Digital Innovations and the Rise of Digital Piece-work

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The development of digital technologies and the availability of cloud infrastructure and computing services since the 2000s has led technocrats to come up with new business models, such as digital labour platforms, which allow for new modes of outsourcing work across the globe. [1] Digital platforms can be categorised out into two types – a) online web-based platforms, where tasks are performed online and tasks are allocated to the crowd (microtasking) and to individuals (on freelancing and competitive programming or software platforms) and b) location-based platforms, which are performed in physical locations by workers such as taxi services or delivery services. Among the business models, the most popular are the location-based platforms which provide taxi services, such as Uber or Ola; and delivery services such as Swiggy, which have received far greater attention over the past few years. The online web-based platforms are comparatively less known and are the latest manifestation of the on-going outsourcing process.

This note focuses on microtask digital labour platforms based on an International Labour Organisation (ILO) survey of 2350 workers conducted across the globe in 2017. They provide businesses with access to a large flexible workforce 24/7 across the globe to complete the tasks. These platforms enable the reorganization of activities that have conventionally relied on traditional employment relationships that characterized the work earlier, and are now being performed by independent contractors or the self-employed. Work is now often performed on an on-demand basis, wherein the logic of

"'just-in-time' inventory system" is applied to the labour process (Vallas, 2019, p.49). The compensation is based on a piece-rate basis, and as the workers are defined as 'independent contractors' they are required to provide their own capital equipment with little labour and social protection (Stanford, 2017; Drahokoupil and Fabo, 2016).

Invisible labour

In 2005, Amazon was struggling with cataloguing products in a way that would be easy for buyers to access through the search function, particularly due to duplicate product entries on its website. To systematize the data that was supplied by its multiple vendors, it created an internal website tool wherein employees, during their spare time (unpaid labour), could go through the catalogue entries and mark any duplicates. The reason for launching its own internal website, was because technological developments, such as artificial intelligence were not able to detect and classify images or texts, which still required human intelligence (Irani, 2015). This technology tool that the company developed allowed it to complete the tasks in a quick and efficient manner, and the success of this tool led Jeff Bezos to launch a digital labour platform, Amazon Mechanical Turk (AMT) in 2005. The platform facilitated businesses to outsource a wide variety of simple data processing tasks, which could be performed by workers from across the globe in a cost-effective manner (Silberman, 2015). Recognizing the power of the platform to get tasks completed at such a rapid pace using a global pool of workers led to a rise in such platforms. This virtual supply chain of

invisible workers has been central for data processing and for vehicular automation, among others for many companies.

Technological advancements do not necessarily displace workers, but reorganise work, and the current wave of digital transformations are making a worker invisible, as they perform tasks virtually behind a machine. This is most prominent in the case of content moderation, which refers to screening content posted on internet websites, social media platforms, and other online websites. These tasks are done on digital labour platforms, and in call centres, which are largely located in India and the Philippines (Roberts, 2014). According to YouTube's CEO in 2018, a lot of objectionable material such as pornographic images, war images or hate speeches are detectable through artificial intelligence (AI) and algorithms. However, what is often concealed is that AI and algorithms are still unable to capture these aspects 100 per cent, and as a result a human behind the screen has to verify the decision to remove harmful content from the web. This secrecy of human involvement is quite common in content moderation, and workers often have to sign a non-disclosure agreement about the nature of work they perform. The work and the attendant conditions have a huge psychological impact on these workers.

This process of automation not only renders workers invisible but also deskills them. Many of the tasks, especially on microtask digital labour platforms are simple, repetitive and mind-numbing and do not require any specific skills. An ILO survey of workers on digital labour platforms in 2017, and interviews with workers of a content moderation firm in 2019 revealed that a large proportion of them are highly educated with a bachelor's or postgraduate degree in science, technology, engineering and medical education especially in developing countries. Most of these workers who have been educated in urban centres and in institutions with high average costs of education, risk their skills to be wasted or under-utilized. Further, governments in many developing countries, instead of leveraging the skills of newly trained graduates, are embarking on developing digital infrastructure and supporting training programs initiated by the private sector to equip the workforce with such skills to perform tasks on digital labour

platforms. These developments raise a fundamental question with regard to whether this strategy would lead to social and economic development that generates long-term benefits for the economy and society.

Management by algorithms

Apart from resurgence of piecework, digital technologies have also enabled the entire work process to be managed and controlled by algorithms. This form of algorithmic management is not specific to microtask digital labour platforms but is increasingly becoming prevalent among a range of other sectors such as the taxi or delivery sector, where the algorithm is the boss. On microtask digital labour platforms the allocation of tasks to workers is done by an algorithm based on workers ratings, and if the rating is below a certain threshold of the platform then the worker will not receive the task and there is a high probability of the account being deactivated. The work is supervised and evaluated by an algorithm using a majority voting system, and the algorithm is programmed by a human. For example, suppose on microtask platforms that a particular task is distributed among three workers. If the result of one of the workers is different from the others, then the worker risks his work being rejected even if it is correct. This is because the algorithm may be set up to automatically reject the work of the response that is different. Such evaluation of work by an algorithm risks work being rejected, even if it was completed well. In addition, on these platforms there is no communication between the platform/ business client and the worker. And when the task is rejected, there is no way for the worker to know why the task was rejected, nor any dispute resolution mechanism to contest the decision. In addition, there is no payment for the time spent on completing the task, which has repercussions on their ratings and access to their future tasks. Thus, while ratings are critical for workers' access to work and incomes, they are not always fair or transparent, and workers have limited opportunities to undertake dispute resolution.

Opportunities and challenges for workers

The rise of microtask digital labour platforms has brought about many opportunities for businesses as they are able to reduce costs, improve efficiency and organisational performance by accessing a global pool of workers. The success of this business model is largely due to massive investments from venture capitalists, despite many of the platforms not being profitable. These platforms provide workers with some income generation opportunities especially in developing countries, and flexible work schedules. This allows workers such as, women, persons with disabilities, youth, migrants, and non-specialists to access the labour markets. For instance, women with care and household responsibilities have the flexibility to access work from home, who might otherwise have difficulties to access paid work in the offline labour market. This motivation seems to be quite prevalent among highly educated women in India, a country which is largely influenced by the gender roles and expectation of women to take care of children and household work. However, work on these platforms has also created a number of challenges for workers and these include:

Status of employment: The workers on digital labour platforms are categorised as 'self-employed' or 'independent contractors', while the work process is often controlled by an algorithm and the relationship resembles that of an 'employee'. This is not only evident in the case of microtask digital labour platforms, but also in taxi and delivery app platforms. This strategy allows platforms and business clients to devolve the responsibility of providing labour and social protection to workers themselves. This has huge implications on workers income security, and the COVID-19 pandemic revealed the enormous risks for these workers as they lack social protection or sick leave due to an absence of an employment relationship.

Regularity of work: Though digital piecework resonates a lot with traditional home-based piece-rate work in the manufacturing sector, there is a fundamental difference. The home-based piece-rate workers had a regular flow of work through their middlemen or intermediaries, and they did not have to go searching or looking for work. In contrast, digital piece work does not have any intermediaries and they have to constantly search for work and build their profiles, which can be quite time consuming and is often unpaid work. An ILO survey of workers on digital labour platforms in 2017 revealed that for every hour of paid work, the workers spent additional 20 minutes searching for work.

In addition, due to the global nature of the platforms, wherein the clients are largely based in developed countries and workers are based in developing countries, workers often have to adapt to the temporal distribution of jobs (O'Neill, 2018). This often leads to long working hours for a substantial number of workers from developing countries, wherein about 56 per cent of the workers worked during the night (10pm to 5am) and 44 per cent work for seven days per week (Rani and Furrer, forthcoming). Apart from the high intensity of work, it also blurs the line between work and personal life, as the constant need to search for tasks makes it difficult to define the boundaries of work. It also contradicts the flexibility model that is promoted by the platforms, as the workers do not have the autonomy and control over their work schedules. The regularity of work is also impacted by the way platforms are designed, as they can block workers from certain parts of the world from participating in some of the tasks, thus restricting access to work.

Low incomes: The irregularity of work has implications on workers' earnings, especially if they are dependent on it as their main source of income. An analysis of work performed on these platforms compared to those performing similar tasks in the offline labour market in India, revealed that workers earn almost 62 per cent less than their counterparts in the offline labour market. Furthermore, due to the restrictions of workers to perform certain tasks on platforms there is also a huge variation in incomes among workers from different countries. For instance, based on an ILO survey on Amazon Mechanical Turk platform, findings show that American workers earn 2.5 times the average earnings of the Indian workers and such disparities were also observed by other researchers on freelance platforms (Beerepoot and Lambregts, 2015; Galperin and Greppi, 2017). In addition, many workers from developing countries expressed that the payments for tasks were too low and unfair, and workers were often paid in gift vouchers rather than in cash, which they could not utilise leading to lost income and time. Even when workers received cash, it was far lower than what was prescribed in the platform for the task, as they had to pay for invisible middlemen or PayPal.

Lack of social protection: The social protection coverage is a major concern for workers on

digital labour platforms, across both developed and developing countries. With the outbreak of the COVID-19 pandemic, this situation has created additional risks for workers not only in microtask digital labour platforms, but also those that provide taxi and delivery services. While weak social protection coverage is common, occupational safety and health risks are significant especially for workers engaged in tasks such as content moderation.

Low levels of unionisation: Given the global dispersion of labour, a major challenge has been to organise these workers, as they also often compete with one another to access jobs. As a result, the levels of unionisation are quite low (4 per cent according to an ILO survey in 2017). However, workers use social media and other online forums to share their experiences, to discuss their problems or seek advice for well-paying tasks or how to handle rejection rates. While these forums are effective in sharing information, issues relating to working conditions are rarely discussed.

Despite low levels of unionisation among these workers, there have been some efforts towards improving the working conditions.These include Turkopticon, which allows workers to rate clients who post tasks on AMT; the Dynamo Guidelines for Academic Requesters on AMT to ensure minimum wages are paid to workers; FairCrowdWork.org, which lays down principles for fair work, initiated by IG Metall (a German trade union), the Austrian Chamber of Labour (*Arbeiterkammer*) and the Swedish white-collar union, Unionen; and the Crowd sourcing Code of Conduct, a voluntary pledge initiated by German crowdsourcing platforms. The signatory platforms have also established, in cooperation with IG Metall, an "Ombuds office" through which workers can report disputes with platform operators.

Way Forward

Some of these issues and challenges discussed for microtask digital labour platforms, are also similar across other online web-based platforms (such as freelance and competitive programming platforms), and location-based platforms (such as taxi and delivery platforms). In a number of developed countries, there has been a debate about the employment relationship of these workers, which has led to court decisions about the status of the workers based on litigations. This has also resulted in different decisions across countries with regard to the classification of workers. Some countries have classified these workers as 'employees' (France, Italy, Spain, California in the United States) or as an 'intermediate category' (the United Kingdom) to ensure that both labour and social protection are extended to them. Further, some countries have tried to address some aspects of working conditions. For instance, governments in New Zealand and Australia have adopted a broader statutory language, which allows all workers irrespective of their employment status to occupational safety and health, while in Brazil a judicial decision has led to the extension of safety and health to platform workers. Many of the Latin American countries, Indonesia and Malaysia have enhanced social security through using digital applications which automatically deduct the tax and social security contributions of platform workers, thereby simplifying the process and ensuring that the workers are protected. Unfortunately, India through its recent labour reforms has taken a step backward as it does not ensure any protection to these workers. Given the diverse nature of interventions there has been a call towards international legal coordination and international governance to address the issues related to workers on digital labour platforms.

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Endnotes

1. This note draws largely from the following two reports: Berg et al. (2018) Digital labour platforms and future of work: Towards decent work in the online world; ILO (2021) Digital transformation of the world of work: The growing role of digital labour platforms

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