list. This does not happen.” – Crowdfunder worker.

3.3 Financial security and social protection of crowdworkers

The financial security and social protection coverage of crowdworkers is highly related to their dependence on crowdwork. Crowdworkers who supplement their income, in combination with another job, are usually classified as employees in the other job (more than 80 per cent) and thus likely to enjoy social protection coverage from this job as well as an additional, and more reliable, source of income. Thus it is not surprising that for the 38 per cent of American AMT workers and the 49 per cent of Indian AMT workers who crowdwork as their main source of income, their financial situation is weaker, with a greater dependence on financial support from extended family in the US (27.6 per cent of main job crowdworkers depend on extended family compared with 10.1 per cent of those who do not crowdwork as a main job), a more difficult time meeting basic necessary expenses each month (24.8 per cent v. 9.8 per cent in US and 31.4 per cent v. 21.1 per cent in India) and insufficient savings to meet emergency expenses (58.6 per cent v. 26.1 per cent in US and 43.1 per cent v. 23.1 per cent in India) (See Table 3). In addition, most crowdworkers who crowdwork as their main source of income lack social security coverage, which according to the International Conference of Labour Statisticians, would make them ‘informally employed’ (ILO-ILC, 2003).¹⁸ Indeed, a mere 8.1 per cent of main job crowdworkers in the US report making regular contributions to a private retirement account and only 9.4 per cent contribute to social security, raising concerns about the financial situation of these workers when they reach retirement age, but also about disability coverage. Similarly, in India, only 13.7 per cent of main job crowdworkers report contributing to a provident fund compared with 42.3 per cent of those who do not crowdwork as their main job. Health insurance coverage is also lower with 38.1 per cent of US main job crowdworkers and 64.7 per cent of Indian main job crowdworkers reporting that they are uninsured, nearly double the rates of their compatriots who crowdwork as a secondary source of income.

¹⁸ See also Hussmanns, 2004.

Table 3. Financial security and social protection of crowdworkers, India and US, main job or not (percentage)

		USA [n=558]			India [n=103]		
		All	Main job	Not main job	All	Main job	Not main job
Receives financial support from extended family	Yes	16.7	27.6	10.1	48.5	49.0	48.0
	No	83.3	72.4	89.9	51.5	51.0	52.0
Household's total monthly income is enough to cover basic necessary expenses like housing, food, clothing and transportation	Yes	84.6	75.2	90.2	73.8	68.6	78.9
	No	15.4	24.8	9.8	26.2	31.4	21.1
Has enough savings to cover personal emergency of \$500 (USA) or \$250 (India)	Yes	61.7	41.4	73.9	67.0	56.9	76.9
	No	38.3	58.6	26.1	33.0	43.1	23.1
Makes regular contributions to a private annuity/IRA/401k/pension or provident fund	Yes	27.8	8.1	39.7	28.2	13.7	42.3
	No	72.1	91.9	60.3	71.8	86.3	57.7
Has health insurance	Yes	75.1	61.9	83.1	50.5	35.3	65.4
	No	24.9	38.1	16.9	49.5	64.7	34.6
Makes contribution to social security [only USA; n=678]	Yes	51.5	9.4	77.0			
	No	48.5	90.6	23.0			

Note: Data is from Survey 2 (only AMT workers) with the exception of the question on social security which was asked in Survey 1 but only to Americans. For the social security question, both voluntary contributions and contributions made from other jobs were included.

Source: ILO Survey of Crowdworkers.

4. Current discourse and policy proposals on the on-demand economy

Most crowdworkers like the work and appreciate the opportunity to work from home, but are nonetheless frustrated with the low level of pay, the lack of a reliable and steady source of work, the unresponsiveness of platforms to their concerns and the poor, and at times abusive, relationship with requesters. At present, platforms are not regulated by governments, but this does not mean that they are not regulated, or that it is a free exchange of services between independent parties. Rather, the platforms regulate the market. In fact, the platforms have a position “like that of the government” as it “sets policies to encourage efficient market outcomes without dictating trades,” as Argawal et al. (2013) explain. The authors describe how, “the platform decides how often and in what context participants are exposed to each other, what information is collected by parties, and how this information is displayed. Platforms also set policies about what trades are permissible, how entry is gained, what contracts and prices are allowed and so on.”¹⁹ Platforms also mediate disputes and “ultimately decide how they should be resolved.”²⁰

Thus, platforms have decided to classify the workers as independent contractors, relieving them of the principal obligations of the employment relationship such as paying a minimum wage or overtime, contributing to social security, or ensuring a safe and healthy work environment. As a result, crowdworkers bear the risk when there is insufficient work, when clients refuse to pay, when payments are low, or even for paying taxes to the government. Moreover, crowdworkers are not able to negotiate payments, which are set by requesters upon posting the task, and often in accordance to the fee being charged by the platform (Kingsley, Gray and Suri, 2014). These risks are disregarded by much of the current discourse on crowdwork or the on-demand economy as a whole, which has sought to portray the work as ‘pin’ money or alternatively, has sought to reframe the debate around protecting the worker who moves from ‘gig’ to ‘gig’ rather than focusing on improving the working conditions of the job.

4.1 The convenient rhetoric of pin money

Crowdwork shares many similarities with other forms of non-standard employment such as temporary work, part-time work or temporary agency work. In addition to the casual and unstable nature of the work, crowdwork as well as other work in the ‘on-demand economy’, is often portrayed as additional income for secondary earners, and thus, not real work.²¹ This discourse has existed for decades in debates on pay and regulation of non-standard employment. For example, opponents of the U.S. minimum wage have often argued that it is teenagers working part-time, retail jobs that earn the minimum wage and thus there is no need to increase their pay as they are working for pocket money.²² Thus the job itself may be precarious, but the worker is not.

¹⁹ Ibid, p. 19.

²⁰ Ibid, p. 11.

²¹ For example, Marlo Struve of the now defunct Homejoy explained to Forbes how “A lot of people use it [working for Homejoy] as a flexible option to bring in extra earnings to a family and sometimes supplement another part-time opportunity.” (Cited in Slee, 2015.)

²² See for example “The Lost Wages of Youth,” *Wall Street Journal*, 5 March 2010, available at <http://www.wsj.com/articles/SB10001424052748704761004575096150953378366>. In 2014, 21 per cent of minimum wage earners were between 16 and 19 years of age (BLS, 2014).

Similarly, when the temporary agency industry was establishing itself in the U.S. labour market in the 1950s and 1960s, it chose to promote the view that the work was done by middle-class housewives who were looking to earn ‘extra’ money while still fulfilling their household duties. In 1958 the Executive Vice-President of Kelly Girl described “*the typical ‘Kelly Girl’*” as someone who “[*doesn’t*] want full-time work, but she’s bored with strictly keeping house. Or maybe she just wants to take a job until she pays for a davenport or a new fur coat.”²³ Similarly, the temporary agency, Manpower, wrote in 1957 that temp work is “*ideal for a married women with responsibilities that do not permit her absence from home every day of the week.*”²⁴ Yet even then, women working as temps needed to be available every day in order to get work. Furthermore in an academic study of the industry from the early 1960s, it was found that 75 per cent of women cited ‘to earn money’ as the primary means for working, with more than double citing that they needed the money to meet daily living expenses rather than for extra miscellaneous items. Only 15 per cent stated that they worked out of boredom.²⁵

In our survey of crowdworkers, nearly 40 per cent crowdworked as their main source of income and an additional 35 per cent crowdworked to complement pay from other jobs. Fewer than 15 per cent crowdworked out of enjoyment or as a form of leisure. The survey respondents, both American and non-American, considered it work and felt they should be compensated with a ‘fair’ or ‘minimum’ rate of pay. Yet even if crowdwork were undertaken for ‘pin’ money, there is nonetheless a need for minimum pay thresholds. Indeed, a primary goal of minimum wages, aside from protecting workers’ earnings, is to prevent businesses from competing unfairly through wages that are so low that they do not cover ‘the social costs of the worker’ and which undercut fair competition.²⁶ Yet when the discourse evokes ‘pin money,’ ‘extra money’ or ‘beer money’ as motivations for work, there is less support or perceived need for regulating it.

4.2 Portable accounts to provide security

Researchers and policymakers have recognized that on-demand workers need some basic protections that they are currently not receiving. One proposal, advanced by the New America Foundation, which has received widespread support and attention, is the creation of individual security accounts for all workers, beyond just those in the on-demand economy (Hill, 2015).²⁷ According to the New America proposal, every worker would have an account and regardless of how many businesses they work for, or the contractual arrangement they have, the business would pay into these accounts a proportion of the ‘wages’ or ‘earnings’ that is paid to the worker. These accounts would then pay into existing programs such as social security, Medicare, unemployment insurance and workers’ compensation, as well as providing funds to cover sick leave or holiday leave. Thus the business would have the same

²³ Cited in Hatton (2011), p.38.

²⁴ Ibid, p. 39.

²⁵ See M. Moore (1963). (Cited in Hatton, 2011, p. 40.)

²⁶ Sidney and Beatrice Webb (1902) argued that wage floors were an effective policy for preventing what they termed ‘parasitic’ industries, or industries that paid wages that were ‘insufficient to cover the social costs of the worker’.

²⁷ For media coverage on the topic see L. DePillis (2015).

obligation vis-à-vis its independent contractors as it has with its employees, which, was argued, would mitigate the incentive to hire workers as independent contractors.²⁸

While the proposal appears to create parity between different categories of workers, it ignores other responsibilities of employers including paying at least the minimum wage, paying overtime, and thus respecting limits on working hours (for non-exempt workers in the U.S.), and payment of business expenses such as gas for the Uber or Lyft drivers, or the computer and internet connection of the crowdworker. Moreover, the proposal does not address the critical challenge that on-demand economy workers face, namely the availability and reliability of work. Rather it accepts the current contractual arrangements as given and thus diverts attention from it by delving into a critique of the current social protection system in the U.S.

Moreover, the proposal would likely lead to greater legal confusion with respect to which workers the ‘employers’ would indeed be responsible for. While a crowdworker or Uber driver is very similar to a regular employee and a firm could be expected to be contribute on their behalf (as they exhibit dependency on the contractor), it would be difficult to justify paying into the individual security account of genuinely independently employed person such as an architect contracted to draw plans for a home renovation or a plumber fixing a leaky pipe, especially if this professional has employees of their own.

With respect to the portability of the accounts, social security and unemployment insurance in the U.S. are portable as workers can have multiple employers, simultaneously or over time, contributing on their behalf, allowing the worker to accumulate sufficient contributions and work months to be eligible for benefits. Only employer-provided health insurance is not portable but with the option of individually purchased insurance under Obamacare, health insurance has become less of a constraint on worker mobility. On the other hand, annual leave and paid family or sick leave are not legally mandated benefits in the U.S.²⁹ and as a result, only a small minority of private-sector workers (11 per cent) have paid family leave at their job and just 61 per cent have access to paid sick leave.³⁰ Thus, workers would benefit from having dedicated funds to help fund annual and sick leave, but it is dubious how much a worker in a casual employment relationship would be able to accumulate in his or her fund, which is highly dependent on how much the person works and their earnings.

Indeed, as the survey revealed, insufficient work was a principal concern of crowdworkers, the majority of whom expressed a desire for more hours, either in crowdwork or non-crowdwork activities. Underemployment and intermittency of work are defining characteristics of casual employment relationships, which require daily job search, and in the case of crowdwork, a continuous search for tasks. Workers in non-standard forms of employment, such as temporary employment or temporary agency work, are more likely to rotate between short-term work, unemployment and inactivity—sometimes nearly ten-fold—as compared to workers on a ‘regular’ or open-ended employment contract (ILO, 2015). Moreover, in countries where there is a large pool of temporary workers, due primarily to regulatory frameworks with fewer restrictions on their use, the likelihood of workers in temporary arrangements to transition to more stable employment is lower than in countries

²⁸ Harris and Krueger (2015) recommend having ‘intermediaries’ contribute half of workers’ social security contributions. Their proposal argues for the establishment of an intermediate legal category, which would have collective bargaining rights, but which would not be covered by wage and hour protections.

²⁹ The U.S. is one of five countries, together with Gambia, India, Kiribati, Pakistan and Sri Lanka that does not have a universal statutory minimum amount of annual leave (ILO, 2013). Connecticut is the only U.S. State that mandates paid sick leave; there is no federal mandate. (Council of Economic Advisors, 2014).

³⁰ National Compensation Survey. (Cited in Council of Economic Advisors, 2014).

where there are more limits and a smaller percentage of the labour force employed in these arrangements (ILO, 2015).

Several countries have experimented with individual savings account as a means to provide security to workers who lose their jobs. In 2002, Chile adopted a portable, individual unemployment insurance savings account, which workers could withdraw from in the case of job loss or retirement. The system established different levels of contributions depending on the contract held by the worker, with employers of workers on fixed-term contracts required to pay more. It also included a solidarity fund to help finance payments to workers who had met the contribution requirements but whose funds were low due to low earnings. Access to the fund is dependent on contributions of 12 months (though not continuous) for workers on open-ended contracts and six months for workers on fixed-term contracts, three months of which should be from the same employer, over the course of the previous 24 months. Nonetheless, data from 2012 shows that 18.8 per cent of workers on open-ended contracts and 30.1 per cent of workers on fixed-term contracts would not have been entitled to the funds in the event of job loss due to insufficient contributions. Moreover, an analysis of those who lost their job revealed that 24.8 per cent of workers on open-ended contracts and 59.9 per cent of workers on fixed-term contracts were ineligible for payouts from the fund to due to insufficient contributions. For those workers who did receive payouts, the average replacement rate was 38.4 per cent of previous earnings.

Although the Chilean system differs from the New America proposal, it does demonstrate how portability and increased flexibility in a benefit system, while certainly a desirable feature, is not synonymous with security. Moreover, those who are likely to fall through the cracks in ‘portable’ systems are precisely those workers who need the most protection – the workers with unstable and low-paying jobs. In Chile, workers from the lowest household income decile have median job tenure of 2 months compared with 25 months for workers in the highest decile (Sehnbruch and Carranza, 2015). Low earnings and low job stability go hand-in-hand. Individual security accounts provide little security as they cannot compensate for the central source of insecurity – the unreliability of work past the task, day or contract at hand.

5. Restructuring crowdwork to the benefit of workers and employers

The current organization of crowdwork has drawbacks for both workers and the businesses that post work on the platforms. A different organization of work could prove beneficial to both parties. At present, businesses (or ‘requesters’) post tasks on a platform for which they are charged a fee (ranging from 20-45 per cent of the cost of the job). For a higher fee they can choose a ‘higher’ category of worker. They can also place geographic restrictions on who does the job and impose ‘qualification tests’ in order to screen the workers. But otherwise they have no knowledge about the competencies or skills of the worker and no assurance that the same worker will continue working for the requester beyond completion of the specific task, even if it is part of a larger batch of work. Communication is limited and there are no opportunities for job-specific training. Moreover, there are no guidelines for pricing work, yet price-setting can have an impact on the quality of the work and its completion time. And because of uncertainty in the quality of the work, all work needs to be reviewed. Having a computer algorithm review the work risks rejecting work that was completed well (and alienating workers and the requesters’ reputation on worker forums if the worker is denied payment) and paying other workers to screen the work adds to the cost.

Finally, anytime a requester posts a job, even if it is a job that is highly similar to what has been posted previously, the requester needs to revisit the same issues.

In the survey, many workers cited poor communication with requesters as an unfortunate flaw in the system, and one that ultimately affects the work:

“So far the most difficult aspect of this work for me is the lack of realtime communication with the requesters. I have had to return quite a few tasks due to unclear instructions. If I had real-time communication with those requesters, I could have gotten those instructions clarified.” – AMT worker

“In about 10 per cent of the HITs I do, I email the Requester and make suggestions to improve their HITs. They are almost embarrassingly appreciative and often email me that that had been trying to get the information I provided from the support group but had been unsuccessful.” – AMT worker

“In normal jobs you can walk down the hall to your boss and get direction. Here there is a lot more ‘trying to figure out what someone else wants,’ which is never fun. Some requesters are good at returning emails but many aren’t. Communication is a big area that can be improved in crowd work.” – AMT worker

A dedicated workforce—a staff—could resolve these issues. Workers could be screened, hired as employees, trained, assessed and guided as is done in a typical employment relationship. Companies whose activities are based on the work of crowdworkers and who regularly post on the platform could hire their workers directly and save the fees that they currently pay to the platform. For other companies or individuals who use crowdworkers for occasional tasks, they could hire the services of the platform, which would then have their own, screened and trained employees. This would have clear advantages for workers and the labour market, but also for the firms as the current system is not efficient.³¹ This point is clearly explained in the following comment by one AMT worker who is unable to work outside of home due to a disability:

“Something I feel should be looked into is an alternative way of handling crowd work. I think crowd work has its place, and some tasks make sense to just upload en masse and allow a group of diverse individuals to work on them. But then there are other tasks that would actually make more sense as a part time job. For example, the state of California has been overhauling their legal document entry system, and so they upload PDFs of their legal paperwork and have several HITs related to entering the data from these PDFs. One group selects how many items are listed, another group enters the name of each item on the list, another group enters amounts, and yet ANOTHER group verifies the data. So besides the fact that they're paying several times for each sheet to be entered, that is actually a job I would like to do. As in, basically be hired by California's government to process their paperwork whenever more comes in. It would be a fairly steady job (it's government: they are ALWAYS making more paperwork) and though it wouldn't be full-time, it would be something I could do from home and so it would allow me to work within the conditions I require. What boggles my mind is how often jobs like that get broken up into random freelance tasks and/or tossed onto crowd work platforms when they could be used to enable

³¹ See Ipeirotis and Horton, *op. cite*, for a discussion of current inefficiencies with crowdsourcing platforms.

those who have very specific needs to actually work instead of relying on government assistance. It's just so strange that our system would rather I go apply for disability than to allow me to work a job I can actually handle within the restrictions I have to live with.”

Returning to an employment relationship would resolve the two main problems with crowdwork – the unreliability of the work and the low pay. Employers would be obligated to pay the minimum wage and overtime and would thus be compelled to organize the work to ensure that workers are kept busy, that the work is of sufficient quality and that their profits are based on value created rather than wages so low that they do not cover the ‘social costs of the worker’ (Webb and Webb, 1902). Adapting the organization of work to comply with the law is not without precedent and is ultimately beneficial for firms and the economy. When minimum wages and standards on occupational safety and health were introduced in the U.S. in the early 20th century, firms were forced to move away from sweatshops and adapt their labour practices to abide by the law. They did so, and productivity increased (Piore, 2004). Within the on-demand economy, having a steady pool of employees will result in a more thorough screening of workers and allow firms to invest in training that will improve the quality of work and ultimately, companies’ success. Furthermore, the public sector, rather than dividing tasks and posting them on the platform to workers in any country, could hire local workers who need a job, but due to a disability can only work from home, as the respondent cited above suggested. Indeed, crowdwork seems particularly well suited as a means for providing work to workers who otherwise have difficulty accessing the labour market.

The ‘contract of employment’ has its origins in the late 19th and early 20th centuries and came about in response to employers’ need for a stable, subordinated and obedient labour force that employers could rely upon in exchange for acceptance by the enterprise of a range of social risks (Deakin, 2005).³² Though on-demand economy firms have sought to organize their labour force under an independent contractor (or self-employed worker) model, there are limits to the control that the companies can exercise over their workforce. In 2015, Instacart, a grocery shopping and delivery company, and Munchery, a food preparation and delivery service, switched from using independent contractors to hiring employees.³³ According to a Munchery executive, the firm was having difficulty with high turnover and having sufficient workers during peak periods, and thus decided to switch to an employment model. The executive explained how the workforce was better trained and thus more reliable and knowledgeable, and that the 20 to 30 percent in added labour costs have “more than paid for themselves” (Scheiber, 2015).

As crowdwork is task-based work, the workers could continue to be compensated at piece-rates and the piece rates could be set up to comply with the prevailing minimum wage. Technology would facilitate setting the rate, which could be based on the average completion time for a task. Technology would also facilitate monitoring working time to ensure that workers receive paid breaks (as required in many laws governing piece-work).³⁴ With a dedicated labour force, the employer would ensure that the work is organized in advance and limit the amount of downtime. Currently, for every one hour of paid work, crowdworkers average 18 minutes of unpaid work looking for the job, reading reviews about the requester to

³² Labour history and labour law history are replete with examples of laws passed to ensure a labour force for businesses. See T. Brass and M. Van der Linden (1997).

³³ “Instacart Makes Some Contractors Employees So It Can Train Them More,” *Forbes*, 22 June 2015. Other well-known examples include Spring, Shyp and Luxe.

³⁴ See Sankaran (2016) for a discussion of piece-rate legislation in different countries of the world. Many countries issue guidelines on how to calculate piece rates and how to factor in rest times.

ensure they are fair and honest, reading the instructions for the job and taking unpaid qualification tests. This unpaid time is an important contributor to the low level of hourly pay. Productivity would automatically increase.

Piece-rates function effectively as a pay system if they are designed effectively. In a comprehensive review of the design of effective piece-rate pay systems, the agricultural economist and compensation specialist, Gregorio Billikopf, explains how a piece-rate system can induce high productivity and earnings, to the benefit of both employers and workers (Billikopf, 2016). Billikopf explains how every employee should make at least the minimum wage when paid by the piece and that is better than the lowest paid employee make at least 20 per cent over the minimum, given the increased effort involved in piece work. He explains that if there are workers who are not earning the minimum wage, it is because they were not properly screened before being hired. Workers vary in how productive they are and it is not unusual to find workers who are four to eight times more productive than the slowest. For this reason, it is important to pay by the piece, rather than at an hourly wage plus bonuses, which lowers the output of the most productive workers. Another general rule in establishing effective piece-rate systems is to hire fewer employees to ensure that there is sufficient work. Moreover, an important part of ensuring quality in piece-work is noting the precise reasons for making a rejection as well as establishing a quality control system with a validated scoring system, so that workers can learn from their mistakes.

Although the lessons of piece-rate systems learned from the agricultural and manufacturing sectors can be easily applied to home-based work such as crowdwork, the international labour force of crowdwork raises questions about the setting of pay. If the U.S. federal minimum wage of \$7.25 (as of January 2016) is imposed as a benchmark for the setting of piece-rates, does this mean that employers would gravitate to places where minimum wages are lower? They may, and indeed there are many crowdworking sites that work almost exclusively with workers from middle and lower-income countries, such as Crowdfunder. But the lower pay rates of lower-income countries cannot be a justification for not abiding by minimum wages laws in the U.S. and elsewhere, as there will always be a country with lower wages. Furthermore, many of the tasks require advanced English language skills (e.g., audio transcription or writing descriptions of products) or cultural knowledge (e.g., surveys), thus there is no shortage of work that will need to be done by American workers.³⁵ And as the internet and crowdsourcing continue to spread, there will be country-specific needs in other countries. Yet regardless of where the workforce is located, there needs to be respect for the established labour laws of the country, including the minimum wage, which exists in 92 per cent of countries (ILO, 2013).

In a well-designed piece-rate system, workers have the potential to make very high wages producing high quality work. Billikopf explains that piece-rate systems often fail because management feels the workers are earning too much and respond by reducing the pay, which leads to mistrust among the staff and quits by the most productive workers. Moreover, as workers are paid by the piece, the total labour costs to the firm do not increase, which is what management should be concerned with. Nonetheless, higher earnings for workers and controlled labour costs for employers are contingent on organizing work for a core group of dedicated, screened and trained employees.

³⁵ According to some of the comments made by survey participants, some requesters do price their tasks using the U.S. federal minimum wage as a benchmark and would thus not be affected if the minimum wage were to be enforced.

6. Conclusion

The current organization of crowdwork is not providing decent work opportunities in the U.S. or elsewhere. Although most crowdworkers appreciate having the opportunity to work from home, they also express concerns over the level of pay, the unreliability of work, the lack of communication with requesters, and the unresponsiveness of the platforms. Requesters face issues of incompleteness of batches, erratic quality, miscommunication with workers, and a constantly rotating workforce.

Presently, workers are hired as independent contractors, even though they may work exclusively for one platform,³⁶ for which they rely entirely on their earnings and for which they exercise no control, with the exception of when to log on and off. Forty percent of crowdworkers rely on crowdwork as their main source of income. These workers have difficulty financing their living expenses, lower rates of saving and a high probability of not having social security coverage. Many have entered crowdwork following a period of unemployment or labour market inactivity. Yet even for those crowdworkers who combine crowdworking with other jobs, most do so to complement their income.

At present, platforms regulate the crowdwork labour market. They decide how information is collected and displayed, how and in what contexts participants are exposed to each other, who can work on the platform and the status they will have, as well as whether or not to intervene and mediate disputes. It is not an unregulated market—it is a ‘platform-regulated’ market. Thus addressing the problems that crowdworkers face will require that governments step in and enforce compliance with labour standards.

While doing so may result in initial adjustment costs for the firms posting jobs on the platforms, ultimately it will lead to a more productive organization of work, for all parties. Fewer workers, who are screened, trained and dedicated to the job, can be highly productive, producing high quality work for their employers. For the worker, being classified as an employee encourages greater stability in employment, and thus greater security in income. Establishing some sort of portable security account for on-demand economy workers, regardless of who finances it, will not provide sufficient income security for these workers, as the main problem is not the portability of benefits, but rather the unsteady income associated with ‘gig’ work. Only a reorganization of work can ensure that this growing and important new sector of the economy will provide quality, decent jobs. This is better for workers, but ultimately for labour markets and society as a whole. As one survey respondent noted, *“This is obviously a way of working that will likely explode in the future. If some sort of fairness were present in early stages it would prove beneficial to long term prospects.”*

³⁶ In our survey, 76 per cent of CF workers, 70 per cent of AMT-US workers and 74 per cent of AMT-India workers worked exclusively on the CF or AMT platforms.

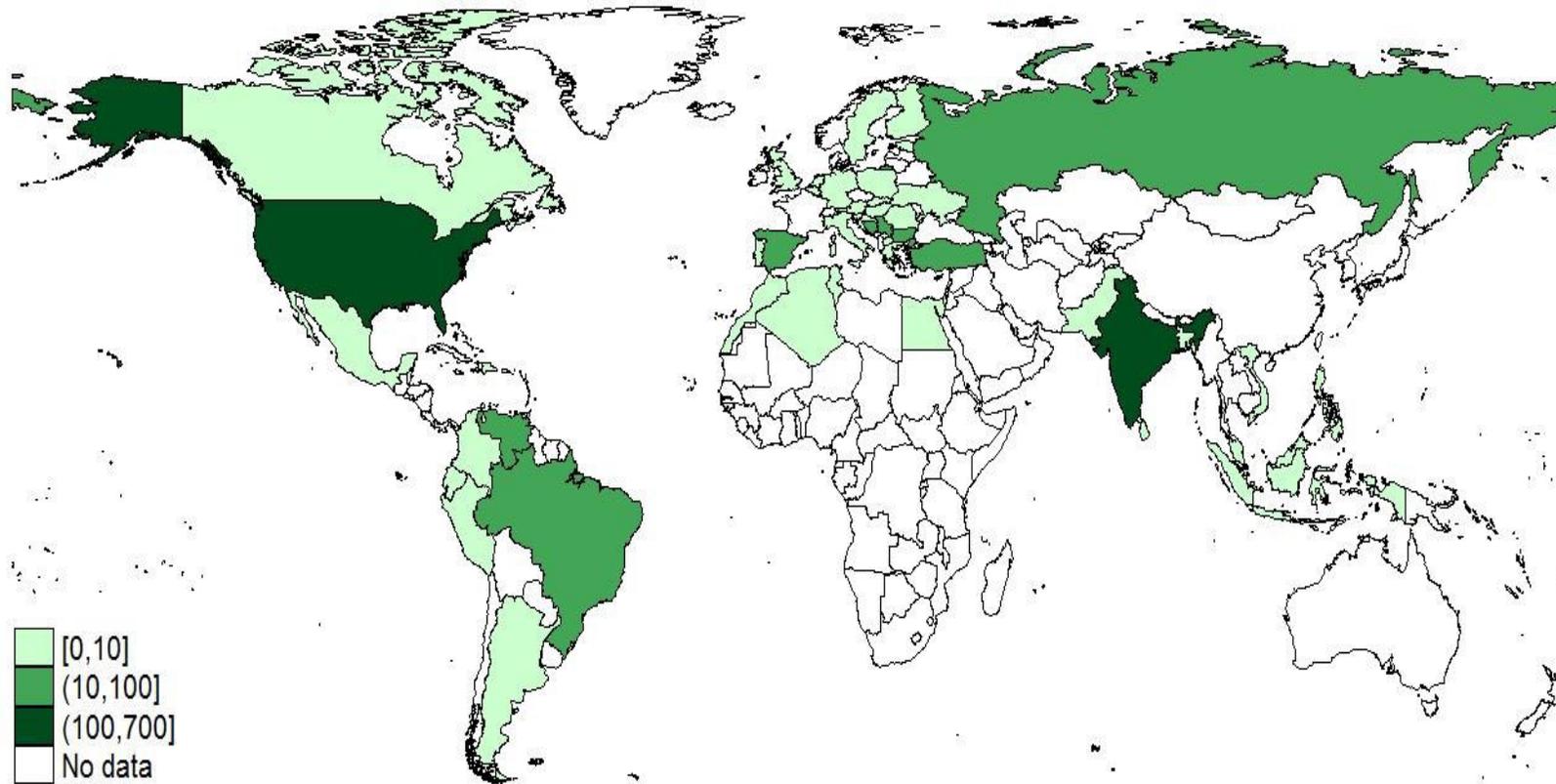
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Map: Distribution of survey respondents across the world



Note: Amazon Mechanical Turk respondents are from the USA or India. Crowdfunder respondents can be from anywhere in the world.
Source: ILO Survey of Crowdworkers.

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