

THE MACRO FRAMES OF MICROWORK

A study of Indian women workers on
AMT in the post-pandemic moment

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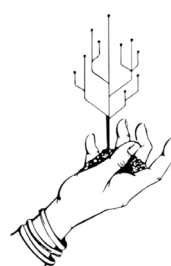
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CENTERING WOMEN
in India's Digitalizing Economy

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The Macro Frames of Microwork

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Research summary

Digital labor platforms like Amazon Mechanical Turk (AMT) are able to mobilize local patriarchies, exploiting women's labor to drive global capitalism's AI ambitions. Our qualitative study, based on interviews with AMT workers, shows that an intertwining of economic necessity and familial validation makes microwork on digital platforms an optimal choice for small-town Indian women from upwardly mobile households in a global digital economy. As a workplace, AMT demands an exacting adherence to the rules of the platform, but enjoys absolute impunity. Women must learn to manage the coercive disciplinarity of the platform, striving to meet its unknowable metrics. Waiting late nights for tasks from US requesters, they must face the exploitative tyranny of an unpredictable wage that may be withdrawn without explanation. With the onset of the pandemic and resultant instabilities in household income, women's work on AMT becomes non-negotiable to making ends meet, even as its harshness is more acute, with reducing work, falling pay, longer hours, and the risk of suspension. The digital economy thrives on gendered dispossession – not only extracting women's digital labor for profit, but also obscuring the care work they must perform in the ostensible flexibility afforded by platform capitalism. The study, hence, reflects how labor platforms, like AMT, engage in global labor arbitrage, exploiting gendered and racial faultlines in the digital economy. Pointing to the urgent need to address gender and redistributive justice, we propose policy recommendations for the government, multilateral institutions, and digital labor platforms as well as advocacy strategies for trade unions and civil society organizations.

1. Background: Digital labor and microwork

Digital labor platforms^{1,2} are web-based, algorithm-mediated platforms through which labor and services are coordinated (Pulignano & Tan 2019). These include platforms where work is allocated, performed, and delivered online (crowdwork) (Berg et al. 2018) and platforms that use software applications to allocate work that is then delivered offline (on-demand work via apps) (De Stefano 2016). According to the International Labour Organization (ILO), the rise of digital labor platforms is the most significant transformation in the world of work since the 2008 financial crisis (Berg et al. 2018). In 2017, the Online Labour Index (OLI), which captures the supply and demand of online labor, projected a 25% annual growth rate for the global digital labor market in the following year (Kässi & Lehdonvirta 2018).

Online work is increasingly being seen as an important pathway for developing countries to harness the rapidly growing opportunities of the digital economy (Banga, K. 2020; Stephany 2020). On the five largest digital labor platforms, which together make up 70% of the global platform labor market, around 67% of the workforce is from Asian countries including India, according to data collected for OLI (Kässi & Lehdonvirta 2018).

The production, development, and support of AI requires human intelligence so that technology can ‘learn’ cultural and social facts. Such learning is facilitated by microwork or microtask platforms.

This trend accelerated in the months following the Covid-19 pandemic as digital labor platforms witnessed a rise in both labor demand and supply particularly in parts of Asia, including countries like India (Rani & Dhir 2020). For instance, the mass layoffs and retrenchment propelled by the pandemic in the Indian software and information technology (IT) sector (Sharma, Nishant 2020; Sharma, Niharika 2020) was accompanied by a shift to a distributed workforce that could be managed via online platforms (Younger 2020).

The reconstitution of the economy in the fourth industrial revolution, propelled by data and artificial intelligence (AI), has opened up new labor markets. As such, the AI value chain refers to the business model where products and services of the digital economy are generated through the assemblage of intelligence infrastructure layers consisting of the base data layer, the cloud computing layer, the

1. The term digital labor platforms encompasses web-based platforms (crowdwork) and locally-based labor platforms in which work is allocated through software applications and completed offline (Berg et al. 2018). The term crowdwork was coined in 2005, to describe the “act of taking a job once performed by a designated agent (an employee, freelancer or a separate firm) and outsourcing it to an undefined, generally large group of people through the form of an open call, which usually takes place over the Internet” (Berg et al. 2018).

2. The terms digital labor and platform/platformized labor are used interchangeably in this paper.

intelligence layer, and the user/consumer-facing intelligence services layer (Gurumurthy et al. 2020). The production, development, and support of AI (Altenried 2020) requires human intelligence so that technology can ‘learn’ cultural and social facts. Such learning is facilitated by microwork or microtask platforms, which essentially are crowdwork platforms that provide businesses with access to a large, flexible, globally-distributed workforce that can perform numerous small, quick, and often repetitive, tasks (Berg et al. 2018). But this computational labor force at the service of AI and high technology is at once created and invisibilized.

Microwork is not a fringe phenomenon (Tubaro et al. 2020), but rather a new ‘workplace’ that needs to be understood in relation to how human computational labor inhabits the invisible, liminal spaces of the dominant digital economy. Notions of ‘freedom from degraded labor’ once associated with technology and automation, and ‘flexibility’ associated with platformized labor need to be systematically unpacked. Existing scholarship also notes gender and region-based wage differentials in digital labor platforms (Berg et al. 2018). The international division of labor associated with digital work also deserves attention for its racial and gendered markers, (Chaudhary 2020; Graham et al. 2017), particularly in relation to its exploitative and unregulated conditions (Choudary 2018).

1.1 About AMT

Amazon Mechanical Turk (AMT) is a cloud-based microwork platform (Schmidt 2017) which became a pioneer in the field when Amazon founder Jeff Bezos realized there was a market for platforms through which workers could perform tasks that are difficult for computers (Pew Research Center 2016). In the following decade, many competing microwork platforms emerged to meet the “need for uniquely human intelligence” (Berg et al. 2018).

While AMT was first developed as an internal Amazon website where duplicate products could be identified by employees, when it was opened up to outside ‘requesters’, it included a whole range of tasks that are now carried out by globally-dispersed anywhere, anytime workers who are compensated only when the results of the task are deemed acceptable by the requester. The type of tasks include image tagging (to enable accurate search results), sentiment analysis (to glean audience/consumer feedback), data entry, transcription of audio and video content, software testing, and market and academic research.

Such tasks, referred to as ‘human intelligence tasks’³ (HITs), are posted on AMT by requesters (someone who posts HITs) and subsequently taken up and completed by workers (someone who performs HITs) (Martin et al. 2016; Keith et al. 2017). The descriptor human intelligence tasks reflects the ideology of ‘humans-as-service’ which were the words used by Bezos while launching AMT

3. The description of these tasks as ‘Human Intelligence Tasks’ reflects the ideology of ‘humans-as-service’, which were the words used by Jeff Bezos when launching AMT (Schmidt 2017).

(Schmidt 2017). Requesters must pay Amazon 20% of the task payment as a fee in order to post tasks on the platform (Martin et al. 2016). Crucially, only requesters from certain countries are permitted to register on AMT – a list that does not include India.⁴ While posting HITs, requesters who are largely a mix of academics and businesses (Pew Research Center 2016), provide a title and description of the task, the payment, the time allotted for its completion, the expiration date of the task, and worker requirements or qualifications (Keith et al. 2017). Once a HIT is completed by a worker, requesters can either accept or reject the work performed, and decline to pay for work that is rejected (Keith et al. 2017). Each worker is assigned an ‘approval rate’ based on the number of approvals and rejections their work receives. Amazon also uses statistical models to analyze workers’ performance, based on data provided by requesters and the marketplace, conferring on certain workers a ‘Masters Qualification’ that allows them to access additional HITs.⁵

1.2 Situating (Indian) women in microwork

The purported flexibility offered by digital labor platforms holds particular significance for women’s work participation (Kasliwal 2020; Aneja 2017; Kullmann 2018; Berg et al. 2018). Scholarship on microwork focusing on educated, upper-middle class women also suggests that home-based microwork platforms like AMT provide an avenue for economic empowerment, allowing women to prioritize their family – and stay home – while contributing to the household income (Gray & Suri 2019).

This study is guided by the need to unpack the experiences of women microworkers during the current period of socio-economic flux. While existing scholarship notes gender and region-based wage differentials in digital labor platforms (Berg et al. 2018), the interplay of these trends with Covid-induced shifts to online work needs to be closely examined. The opportunity rhetoric associated with digital labor also needs a critical, feminist stocktaking.

As the pandemic indelibly altered work and employment conditions, it also brought to center stage the fact that for women in microwork, the continuum of paid and unpaid work within the fixed time-space boundaries of domesticity results in gendered consequences that leave them worse off. The ostensible work-life balance seen as a desirable option for women in conventional white-collar jobs tends to obscure that a disproportionate burden of care work is carried out by women. Pandemic or not, their predicament shares similarities with traditional home-based work such as *bidi* rolling. This study, thus, builds on and contributes to the vital body of feminist work on women’s economic participation across sectors.

4. See Amazon Mechanical Turk, FAQs, “Can Requesters outside of the US use Amazon Mechanical Turk to get tasks completed?”: https://www.mturk.com/help#can_requesters_outside_us_use_mturk

5. See Amazon Mechanical Turk, FAQs, “MTurk Master Worker”: https://www.mturk.com/worker/help#what_is_master_worker

1.3 Objectives of the study

Our broad objective is to situate the woman worker in AI value chains through a focus on AMT – a leading digital labor platform for clerical, data-related tasks⁶ that fuel AI – in order to understand the gendered workings of platform capitalism.⁷

Existing surveys estimate that Indian workers constitute the second highest group (after the US) in the regional composition of AMT workers, comprising 16% to 18% of the platform's total workforce. Of the total number of Indian workers on AMT, 23% are women (Berg et al. 2018; Difallah et al. 2018).⁸

Examining the contradictions of women's economic participation in relation to platform capitalism, we have attempted to understand the motivations and conceptions of work and self of women workers in this sector.

The avenue for economic participation that AMT provides Indian women, who have increasingly been pushed out of the productive workforce (Kamdar 2020), is a vital point of departure framing the study. Examining the contradictions of women's economic participation in relation to platform capitalism, we have attempted to understand the motivations and conceptions of work and self of women workers in this sector. We have explored how they navigate the algorithmic workplace, and if and how the Covid-19 context impinges upon them.

The rest of the report is organized as follows: Section 2 provides a brief outline of the methodology and demographic profile of the research participants. Our findings, thematically divided into three parts, are presented in Section 3. The first part discusses the ideologies that determine the motivations of women on AMT; the second charts the quantified workplace of AMT where women navigate multiple opacities and rigidities to keep the option of paid work open; and the third examines the impact of the Covid-19 pandemic on women's experiences of work on AMT and consequently, on their overall well-being. Section 4 highlights the conclusions derived from this study and uses a feminist analytical lens to identify directions for future research and policy action necessary for building a gender just online work

6. A typology for occupations, developed by Kässi and Lehdonvirta (2018) covering five digital labor platforms including AMT, lists six categories, namely, software development and technology, creative and multimedia, sales and marketing support, writing and translation, clerical and data entry, and professional services. In this, the microwork done on AMT largely falls in the fifth category of clerical and data entry.

7. Capitalist value creation and capture propelled by incessant accumulation of data and application of data-based intelligence for optimizing profits. See Gurumurthy et al. (2019).

8. There are an average of 150,000 workers available on AMT at any time (Difallah et al. 2018). In June 2020, on any given day, 11-33% of workers on AMT were Indians (Dubal 2020). Taking an average of this – i.e., 22% – we estimate that there are around 33,000 Indian workers on AMT on a given day. Going by the assessment of Berg et al. (2018) that women constitute 23% of Indian workers on AMT, around 7,600 Indian women are on AMT on any given day. This figure is an approximation, and may also not capture the dynamic conditions presented by the pandemic over the second half of 2020.

environment. Section 5 outlines key recommendations for the government, digital labor platforms, multilateral institutions and civil society for improving the status and working conditions of women workers in the digital economy.

2. Methodology

AMT was chosen as the site of study since it is one of the largest and oldest microwork platforms⁹ and, as noted earlier, a significant proportion of workers on the platform are Indian. Qualitative data was collected through semi-structured interviews with 11 Indian women who work on AMT, and were recruited for this study through AMT, online worker forums, and group chats, and subsequently by snowballing.

Our conceptual framework borrows feminist theorizations of gender and work and feminist political economy analyses of the digital economy to arrive at a critical feminist narrative of Indian women engaged in particular forms of digital labor.

2.1 Recruiting participants

To recruit participants, a survey was posted as an HIT on AMT. It contained multiple choice questions on the demographic profile of the woman, her experience of working on AMT, trends since the pandemic and the perceptions of family and the self about working on AMT. Completing this survey required two-three minutes, and respondents were paid USD 1 (INR 73) each.¹⁰ At the end of the survey, respondents were asked to indicate their willingness to engage in a longer conversation and participate in an interview with the researchers by providing their contact details.

This survey received 51 responses. However, it became clear during the course of recruiting participants that the responses also included men posing as women and duplicate entries. Some respondents who had expressed willingness to participate in the interview pulled out at a later stage. Finally, we were able to identify five participants through the survey. Five others were recruited through snowballing, including posting on worker WhatsApp groups through the existing participants, and one participant was identified through a post made on a Slack¹¹ group for AMT workers.

9. Germany-based Clickworker and US-based CrowdFlower both compete with AMT in terms of annual transaction volume. (Berg et al. 2018). See also Schmidt (2017).

10. Conversion rates as of June 2021.

11. Slack is a business communication software: <https://slack.com/intl/en-in/>

2.2 Data collection

Telephonic interviews were conducted over a 10-day period by three researchers. The duration of the interviews ranged between 35 minutes to an hour. Prior to the interviews, a consent form which included information about the study and the researchers involved in it was shared with the participants and verbal consent to record the interviews was sought. Participants were compensated USD 7 (INR 510) for interviews that lasted up to 45 minutes and USD 10 (INR 731) for interviews that went up to 60 minutes.

The interviews followed a semi-structured format using a topic guide which consisted of six sections, namely: i) demographic details, ii) perceptions of their work on AMT, iii) work parameters and working conditions, iv) experiences since the onset of the pandemic, and v) participation in worker groups and fora. The questions were open-ended and intended to be exploratory, allowing women to share as much or as little as they preferred. The homogeneity of our sample, comprising largely women from Tamil Nadu, with the exception of one woman from Kerala, enabled specific insights about the local/regional dimensions of women's economic participation, including class and caste, allowing us to reach saturation with respect to the themes of inquiry.

Building on the findings from survey-based scholarship and real time trends post-pandemic, our study sought to privilege a depth of narrative to explore the implications at the intersection of household gender dynamics and the global political economy of digital labor.

The names of research participants quoted in the analysis are anonymized to preserve their privacy.

2.3 Data analysis

In the first instance, 22 open codes were inductively developed from the five lines of inquiry pursued in the topic guide for the semi-structured interviews. The open codes were then manually assigned to the data collected from the interviews, and data under the same codes grouped together and analyzed. Collectively reviewing this data led to the development of several analytical themes, or axial codes, which included theoretical concepts and trends unique to the data. Finally, these axial codes were analyzed as a whole, and unified to construct the three broad themes that populate our findings and analysis in three distinct parts.

2.4 Profile of participants

All 11 participants were working for AMT. The median age of participants was 25 years, ranging between 17 and 41. Over half the participants were between the ages of 24 and 28. In terms of religion, nine participants were Hindu and two were Muslim. Among the Hindu women, the caste of participants was diverse, and included members of forward castes (Thevar), backward classes (Chettiar, Kongu Vellalar, Saliya, Agamudayar) and scheduled castes (Pallan). Of the two Muslim participants, one was not aware of her caste and the other was unresponsive to the question.

Barring one participant from the state of Kerala, all others were based in Tamil Nadu, mainly in tier II cities (Erode, Coimbatore, and Tiruppur) and small towns (Namakkal, Kumbakonam, Ramanathapuram, Dharapuram, Pollachi, and Mulanur in Tamil Nadu, and Kotakkal in Kerala), except one who was based in Chennai. This sample is representative of where most AMT workers from India, in general, and most women workers in particular, are located.

Most of the women had high educational attainments – a technical bachelor's or master's degree. Four women had completed, or were in process of completing, a master's degree, in a range of disciplines including economics, commerce, and business administration. Four others possessed a bachelor's degree in engineering, computer science, computer administration, and mathematics. Of the remaining women, one held a diploma in nursing and two others, including the youngest participant, had graduated high school. Most of the women had prior work experience in an assortment of occupations before signing up for AMT. Three women stated that AMT was their first job. The remaining eight had engaged in a variety of occupations earlier, such as working for a construction company, an agricultural startup, an auditor's office, a local office, a wholesale shop, a telecommunications company (Airtel), a medical shop, and in the share market as a sales executive.

Participants had been working on AMT for varying durations: less than a year (three), between one and five years (five), and more than five years (three). This diversity was crucial in assessing the impact of Covid-19 on working conditions on AMT and enabled us to draw out reflections on the changes they perceive.

Of the 11 participants, four were married (two of them lived with extended family members), and seven were single. Most of the single women lived with their parents. Only two participants were living alone or with roommates/housemates.

All the women, with one exception, came from a middle-class background (and reported owning a house or farm land, and no major loans), with two earning members on average. Women who were married reported that the two earning members included themselves and their husband, while single women reported themselves and their father as earning members. Six women noted that the pandemic had impacted their household income and the income of other earning members. One of these

women, who came from an agricultural family, reported that while income had been affected to an extent, the bigger challenge for the household was marketing agricultural produce.

Belonging to an aspirational and upwardly mobile class, most of our participants qualify for technical jobs based on their educational attainments; however, these opportunities have not materialized or have been unattractive or unsuitable. Additionally, as discussed in subsequent sections, gender-based household expectations were an important reason why they preferred to work on AMT. Representing a mix of caste groups, they come from households that are glad for the additional income and the certainty that such work does not require the participant (married or single) to go out to earn. One participant viewed her work on AMT as a transition phase that would eventually propel her towards other ambitions, such as joining the civil service.

3. Findings and analysis

This section captures the intersecting vectors of gender and economic ideologies that influence women's perceptions of work on AMT. It examines the constructions of work and the self, how women cope in a gamified work environment, and how the impact of the pandemic manifests in the context of their work.

3.1 Conceptions and motivations influencing women's choices about microwork

- Sexual division of labor places the demands of care work entirely on women and is a key constraint in their ability to work outside the home.
- Women carry the burden of upholding the household's honor and aspirations for social mobility. They must perform their household gender roles at any cost and undertake paid work, only if it is 'respectable'.
- Under the circumstances, work on AMT presents a respectable and practical choice.
- Working conditions on AMT are, however, far from ideal. Women toil for long hours whilst simultaneously juggling their care work, and face alienation in an online workplace that prevents them from collectivizing and building a worker identity.
- The perceived lure of microwork for educated women in smaller towns in South India is, in part, also colinear with a wider employment crisis that shrinks the work choices available to them, making it doubly attractive.

3.1.1 Gender ideologies at work

Home-based microwork materializes at the intersections of gender-conservative ideologies and the prospects of digital labor in global value chains. Using the language of ‘convenience’, participants outlined the double burden of undertaking paid and unpaid work from the commercialized home.

Sheeba is a computer science graduate who self-identifies as a middle class woman. While her husband, who according to her is the primary earner in the household, works as a private consultant, their two children and Sheeba’s mother-in-law are economically dependent. Sheeba underlined the importance of being able to fulfill her primary role as caregiver:

[After] I got married, I got this good opportunity from AMT, which I found very convenient because I can work from home. I got pregnant, I had two children, and also had to care for my mother-in-law. So I could handle everything conveniently by working from home. At the same time, I could easily earn money. (Sheeba, 33, Erode, Tamil Nadu)

Akhila always wanted to step out to work and support the family, but her husband felt working from home would be more suitable. When she found out about AMT, they reached a compromise:

So basically, from the start, I have been a housewife, but I wanted to support my husband. When I told him that I would like to take up a job, he asked me to see if there was something that I could try to do while being at home itself. After that, I heard about AMT through a friend. Then I took it up. (Akhila, 28, Namakkal, Tamil Nadu)

She highlighted the many advantages of working on AMT, pointing to how “there is less roaming around” and that she is able to take care of her children and the housework.

The articulations of ‘convenience’ in the case of married women reflect rationalizations mandated by a division of labor that demands women perform reproductive roles and uphold the institution of family, leaving a narrow window for economic participation. A few women reported being able to pass on some of the care work to elder/other women in the household, while most others continue to straddle paid work for AMT with unpaid care work for the household, extending themselves through a grueling daily schedule. Even though some participants mask and sublimate the domestic and social inequalities that allow them limited avenues to take up paid work, some do recognize its socio-structural roots. For instance, Vimala, an economics postgraduate living with her husband, gave us a glimpse into how thin the veneer of convenience is. She described it in terms of the absence of “too many hassles” and immediately after, articulated the domestic responsibilities that mediate her ability to undertake paid work. She said:

I wanted to be at home and work conveniently...without too many hassles. I also need to look after parents and in-laws and not trouble them. I must pay attention to the affairs of the house as well. (Vimala, 35, Kotakkal, Malapuram, Kerala)

The control exercised on women's mobility, which determines their ability to work outside the home, also fits perfectly with the design of remote work through AMT. Banu is unmarried, and her family had always been averse to her working outside the home. She rebelled at first, but compromised when AMT came along and offered the "best of both worlds". She reflected:

In my house, they didn't like me going out at all. But I said I will go, and so I went to Coimbatore. Nobody in my family liked my decision; nobody was comfortable, and they kept asking me to come back home. But I went and worked for nearly one-and-a-half years. In the end, I gave in and decided to resign. I came back home. Since working from home is comfortable for my family and everyone is at home, it is also okay with me. As to what the difference is between the two [working on AMT and working in my previous job in Coimbatore], well, if I work from home, I can be with everyone. (Banu, 25, Tiruppur, Tamil Nadu)

Working and being independent, which was previously an act of rebellion for Banu, became a permissible "way of life" (Kalberg 1980), and the control over her mobility, an irrefutable truth. The opportunity presented by AMT could, thus, be easily inscribed within her gendered reality.

Noor, a single woman with a degree in commerce, always "had the desire to go to a job, to earn". She did not want to depend on others. Given that her family would not allow her to go outside the house, she looked for jobs online. AMT proved to be the best option, she said:

Even while searching [online], I did not find other jobs with as good reviews or standardization. My family will not allow me to go outside and work. So, if I am to earn, I have to find jobs like these, that allow me to work from home. Sometimes I think, it would be nice to have another job, and so I have been searching and reviewing – but I have so far not found a website as good as AMT. (Noor, 26, Kumbakonam, Tamil Nadu)

For both married and unmarried women, the design of remote microwork through AMT aligns perfectly with patriarchal control over women's labor and mobility.

In the context of AMT, early studies have observed the prevalence of status-based rationalizations which made working online far more respectable than stepping outside the house for paid work. The perception of AMT as an "American employer" also makes it desirable (Gupta et al. 2014). For Pankajam, who describes AMT as "a subsidiary of Amazon", it is evident that this status counts.

The intertwining of class aspiration with caste patriarchy provides a vital link to the gender ideologies operating in the context. In Tamil Nadu, decades of investment by the government in economic and educational infrastructure, aided by the state's history of social activism, have paved the way for the inclusion of marginalized communities in the economy and society.¹² Yet, the troubling fissures of caste decisively characterize the socio-cultural landscape of the state. Patriarchal norms rooted in caste ideology continue to privilege women's role as caregivers (Pande et al. 2019), thereby limiting the kind of work accessible to women.

Educated women from social locations prefer to work on AMT, accruing "symbolic capital" both within and beyond the household, and marshaling a "respectable femininity" (Radhakrishnan 2009) that conforms to caste norms. For the household preoccupied with class mobility, women's home-bound paid work contributes to "status production" (Eswaran et al. 2013), even as it becomes complicit in the extractive project of global digital value chains. The operations of AMT in the Indian context, thus, hinge on a class-caste dynamics of acquiescing women and approving households, enabling the optimization of women's labor for the aggrandizement of digital capital.

Ranjani invoked her class position and explicated:

We are an upper middle class family. So I did not need to go for a job. Once, a friend told me about Mturk, and so I joined. (Ranjani, 41, Pollachi, Coimbatore, Tamil Nadu)

Ambika found approval at home only when she gave up her job in an auditing firm and joined AMT:

Yes, they [my family] are supportive, they are very supportive. When I was going out to work, they were not fully happy. Now, since I am working from home itself, they think it is much better compared to the previous job. (Ambika, 24, Coimbatore, Tamil Nadu)

For Vimala, the 'flexibility' accorded by AMT is in keeping with the need to put family first:

I have given primary importance to the family. If we go to the office and work, managing this will be difficult. That is the reason AMT works. Also, there is no one who will scold. I don't feel any pressure. We are our own boss. (Vimala)

Ranjani, who is a mother of two, enjoys the appreciation she receives from being an earner, and shared with elation:

They [the extended family] appreciate me. Every time they see me, they say I am doing good

12. At 31.8%, women's work participation rates in Tamil Nadu are better than the national average of 25.6% as per the 2011 census.

work...My children are also very happy when I buy them things. Actually, they love AMT. (Ranjani)

However, the juxtaposition of online work and gender-conservative ideologies needs to be unraveled for much more than the truce women make with patriarchy. It entails long hours of work by a silent workforce that works late into the night. Given that the demand on AMT is led by US-based requesters, peak activity takes place at night in India. While Indian women work on the US clock, staying up till dawn, this incongruity paradoxically seems to fit the rhythm of domestic life. The necessary prioritization of care work during the day means that any residual time for paid work is available only at night. Pankajam explained:

There is plenty of domestic work during the day like cooking and other things, and so, women can take up HITs only at night; work also comes only at night. (Pankajam, 25, Chennai, Tamil Nadu)

Sheeba, who worked as a sales executive in a firm before her marriage, also spoke of how the work timings on AMT matched the schedules of women:

Most of the work comes at night, around 2-3 o'clock. Because it's a US platform, right? So for us, work comes up only in the night, and that's when women are able to work. (Sheeba)

Ambika shared what many of our participants also echoed, vividly:

I work 24x7. I sleep at 11 in the morning and wake up at 3-4 in the evening. Only during this time I do not work. The other time, the system is on, and if I catch work, I keep working. (Ambika)

Indian women on AMT must reconcile themselves to lower paying tasks aligned to the US-based work day almost 12 hours apart, after delivering on their care work demands. While Indian men on AMT may also work at night in order to make the best of incoming task requests, they do not walk the cyclical tightrope of unpaid and paid work. Hypothetically, if things were reversed and more tasks were posted during the day, men would still be able to take them on (all other things equal), while women would not, unless their reproductive labor was compensated for by someone else; a largely unlikely situation going by the household profiles of our participants. The opportunity rhetoric of digital labor is evidently perched on a paradox. It elucidates the impulse of global digital capital to dispossess educated women at particular class-caste-racial locations of their labor and laboring data, even as it creates a pool – a 'reserve army' – of these women who compete willingly to be part of its international gender-embedded labor hierarchies.

Box 1: Ranjani

Ranjani, a 40-year-old mother of two, lives in Pollachi, Coimbatore district, Tamil Nadu, with her husband, children, and mother. Before getting married in 2002, she worked as an accountant in a wholesale shop. Even though she faced no opposition from her in-laws, she made the choice to quit her job so that she could care for her family. Ranjani belongs to an upper-middle class household, and there was no pressing need for her to earn. Nevertheless, she wanted to make some financial contribution to the household, and signed up to work on AMT in 2009. She has been working on the platform ever since.

Ranjani's decision to work on AMT was met with an outpouring of support. Her husband was very encouraging, and her children were delighted when she bought them gifts and trinkets with her earnings. Even though she had not studied beyond high school, she managed to eke out a good income through AMT. Her mother, especially, was extremely proud of her ability to do so. Some of her friends were even slightly jealous, and badgered her to get them similar jobs. She was, however, unable to help them as creating an account became harder after 2012.

On AMT, Ranjani performs an assortment of tasks, such as validating the veracity of movie reviews, tweets, and comments, sentiment analysis of content on the internet, and product reviews, among others. She finds the tasks on AMT very enjoyable, and even identified a few requesters, such as NovaTurk, Ibotta, and ABXray, who posted tasks she thought were especially interesting. As time passed, Ranjani soon discovered some clever tricks that helped her make the most of AMT. For example, she uses HIT Finder – a tool that identifies high reward tasks – to be notified as soon as a favored requester posts a task. HIT Catcher, on the other hand, enables her to queue up a batch of tasks all at once. She was also active on several AMT worker groups that proved to be useful. Once, when a requester unfairly rejected her work, she took to the forum Turkopticon to reprimand the requester's actions. The requester then promptly reached out to her, and offered to revoke the rejection in return for her taking down the complaint.

Overall, Ranjani found AMT to be a good source of income, and was satisfied with her work and working conditions. However, as time went by, she was unsettled by the lack of certainty over her future on the platform. She heard from friends and other AMT workers that accounts were suspended without warning or reason. Some of these workers were the sole income earners in their families. While she was confident about the quality of her work and hence not afraid of rejections or low approval rates, she started becoming very anxious over being suspended. Learning about others' suspension disturbed her greatly, and made her nervous about the same thing happening to her.

Like several others, Ranjani, too, found tasks being posted more and more sporadically following the onset of the Covid-19 pandemic. Her earnings have dropped, as some requesters have simply vanished, while others post fewer tasks – some earmarked solely for US-based workers. She sees no point in taking up such tasks, with meager rewards. Her household responsibilities have also increased dramatically, as the whole family has been confined indoors. Earlier, she could spend the whole day concentrating on doing tasks perfectly. Now, she must care for her children who require constant attention, limiting the time available for her to focus on her work.

Despite the ups and downs of working on AMT, Ranjani does not intend to seek alternative employment. "I love AMT," she said, during our interview. "I have bought so much jewelry for my daughter, and I don't have to ask my husband for money. I just want to be made permanent."

3.1.2 Ideas of the self as ‘worker’

The reliance of cross-border AI value chains on the invisible labor of workers, particularly women, in developing countries has been documented (Lee 2018; Murgia 2019). Participants in our study showed varying degrees of awareness about their position in the global value chain. While some women identified themselves as “cheap labor” (Akhila) benefiting employers based in the US, their rationalizations tend to play up the benefits accruing to the self. In addition, the isolation of working on AMT discourages the creation of a shared reality about the nature and place of the work. Akhila does not know much about the requesters posting tasks: “I can only say that the work benefits me, since just by being at home I am able to earn”, she avers. However, Noor began to introspect on something she had not thought about earlier when asked about her position in the international flow of work from US to India:

Actually, I don’t know how to recognize myself in that chain. It is only now that you have asked the question that I am even thinking about it. There is no information that allows us to answer what our position is, or recognize ourselves. So, I have no idea how to answer this. (Noor)

Vimala is able to contextualize her contribution to the production processes in some cases but not in others:

Sometimes I understand how my work contributes to the business objective. Sometimes I don't. For example, in fashion product matching, I think my work may contribute to online business in retail. (Vimala)

She also recognized partially how her work is connected to AI.

The requester, ML Data Lab, I think, may be doing something with artificial intelligence. Usually, I understand what the work is about, from my own knowledge. But sometimes, the requester also explains in the work they solicit. (Vimala)

The isolation of working on AMT discourages the recognition of a shared reality about the nature and place of work. Noor is perceptive about the atomization and individualization intrinsic to her work, and attributes her lack of knowledge about the AMT work process to this:

Yes, AMT assigns work based on my (AMT) qualification. But because I know only my experience, I can't tell what the process is. Suppose I worked along with someone (had a colleague), and they had the opportunity to do more tasks, maybe I could compare and say, perhaps it is because they are more qualified than me, or are in a higher position. But because I am working alone, I have no idea about these things. (Noor)

Notwithstanding this lack of connection, the general perception among women of their work was that it is “respectable” and of a “good standard” (Ranjani). As Irani (2013) argues, AI value chains require ideological work to uphold the aura of high technology. It is, therefore, likely that microworkers need to internalize the ‘goodness’ of platform capitalism and ignore its ‘exploitative’ nature. Also, to the extent that familial validation for paid work is contingent on household gender ideologies, women seek to ‘balance’ their unpaid household tasks with their paid work. This, combined with the atomization characteristic of microwork – as in the case of other home-based or domestic work – impedes women’s ability to explore aspects of worker identity that concern shared aspects of exploitation, let alone take the risk of collectivizing or organizing.

3.1.3 Local economic conditions and the need to work

Besides domestic patriarchy, there are other forces that mediate women’s aspirations. AI value chains, by subsuming women’s home-based labor, conceal local economic conditions. Narratives of women who settled for AMT as a source of livelihood after exploring other options paint a bleak picture of paid work opportunities for women. In the past decade, the lack of employment opportunities has contributed to a steady decline in women’s work participation rate in the state (Sundari 2019). AMT, thus, becomes a benevolent provider of income and empowerment pathways.

Selvi’s degree in mathematics proved to be insufficient in the job market. This, coupled with poor transport facilities, made AMT the ideal option:

I have not found anything appropriate...In our town, public transportation is not good. There are no buses for me to go out and work. (Selvi, 25, Dharapuram, Tamil Nadu)

Hailing from Tiruppur, the district with the highest workforce participation rate for women in Tamil Nadu, Selvi has struggled to find a job.

Ambika and Pankajam both live independently in cities outside their hometown, making care work burdens and controlled mobility less influential factors in their employment choices. However, AMT stands out, given the sparse job opportunities. Ambika’s previous job did not pay very well. Her monthly income on AMT is under INR 10,000, but even that is an improvement and a more palatable choice for her and her family.

Despite putting in six to seven hours a day, and being logged in 24 hours, Pankajam considers her work to be “part time”, using it to provide for herself while she pursues her ambition of cracking the government administrative services exam. While her “upper-middle class” family laments that “there will be no promotions, no growth” on AMT, she can find no other work that meets her requirements.

For others like Selvi, there is clearly a take-it-or-leave-it Hobson’s choice. Unable to find other employment, they stay on AMT. The decision to work on AMT seems to be strongly and uniformly

guided by economic bottom lines for all participants. AMT remains the only meaningful choice, whether expressed as most amenable to the pursuit of respectability, or the only residual option in a wider context of a job crisis. Their aspirational class status encourages the women (married or single) to, thus, conform to the decrees of the platform, rationalizing this work as most appropriate.

The increased economic distress since the pandemic – discussed in depth in the next section – has brought front and center the role of all these women in mitigating household economic distress and precarity. Akhila’s husband lost his job in January, which made her contribution to the household income even more important. She wanted to “step up and support her husband”. Noor’s father also faced issues with his job post the pandemic, which made her “concentrate on doing more tasks” so she could help with household expenses. Earlier she was “only doing this job part-time”. Similarly, Jayashree’s mother recently lost her job in a garment factory, leaving her as the primary earner.

Whether a function of economic independence or symbolic capital pursued by small-town, middle-class Tamil women from India, motivations to stay on AMT are deeply entangled with economic conditions of the home. This also suggests that global digital value chains are scaffolded by distinct gendered and racialized labor hierarchies, underwritten by well-educated, undervalued women, from the Global South. The 2021 edition of the ILO’s World Employment and Social Outlook report finds that as compared to developed countries, workers from developing countries on digital labor platforms tend to be highly educated. This figure is highest for women in developing countries (80%) (ILO 2021).

3.2 Worker experience in a quantified workplace

- AMT functions as an opaque and gamified workplace where the workforce is managed through proprietary algorithms and workers are disciplined through inscrutable metrics.
- An embedded discrimination is evident in the experience of women workers from India on AMT. They face challenges in gaining entry into the platform, and even pay hefty sums in the local gray market to procure an account.
- Those who make it must perform the worst paying and most tedious tasks, since higher paying jobs are reserved for ‘skilled’ workers situated in the Global North.
- Despite configuring and controlling the automated environment in which task allocation and worker rankings are determined, AMT stays clear of any worker-requester conflict, giving an upper-hand to the business and academic requesters who can reject tasks at will.

3.2.1 AMT as an algorithmic ecosystem

Algorithmic management, or the remote management of a workforce through data collection and surveillance (Mateescu & Nguyen 2019), is a ubiquitous, defining feature of digital labor platforms. On AMT, the processes of posting tasks, evaluating work, and compensating workers are automated through readily available Application Programming Interfaces (APIs) (Berg et al. 2018). Criteria for filtering workers, assessing their performance, and nudging them through incentives are all embedded into the code, and relegated to automatic management (Cherry 2016). Even the allocation of tasks to a worker is determined automatically based on the worker's approval rate¹³ (Bergvall-Kåreborn & Howcraft 2014). Other decisions, such as awarding a Masters Qualification to a worker, are also automated. Amazon treats this algorithm as proprietary (Loepp & Kelly 2020), which means there is no obligation whatsoever to explain to the worker the basis of such algorithmically-determined decisions. The system is calibrated towards optimizing efficiency for the platform and its requesters, with communication, transparency, and dispute resolution being perceived as costly impediments which would involve a human managerial layer (Cherry 2016). Amazon absolves itself of all responsibility in disputes between workers and requesters, observing that it is not a party to the transaction (Amazon 2020).

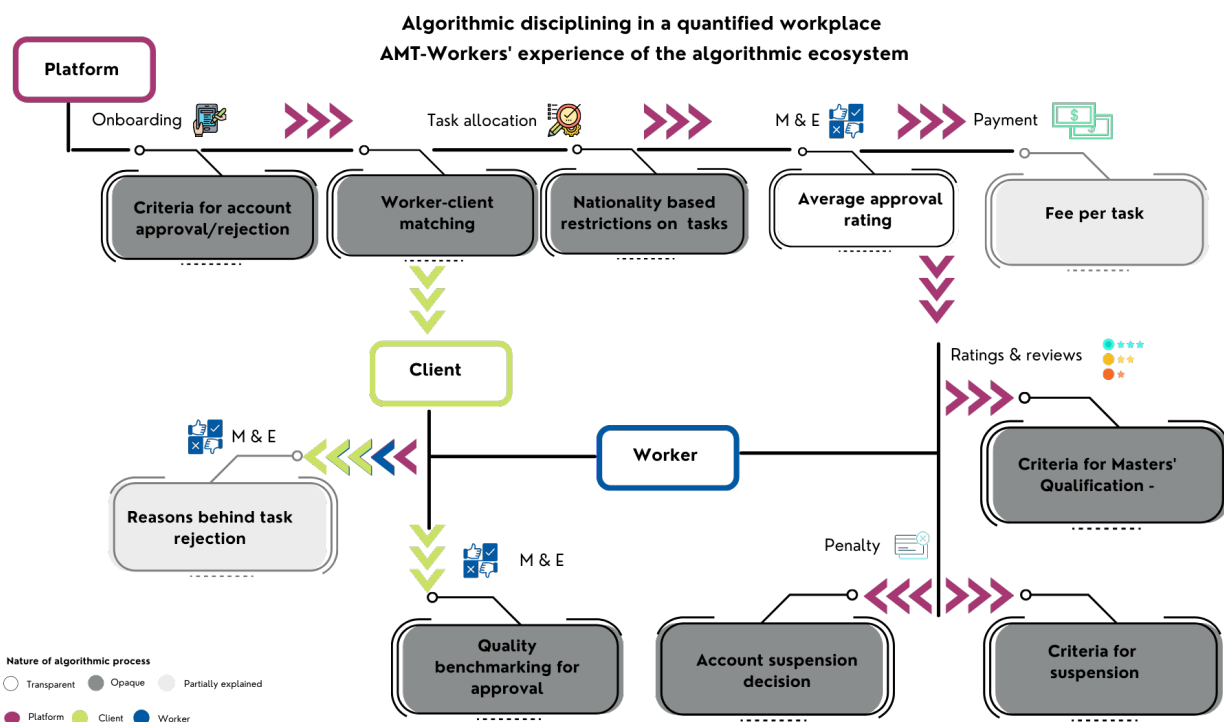


Fig 1. An illustration of AMT workers' experience of the algorithmic ecosystem.

13. Approval rate is the percentage of assignments or HITs submitted by a worker that have been approved by the requester.

Participants in our study confirmed that no contract is signed or shared with the workers upon registering. The Participation Agreement (Amazon 2020) is a publicly available document, left to workers and requesters to read and interpret. Crucially, there is no opportunity for bargaining or negotiating the terms of this contract, and this take-it-or-leave-it approach results in workers paying hardly any heed to the content of the agreement. Akhila confessed to never having read the clauses on this page, since it was not relevant to the process of getting started on AMT. Ranjani shared that she only “went through it slightly” and “didn't take much interest” in it. When disputes arise, workers can use a feature to contact a requester or email them directly if the information has been provided, but it is the requester’s prerogative to either reply or not. This is especially insidious, as the algorithm that is responsible for decision-making does not account for challenges to its decision, nor does it incorporate a redressal mechanism. The unknowable and unseeable algorithm exercises control over the entry, earnings, status, and tenure of the worker as illustrated in the following discussions.

3.2.2 Opacity and embedded discrimination

The opacity with which registrations are handled by the AMT platform creates several barriers to entry. In 2011, AMT moved to an ‘invitation-only’ system of accepting new workers from non-US countries, which involves a review of the information that workers submit at the time of registration. This represented a shift from the earlier system, where anyone with an Amazon account could register to work on AMT (Bergvall-Kåreborn & Howcraft 2014).

Workers’ applications were rejected on the grounds that AMT’s “account review criteria are proprietary” and cannot be disclosed.¹⁴ Consensus emerged on worker forums, through experience sharing, that this was being done to unfairly target international workers, who were predominantly from India and the Philippines (Milland 2019). While some have been able to register and create their own accounts in the period since, there was no uniformity in this experience.

When Noor registered in 2015, she was told that no new applications were being accepted and she would be informed if the “criteria change[s]”. A year later, she got accepted. For Akhila, it took two years. Both frantically scoured the internet to find explanations during this time.

I searched for the reason – it seems in between they had put Indians on hold, in the recruitment process. This is what people were saying, but I don’t know the exact reason. I read this in an article. It was only in 2016 that I got an email saying “you are approved to work on AMT”. (Noor)

We [my husband and I] searched a lot on the internet. We heard that US workers got more approvals, and Indians did not get them easily, or even earn as much. We also heard that work done by workers in India is not always perfect, which could have been a reason for the rejection. (Akhila)

14. This has been discussed by workers in worker forums and blogs, such as: [Reddit](#), [Quora](#) and [Turk Requesters](#) on Blogspot.

Ranjani's account highlights the ad-hocism of the platform and the opaque ways by which aspiring workers are locked out:

Sometimes, others ask me, "can you get me a job like this?". They keep following up with me also. But unfortunately, MTurk is now not for Indians. We can't create any IDs now. So I have not been able to help them. (Ranjani)

This arbitrary and non-transparent process of admitting new workers creates and proliferates a black market where accounts are sold at exorbitant prices. These 'sellers' are account holders looking to make windfall gains. If known to the worker, sellers also act as information gatekeepers, since new workers begin to look up to these veterans. Pankajam, a civil services aspirant with engineering and management degrees, paid INR 1 lakh for her AMT account. She was entirely unaware of the process of registering. She said:

There is no knowledge about the MTurk platform. Only a select few know how to buy IDs from Amazon. Even I got my ID from a friend. I do not know how to buy it from Amazon. I have a circle of people who work on AMT. If someone needs an ID, we post it on a group, and get to know if there is an available ID. In Indian currency it will be around 1 lakh. That is normally how much people pay for these IDs. (Pankajam)

While Pankajam 'purchased' an account in 2018 and believes that there is no other way, another respondent in our study, Padma, was able to sign up for free in 2020 using identification documents. The lack of uniformity in experience reflects an unpredictability about the platform and its rules, which can be attributed to the opacity of the criteria for decision-making. It signals an inherent lack of accountability on the part of AMT that leaves workers anxious about what they should be doing in order to be approved to work on the platform. Also, given the gender ideologies that keep most women we interviewed tied to the platform as the workplace of choice, the shadow economy through which accounts can be obtained and its exploitative terms are accepted as a normalized reality.

Jayashree has been trying for years to get her account. In the meanwhile, she uses her cousin's account, but has to share 50% of her income with the cousin. For Jayashree, the commission is deducted at several points: AMT takes its share, the digital wallet through which payments are made keeps its share, and the remaining is split between her and the cousin. She said:

I have not found a way to get an account. I try to create one, but it keeps getting rejected. If I get one, it will be nice. Now, because I use my cousin's account, half the amount my cousin takes away, and I get only half the amount. (Jayashree, 24, Mulanur, Tamil Nadu)

Banu referred to a "friend" who helped her set up the account for INR 700. She was not able to

determine whether this fee went into her friend's pocket or if it was legitimately an amount she had to pay to create her AMT account. She observed:

It did not seem to me that there was any instruction asking me to pay for the account. But my friend told me to pay around 700 rupees for account activation. So I paid that to her. I don't know whether this was a charge for her to do it for me, or actually a charge to activate the account. Anyway, I said okay and didn't ask for any details. (Banu)

The existence of these local intermediaries who use the informational opacity intrinsic to AMT as a removed, depersonalized workplace to recruit women desperate for the coveted job is noteworthy for the embeddedness of female digital labor in exploitative conditions of the labor market. It also suggests that the political economy of AMT as a digital labor ecosystem extends far beyond its virtual architecture, into gendered real economy spaces. Of the 11 participants, only five women had registered on their own, and the remaining had either bought an account, borrowed accounts from others, or had someone else do the registration for them, either for a price or for free.

3.2.3 Sorting of workers and allocation of tasks

The allocation of tasks to a certain worker depends on a range of factors. Tasks displayed are automatically sorted on the basis of the worker's approval rate. AMT allows requesters to choose workers with higher approval rates for their tasks, but workers cannot choose requesters through any criteria beyond their AMT display name (Bergvall-Kåreborn & Howcraft 2014). This information asymmetry is a feature of algorithmic management.¹⁵ In 2012, when Amazon started restricting international accounts, debates emerged about the negative influence of Indian workers on the platform. One study noted that Indian workers are likely to accept low wages, precipitating a race to the bottom, since all workers on AMT, regardless of their location, are paid in US dollars (Martin et al. 2016). Our data reflects that it is possible that lower-paying tasks were specifically targeted at Indian workers.

Ranjani noted how AMT does nothing about the differential remuneration paid by requesters to US and Indian workers. She recounted:

Some tasks are only available to US workers. Maybe the requester has nationalistic feelings and hence wants only US workers to do the task. It could also be because they think Indians are not skilled enough or are bad workers. (Ranjani)

Vimala echoed Ranjani's speculation that the disparity in wages could be related to Indian workers being less qualified, observing that US workers may be "performing better and getting a higher rate on the whole".

15. Workers often attempt to find their way around the system by using extensions such as HIT Catcher and HIT Finder (Newman 2019) that help them snag the best HITs.

Taking stock of the US-only tasks, Ranjani observed that “they are very simple and could easily be done by [her]”. Jayashree pointed out that while the compensation is different, the complexity of tasks is not. She said:

Workers in the US get a lot of requesters and a lot of work. While Indians get the leftover tasks, US workers are able to do the easier tasks for which the reward is high. Indians, however, have to take on the difficult tasks. This is the mindset among Indian workers – no matter how difficult [the task is], we will do it. A lot of people have told me that they allot tasks to US workers first, and only then to Indians. So they are able to do the easier and higher-paying tasks. While Indians take up a lot of typing work, US workers get to do a lot of surveys. Rewards are high for surveys – USD 3 [INR 220], USD 5 [INR 365], sometimes even USD 12 [INR 875]. (Jayashree)

Selvi added another possible dimension to the discrimination, observing:

Only after the work is given to US workers, the tasks even come here, for Indian workers. (Selvi)

Selvi described what her AMT page typically looks like, in a damning indictment of the work allocation on the platform:

When I look at my page, I can see that maximum tasks are labeled for “US workers only”. We cannot touch these; if we try to, our work will be rejected, and our ID can be suspended. Suppose there are ten HITs, five will be US only, four others will be tasks that we are not able to perform. Only one task will be suitable. (Selvi)

What is clear is that Indian female workers on AMT are aware that its ‘rewards system’ – a euphemism for wages paid to atomized workers who perform routine cognitive tasks for invisible ‘requesters’ – comes with an unfairness. Lower paying tasks are the only fall-back option given the built-in preference for US workers and the race to grab doable tasks in a high pressure auction environment. To maintain the status quo as paid workers, tasks that can be done must be done. As things stand, there is no process by which transparency about wages can be demanded nor is there an incentive to do so within the ambition the women have carved out for themselves as contributors to their household’s wellness and/or their independent survival.

3.2.4 Unilateralism and incontestability of decisions

AMT prohibits “robots, scripts, or other automated methods as a substitute for human intelligence or independent judgment to perform tasks” (Amazon 2020), monitoring closely for bot-like activities and promptly suspending accounts deemed to be displaying signs of such activity. The platform has both automated and manual mechanisms to detect this (Dreyfuss 2018). Requesters too have their own means of monitoring, which often leads to unfair rejections of tasks performed by genuine workers.

It took Noor some time to understand this, and she described how she was able to do so:

There is something called an attention question that is included in surveys. Sometimes, if I am distracted while working, I miss the question and my work ends up getting rejected. This was two years ago. Now that I am aware, I do it more carefully. (Noor)

An 'attention question' which is randomly inserted in the middle of a survey, requires the worker to select the answer which is being indicated rather than what would be their own response, to make sure that a bot is not filling the survey.

At other times, reasons for rejection are less discernible, leading to wasted time and effort as well as feelings of dejection and unfairness. Akhila and Pankajam shared examples of tasks they completed painstakingly, but were rejected without explanation:

I did work for a requester called MTurk Prod. After ten HITs, they rejected my work. I emailed them through AMT and tried contacting them for four to five days. But I did not get a reply. (Akhila)

Once I did a writing task with a reward of USD 100 [INR 7,300]. I spent three days completing it. But they rejected it. When I wrote an email to them, they did not even respond. (Pankajam)

Without any avenue to register her grievance, Akhila resolved to do her work "even more perfectly" going forward. "I only desired to give perfect work next time", she said. She had no confidence that AMT would resolve her complaint. Selvi also shared with despondence, "If requesters don't reply to email, nothing can be done, have to just forget it."

By contrast, Ranjani had a positive experience of contacting a requester, through a worker platform, and having her grievance addressed. She narrates:

One time my work was unnecessarily rejected. I immediately posted about this experience on Turkopticon. After this, I got an email from that requester saying "Why did you post like that?" Then I asked him, "Why did you reject my work? Give me a proper reason." He told me that he would revoke the rejection, but I would have to remove my review from Turkopticon. I agreed. I said, "You revoke my rejection, because it is screwing my approval rate." The rejection was revoked and I revised my comment on the forum to say that "This requester is good, he replied immediately and revoked the rejection. He is a good requester, good to work for." (Ranjani)

With the platform absolving itself from addressing any grievance, it all comes down to individual requesters, Noor pointed out:

We can use the “contact this requester” option to contact them. However, not all requesters will reply. Apart from this, as far as I know, there is no facility on AMT to report a requester or complain about them. Our only option is to ignore the rejection and look ahead to the next task. (Noor)

Besides unexplained rejections, workers also face obstacles in submitting tasks due to technical glitches. Sheeba said this can be both “stressful” and “disappointing”:

Once, I spent a few hours, on a 100-dollar [INR 7,300] task. The task was to convert a file from PDF to Excel [spreadsheet], like data entry. I completed the work, it took about four to five hours. After that I pressed the submit work button, but the button was not working. So I was very disappointed. I gave a report to AMT and emailed the requester as well, but they did not respond. (Sheeba)

These experiences demonstrate how AMT, as the creator and owner of the workspace, removes itself completely from interactions between requesters and workers, leaving grievances, disputes, and issues to bilateral communications in which requesters invariably have an upper hand over workers. The lack of certainty in receiving a response or an acknowledgment of the grievance only intensifies the anxiety and uncertainty that workers are subjected to.

As a work optimization apparatus, AMT’s algorithmified processes reveal a coercive disciplinarity that is exacting, extractive, and exploitative. Requesters may admit or reject HITs, and offer explanations or not. In any case, AMT as the intermediary has no obligation. Its role is to keep labor available and ready. The awareness of exploitation leads laboring female workers to an impasse: they seek a fairness that they know is beyond their reach, and, hence, must resign themselves to the servitude demanded by the system.

3.2.5 Ranking and built-in meritocracy

The strict regime of punishment and reward that holds up the myth of meritocracy also perpetuates the “voluntary servitude” (Romele et al. 2017) of workers on AMT. While Indian workers get suspended for so much as attempting tasks meant for US workers, they are also lured by the prospect of eventually qualifying to be at par with their US counterparts. A Masters Qualification is conferred upon workers at AMT’s algorithmic discretion. While the elusive qualification keeps workers toiling, AMT achieves what it desires – an attentive workforce from which labor power can be endlessly squeezed.

Akhila explained this conundrum as it played out in her case:

Till today, I have not got this qualification. I have worked thousands of HITs, but somehow, I have not got this yet. I have a desire to take up and do better HITs. However, because I am working from India, I am not getting good HITs, or this qualification. It seems workers in the US get this more easily. But till now, I have not got this opportunity. (Akhila)

Demonstrating a worrying internalization of the tyrannies of the system, Noor wondered if her skills were lacking. She said:

It all depends on my skill. If I am knowledgeable enough, I can pass and get the qualification. Else, I will fail. (Noor)

While a few participants attributed the system's unknowables about their own ratings to "luck" (Pankajam), that did not stop them from trying. Despite its unpredictability and unknowability, workers carry an unshakeable belief that keeping their approval ratings high and retaining their Masters Qualification is a matter of individual strategy. What this translates into, in reality, is a personal assessment about the best possibilities for making a minimum sum of money within the constraints of automatically-determined task allocation appearing on the worker's page. This tactical judgment is essentially about managing risks to ensure that the selections they make will not only ensure that the task is not rejected, but also enable their approval rating to become/remain attractive.

Banu attempts to strike a delicate balance between attempting more tasks and simultaneously preserving her approval rating. She said, "only if I am 100% sure I can do the task, I attempt it, otherwise the slightest mistake can lead to the whole work getting rejected".

AMT, thus, manages worker motivation through the reigning myth of meritocracy, perpetuated through the willing participation of workers who strive to deliver optimally. The promise of a perfect market that automatically matches requirements of requesters (Codagnone et al. 2016) through filters and meritocratic segregation of workers is itself a product of a certain reification of algorithmic quantification in platform capitalism.

Even beyond the scope of our study, it is important to keep in mind that meritocratic environments carry deep biases against women and people of color, undervaluing and exploiting them (Śliwa & Johansson 2013, Zheng 2018). Also, a body of scholarly literature has critiqued platform capitalism's algorithmic foundations for producing and reproducing gender and racial biases (Rosenblat 2019; Heilweil 2020; Williams et al. 2018). The status of women workers in these algorithmified spaces like AMT is hence not disembedded from the gendered antecedents that produce labor market realities.

Box 2: Jayashree

Jayashree is a 24-year-old single woman from Mulanur, Tiruppur district, Tamil Nadu, who lives with her mother. She holds a bachelor's degree in Computer Applications (BCA), and has been working on AMT for the last three years. Jayashree's mother worked as a tailor in the garment factories of Tiruppur, but due to chronic illness, her capacity to work diminished. When the pandemic impacted garment exports adversely and the factory retrenched its workers, she also lost her job.

Shortly after graduation, Jayashree found it hard to find a job commensurate with her qualifications. Local jobs were not easy to come by. She managed to find something, but her paltry salary of INR 5,000 was nowhere near enough for the household to survive. Her mother was also unable to earn consistently due to her health, and the issue of the outstanding loan taken out for her elder sister's marriage remained. So, when her cousin approached her, touting the benefits of AMT, she was more than willing to try out the platform using their ID. She had to pay 50% of her earnings as a fee for utilizing her cousin's account, but still found it amenable. Soon, she decided to create her own account on AMT. But her application was summarily rejected. She has, since then, made multiple applications, but those have also been rejected. She, therefore, continues to work on AMT using her cousin's ID.

On AMT, Jayashree performs a variety of tasks such as data entry, product reviews, transcription and typing, and surveys, among others. She finds most of the tasks extremely easy, but her lack of proficiency in English has prevented her from attempting certain tasks. Further, the fear of rejection and consequent dip in her approval rating has also discouraged her from attempting tasks that she is not confident of performing to perfection. After a few months of working on AMT, Jayashree began to notice certain discriminatory practices on the platform. She observed how higher paying tasks requiring lower levels of effort were predominantly allotted to US-based workers, while Indians were relegated to less desirable tasks. She was also not awarded a Masters Qualification by AMT, despite having completed over 3,00,000 HITs. These niggles notwithstanding, Jayashree found working from home on AMT convenient, and was also satisfied with her earnings, despite having to split it with her cousin.

For two years, Jayashree earned around INR 15,000-20,000 per month, by putting in work hours in the mornings and nights. All of this changed after the Covid-19 pandemic. Jayashree found that the AMT marketplace, once full of various kinds of tasks, had become barren, with tasks barely trickling in. During the pandemic, she earned a sum of less than INR 10,000 per month for the first time in her AMT career, and often as little as INR 6,000. The option of looking for other jobs was also foreclosed due to the restrictions on movement and the economy coming to a standstill. Now, Jayashree is always logged in to the system, waiting for a task or two, while she watches her source of income slowly evaporate.

During our interview, reflecting on the household's extreme duress and increasing precarity, she remarked, "We are not able to manage. But whatever little work I get on AMT, I take it up and do. I am just waiting for the work."

3.3 Implications of a changing microwork environment during the pandemic

- Following the onset of the pandemic, tasks on AMT began reducing. Some requesters even stopped posting tasks, and new requesters were hardly joining the platform.
- Several women saw their earnings reduce dramatically; others had to work longer hours to make the same amount of money. While some women worked harder and were, thus, able to compensate for the loss of household income, others were unable to make ends meet, no matter how hard they worked.
- Indian women workers on AMT also became convenient objects of Northern research interest, having to recount their experience of the pandemic repeatedly, often facing probing questions on sensitive personal issues, including the state of their mental health.
- An ever-present possibility of being suspended from AMT without warning and for seemingly no reason illustrates the powerlessness and precarity of women workers in a moment of acute economic crisis.

3.3.1 Reducing wages, reducing work

Our findings show that with the onset of the pandemic, all women participants, regardless of their experience or qualification status on AMT, have been facing a reduction in work.

This needs to be contextualized in relation to recent statistical data about online work. Both demand and supply of labor for online work increased steeply in India from April 2020 onward, with the clerical sector – relevant to AMT workers from India – picking up from mid-May (Rani & Dhir 2020). While it has been hypothesized that with decline in revenues, many companies in India may be looking at online labor platforms as a substitute for on-site work (Stephany 2020), in the context of Indian workers on AMT, this plays out differently. Since AMT does not permit Indian requesters, Indian workers on the platform depend mostly on US-based requesters who post a majority of tasks. However, even as demand for online work from the US for clerical and data entry jobs started recovering since May 2020, this has proceeded at a slower rate than the increase in labor supply (Rani & Dhir 2020). What this could imply, assuming the trend continued well into the latter half of the year, is that many more Indian workers on AMT are competing for the same tasks, thus, driving down per capita job availability and earnings.

Selvi, after working on AMT for two years, finds that her earnings during the lockdown reduced considerably. She would make INR 13,000 in a good month and INR 10,000 when work was not easy

to come by. In the period since March 2020, she said, the “volume of work has been very low” and her earnings have come down to INR 5,000-6,000 per month since “not too much work is being offered”.

Pankajam, who has put in nearly two years of work on AMT, corroborated this. She used to earn around INR 20,000 per month, which has plummeted to INR 3,000-4,000 a month into the pandemic – a more than 75% drop in income.

Jayashree who has been working on AMT for three years, earned less than INR 10,000 for the very first time this year. In the previous month, it was INR 5,000.

Providing a snapshot of the number of tasks currently available, Noor said:

Before the pandemic, I would be allocated 100 tasks. Now it is only around 70-80 tasks, sometimes just 50-60. (Noor)

Interestingly, the decrease in workflow did not entail fewer hours of work. Women reported working longer hours since the pandemic, and spending more time on the unpaid activity of waiting and searching for tasks. As Jayashree notes:

Only if I am in front of the system, I can know what work is coming. It feels like I am doing nothing but sitting in front of the system. (Jayashree)

Pankajam now works for an additional five hours to make the same amount of money. She said:

Weekly I could take home around USD 100 [INR 7,300] even if I worked only two hours per day. Now, even if I sit for six to seven hours, I only get USD 20-30 [INR 1,400-2,100]. Earlier there was no need to spend this much time. After the pandemic, I have to spend six to seven hours on work. (Pankajam)

For Akhila, who reports making the same amount now as before, “it takes more time”, an indication of a downward trend in compensation per task. Ranjani, who in a normal year would have made USD 10,000 (INR 7,31,000) by the last few months of the year, has only managed less than half this year. She described how, Ibotta, a requester who posts tasks for data entry from shopping receipts, has reduced the compensation per task:

Ibotta has totally transformed, even changed its name. Receipts [-based HITs] are there, but only for one cent. Previously, they were for three to five cents. For one cent, it is not worth it. It is also not coming that frequently. Even if we do it for 24 hours, we won't even get five dollars. One year ago, we were grabbing some 30 dollars [INR 2,100] from Ibotta per day. Don't know why they are doing this now, I am very confused. (Ranjani)

Some requesters have also been missing since the pandemic began. Pankajam quipped, “Some requesters are dead [laughs], maybe that is why there are less tasks on AMT.” While older and familiar requesters are missing, Ranjani said there are “no new requesters at all. It is only sometimes I notice new requesters, very rarely. Last year, there used to be many new requesters.” She described 2020 as a “very dry” year, adding that all her other friends felt the same way. Some, like Pankajam, were counting on the vaccine to “somehow improve the situation”.

The findings point to a consistent, across-the-board willingness to take up more tasks, and a sense of despondency that stretching the hours has still not been enough to mop up the desired minimum wages.

Noor also observes how the pandemic has increased the degree of dependency on AMT. She explains:

I used to do this job only part-time. Now I am trying to do it full-time. Because of corona, expenses are increasing, and income has been affected, like everywhere else. Things are difficult for the household. (Noor)

In a similar vein, Akhila narrates how she has had to step up after her husband lost his job:

After corona, the work on AMT is less, and my husband also doesn't have a job. In these times, somehow, the family must be run. So I have to work really hard. (Akhila)

Clearly, the pandemic seems to have interrupted the facade of stability – a hallmark of the work experience on AMT – for many participants. However, given the post-pandemic economic context and the resultant challenges – job loss for family members and dwindling household income – these women are left with no option other than seeking refuge in AMT. While women like Noor and Akhila have had to work harder to compensate for the loss of household income and sustain their households, others, like Jayashree, are simply unable to make ends meet since the garment factory where her mother works has shut down. In an irony that sometimes characterizes the power inherent in researcher-researched exchanges, many participants asked us repeatedly if we had any information about AMT that may throw light on the disconcerting uncertainty.

3.3.2 Turkers as research subjects

Microworkers not only perform work that machines and AI are unable to, they are often the ‘data’ themselves. Academic research frequently uses AMT workers to conduct experiments and studies. Data collection on sensitive subjects, data extraction that would typically require building a considerable rapport and trust with research participants, is conducted through AMT. In the context of the pandemic, we found that workers are being prodded and probed on topics like the state of their mental health. Some have been part of such assessments multiple times. Selvi shared candidly:

Everything these days seems to be about corona. The questions ask [sic], what did you do during the lockdown? Are you depressed? Have you attempted suicide? (Selvi)

Academic interest also seems to be coming from the Global North, and female AMT workers from the South are convenient subjects for study. Pankajam has filled many surveys that were “related to the pandemic situation”. She said, “They have been conducting a lot of surveys about what the situation is like in my country.” Similarly, Vimala reported that the most discernible change in the Covid-19 context is the influx of surveys relating to the pandemic.

The recruitment of microworkers for research during the pandemic reflects the paradoxes of digital labor for women. As an idealized workspace, AMT has enabled women to navigate the intractable constraints of patriarchal households that would otherwise have prevented their self-actualization as income earners. Yet, the invasive demands of what is neatly encompassed by the term ‘human intelligence tasks’ hides the emotional burdens of having to recount the anxieties and fears they face in these challenging times for market and academic research (including this study). All these exertions are aimed at hitting the desired minimum compensation, which women have come to increasingly depend on during these precarious times. The political economy of AMT as a marketplace in which researchers can find research participants is premised on ideas of willingness and consent that erase the agentic situatedness of the researched. The pandemic has, therefore, pried open the emotion that underlies the intelligence.

3.3.3 Ever-present threat of suspension

A lawsuit was filed against Uber in Europe in October 2020 for deactivating the accounts of four drivers, without providing a reason (Bernal 2020). Touted as a type of ‘robo-firing’, where an automated decision is made about the worker, this was seen to be in violation of Section 22 of the General Data Protection Regulation (GDPR). Even as this is being followed as a test-case and labor rights activists wait for the case to unfold, workers on AMT face robo-firing more routinely. When AMT suspends an account, it is rarely accompanied by a reason, much less, a warning or notice. The decision is executed immediately, leaving workers suddenly unemployed. Even after working on AMT for 11 years, Ranjani lives under constant fear of being suspended and prays that such a fate never befalls her.

The suspension of the account results in workers being pushed out of the online workforce. Padma shared the example of her friend whose account was suspended without reason. She blamed US-based requesters:

Who do you think is able to suspend accounts? It is the people who are in the USA who do it. My friend’s account has been suspended. They did not give a reason or anything. Now she is not working on AMT anymore. (Padma, 17, Ramanathapuram, Tamil Nadu)

Selvi feels it is the single biggest “difficulty” she faces. She said, “You can get suspended anytime.” Ranjani reported that the accounts of 20-25 acquaintances, including holders of the Masters Qualification, have been suspended in the months since the pandemic. These contacts reached out to AMT explaining their predicament, since most of them were the “only source of family income”. According to her, “they shared so many emotions with AMT but there was no result”. Out of the 20-25, around two or three suspensions were revoked, but she did not know on what basis. “The fear of suspension is a lot. We [my friends and I] all have this fear all the time”, Ranjani added.

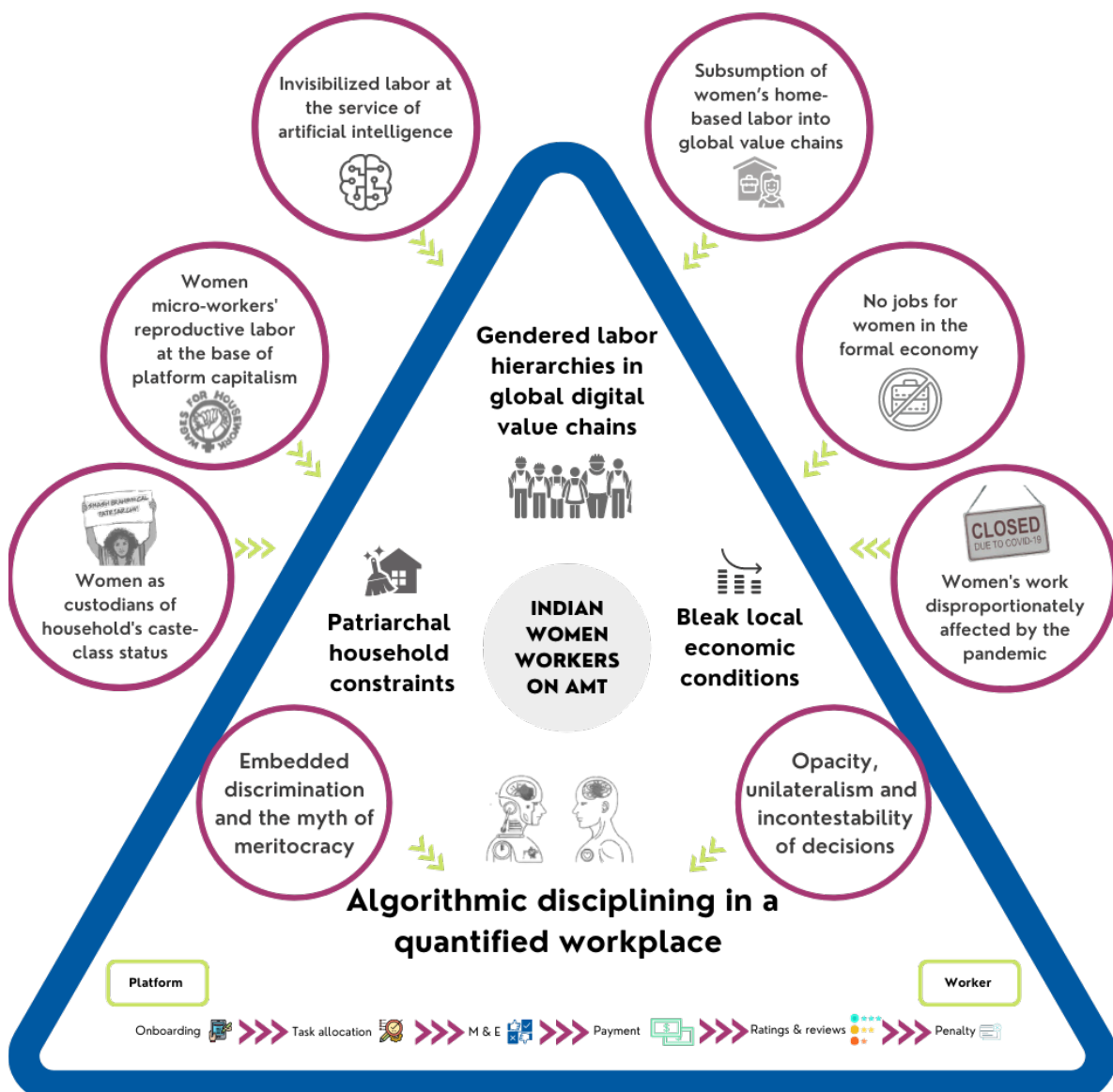


Fig 2. Indian women workers' experiences on AMT.

The anxieties of workers are a product of the inordinate market power enjoyed by requesters and a market concentration where a few requesters post an overwhelming majority of tasks (Kingsley, Gray & Suri 2015). The wage is fixed by the requester, the task is auctioned, and first acceptors are able to earn a ‘reward’. The fact that AMT positions itself as a marketplace that just connects and provides the bare minimum rules needed for genuine transactions (a simple reputation system that can potentially keep bad actors away and a secure method of paying participants) means that the space is already skewed against workers. There is indeed no level playing field for requesters to assume any employer obligations or liabilities. There is also a careful engineering of expectations so that no answerability on the part of AMT is anticipated. As several women have said, AMT only shares the email ID of the requester in case of any complaint or dispute that needs resolution.

In the case of Jayashree, it has been a year since her friend, whose account was suspended, is owed USD 400 (INR 29,200) by AMT – money she had earned prior to suspension. This money is frozen, and there is no information forthcoming from AMT despite innumerable emails.

The possibility of suspension and the complete powerlessness of workers in the context of the pandemic visibilizes the intersections between the vicissitudes of the global economy and digital labor, laying bare the instability inherent in AMT. The cascading impacts of the pandemic also debunk the reification of microwork as ideal labor for women from particular socio-economic backgrounds (small cities/towns, aspirational classes, reasonably well-qualified), exposing the contradictions of gender-conservative negotiations that determine women’s participation in the labor market.

4. Conclusions

This study attempted to explore how the operations of microwork implicate women workers, using the Covid-19 conjuncture to garner insights about the platform economy’s gendered moorings. What our findings show is that for dominant digital labor platforms, the reasonably well-qualified, middle-class Indian woman from upwardly mobile social castes and classes in small towns becomes a vital link.

Upholding the patriarchal contract between capital (that needs disposable labor) and the household (that needs disposable income), she readily embraces low-end cognitive tasks and becomes the willing interlocutor between ideologies of gender that irrevocably pin her down to home-based work and platform capitalism that she services at night for a pittance. Our findings, therefore, point to a greater complexity than may be captured through quantitative inquiry – bridging the seeming differences between women’s “preference to work from home” and constraints owing to which they “can only work from home”.¹⁶

16. These categories were used by the ILO surveys of crowdworkers, in 2015 and 2017, findings from which are published in Berg et al. (2018).

Atomized and anxious, the female subject of our inquiry unrelentingly navigates the ruthless and coercive regime of an algorithmified workplace that represents a lawless unilateralism. Occasionally, she may question the injustices that maintain the system's status quo, claiming human explanations. However, she knows her subordinate place relative to her US counterpart and recognizes that the unknowability that disenfranchises her as a worker is programmed into the system as a neo-colonial ordering mechanism that sorts individuals (Striphas 2015). But she is also aware of the huge opportunity cost of losing her registered account – a highly valued commodity in the local market – and, hence, must strive on.

The pandemic reflects a destabilizing moment for digital labor platforms. While demand for online work has shown a steady recovery and even a spike in certain sectors, for Indian microworkers on AMT, these positive trajectories may not really translate into better opportunities. On the contrary, with a likely increase in job seekers on AMT and the algorithmic tyranny that discriminates against the Indian worker, the race to the bottom will only accelerate. Already, plummeting wages and fewer tasks have created extreme anxiety about the economic futures of women participants, with the haunting threat of suspension. There is, thus, a consistent theme of economic necessity, a finding that is at odds with Gray and Suri's (2019) thesis that Indian workers turn to AMT for reasons beyond money. What we find is a central impetus of economic necessity and the need for further research to uncover the ways in which specific patriarchal practices and attendant gender orders intersect with labor market motivations and choices.

The digital economy thrives on gendered dispossession – exploiting not only women's digital laboring for profit, but also invisibilizing the care work they must perform in the ostensible flexibility afforded by platform capitalism.

Similar to the traditional global value chains in which women from the Global South provided cheap labor, the emerging AI environment of capitalist platforms is also built on racialized and gendered exploitation that takes on situated forms of gender subordination. Further, narratives of 'independence' and 'flexibility' surrounding microwork legitimize the appropriation of cheap female wage labor into the logic of platform capitalism in emerging value chains of the AI economy. The digital economy, thus, thrives on gendered dispossession – exploiting not only women's digital laboring for profit, but also invisibilizing the care work they must perform in the ostensible flexibility afforded by platform capitalism.

Digital work performed by women from particular class/caste locations in racially stratified global labor chains are not altruistic contributions to the household. Such work is tied to exploitative material conditions in the neo-liberal capitalist economy, its algorithmic governmentality, and the middle-class household that seeks to keep female labor malleable in India's globalizing economy.

The notion of extractive HITs in quantified environments like AMT represents a tragic paradox in which creativity and capability are sought to be manipulated towards the cause of machine intelligence. Policies for a twenty-first century, AI-enabled society and economy, hence, need to urgently address the structural conditions of digital labor. The digital economy and the norms that underpin it need a transformative overhaul. There is growing consensus about the ethics of AI (European Union 2020; United Nations 2020a), but beyond the shrill rhetoric, there is a need to debate the meaning and purpose of AI for development.

Debates on platform workers' rights are gaining political visibility, especially in the post-pandemic context (Colclough 2020). Delivery workers associated with e-commerce companies, for instance, have been able to collectivize and make their voices heard (ITF 2019). However, workers on AMT find unions impractical given the AMT environment and the atomization inherent to its workings. Besides, economic necessity and the risk of a backlash preclude collective action on a mass level (Salehi et al. 2015). However, there is a blindspot with respect to women workers from the Global South who suffer double invisibilities on cross-border digital labor platforms. These women are locked away in time-space configurations that make organizing an uphill task, and their subjecthood as rights bearers is undermined by systemic devaluation and depoliticization of their paid and unpaid labor, nationally and internationally.

Platform companies such as AMT have hitherto capitalized on the absence of regulation, operating in a “regulatory sweet spot” that takes advantage of legislation that benefits them, and skirting obligations such as labor regulation and social protection.

Platform companies such as AMT have hitherto capitalized on the absence of regulation, operating in a “regulatory sweet spot” that takes advantage of legislation that benefits them (Gillespie 2010). They routinely skirt obligations such as labor regulation and social protection, pursuing a strategy of “regulatory entrepreneurship” (Pollman & Barry 2017) to change or exempt themselves from existing laws and regulation through political lobbying (Murphy 2020; Paul & Wong 2020). Nevertheless, there are some encouraging signs from courts that have recently demonstrated a willingness to consider platform workers as employees, opening the door to formal labor protection. In Germany, the Federal Labor Court ruled that crowdworkers can be “employees”, while the UK Supreme Court ruled that Uber drivers are “workers” and entitled to associated labor rights (Butler 2021; Kormann 2021).

Any attempt at regulating digital labor platforms must contend with the misclassification of workers as ‘independent contractors’, the absorption of managerial functions by algorithms, and cross-jurisdictional inconsistencies. Digital labor, thus, challenges a fundamental premise of labor regulation – that labor law and employment regulation is a matter for national authorities alone (Cherry 2019).

India has seen some significant movement in attempting to bring platform work within the parameters of legislation. The Code on Social Security, 2020, which seeks to bring platform workers under a social protection umbrella was passed this year. This is a welcome development, but umbrella classifications of digital labor are unlikely to accurately represent labor issues in the platform economy, least of all, the realities of women's labor. The Code is also ambiguous on the nature and extent of such protection, and silent on whether digital labor platforms, like AMT, have any legal obligations towards their workers or an employment relationship with them.

The platform economy needs to be urgently recalibrated for redistributive justice and gender justice, a task that presupposes the dismantling of data imperialism (Gurumurthy 2020). Global-to-local norms for data and AI need to be evolved to prevent the abuse of laboring data to undermine worker rights and to recognize the claims that workers have in the value generated by platforms through their laboring data. A binding regulatory framework tethering platform behemoths to obligations that apply across national frontiers is another immediate necessity.

This study also highlights the crucial need for further research to unpack how specific patriarchal practices and attendant gender orders in the contemporary context shape women's economic participation and empowerment. A tightening of familial and kinship controls in upwardly-mobile castes in Tamil Nadu has been instrumental in shaping ideas of 'respectable work', but not much is known about how women from these castes navigate this.

Now is also a moment of reckoning for labor movements and their ability to organize cross-sectorally, embracing feminist leadership. Encouragingly, workers and their organizations are resisting and contesting digital platforms and their impunity in India (Chhabra 2020) and other jurisdictions.¹⁷ What is clear is that a new epistemological, ethical, and institutional basis is needed for redefining the idea of work and the worker in a platformizing world, with a promise of empowerment and well-being for all.

5. Recommendations

In a data-driven global economy, women microworkers from developing countries are locked into the low-end segment of the value chain. Unless countries in the Global South revamp their public policies and laws, a rapidly digitalizing world of work portends a bleak future for the vast majority of women workers in these contexts. Gendered vulnerabilities require urgent policy attention so that the rhetoric of opportunity in the digital context is not a one-way street in which women have to trade their rights for economic survival. There is also a role for international institutional frameworks to guarantee the labor rights of women in digital value chains and to govern the data and AI economy for equitable

17. The App Drivers and Couriers Union has undertaken legal action against platforms like Uber and Ola in several jurisdictions, on issues relating to employee misclassification, the rights and entitlements of app drivers and couriers, and algorithmic decision making (such as unilateral account deactivation or "robo firing"). Final judgments on these are expected in the coming months. For more info, see (ADCU 2020a; ADCU 2020b).

outcomes. Trade unions, civil society organizations and research scholars need to work together in building gendered analyses, privileging women workers' voices and demanding action strategies.

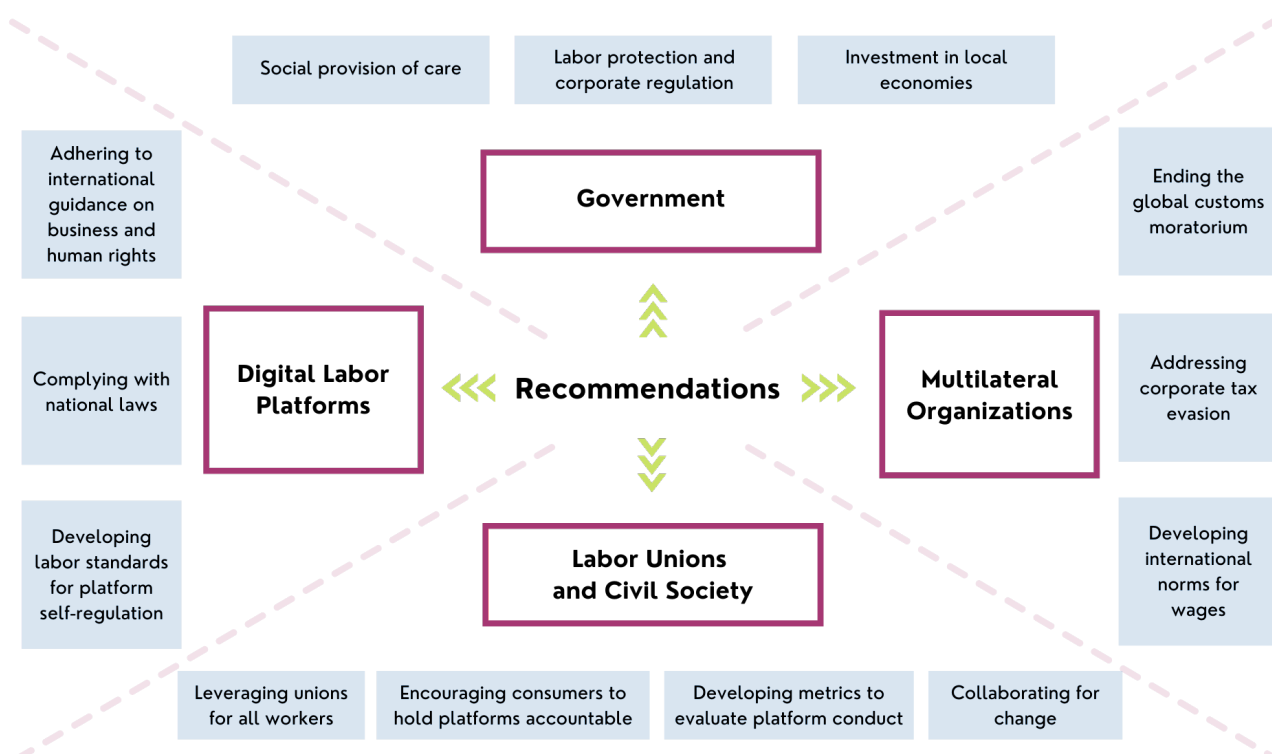


Fig 3. An overview of recommendations for different stakeholders.

5.1 Recommendations for the government

Public policy frameworks to address the predicament of women microworkers must adopt a multi-pronged, feminist approach, achieving coherence between social and economic policies. But this is only half the battle. Changing social structures of gender inequality also requires a transformative approach across sectors, enabling women to transcend the barriers of patriarchy and intersectional vulnerability.

Interventions are needed in the areas of care infrastructure, labor regulation, corporate governance, and local economic recovery.

Policies towards the social provision of care

- Building a care infrastructure:** A comprehensive set of policies, resources, and services are required to recognize, reduce, and redistribute the unpaid care work burden that women carry disproportionately (United Nations 2020b). During the pandemic, India witnessed a deregulation of labor and a weakening of state protection, which intensified care work demands on women (Deshpande 2020). Providing care infrastructure is part of the state's responsibility towards the welfare of its labor force. While this includes social protection for all, providing child care, food security, and public transport are key policy measures required to enable women's economic participation and to alleviate their care work burden.

- **Providing social security:** In India, under the Code on Social Security 2020,¹⁸ platform workers are entitled to social security through government-framed schemes funded by contributions from platform companies. While this is a welcome development, the scheme lacks the granularity necessary for how contributions from companies will be assessed. In outlining the workings of this scheme, the government must draw from established international standards, such as the ILO Recommendation 202 on Social Protection Floors. If adequate social security responsibility is borne by the platform, it will reduce the burden on women to straddle paid and unpaid work.

Labor protection and corporate regulation

- **Ensuring labor guarantees for decent work:** In addition to the provision for social security, Indian labor law must also extend the protections of minimum wage, equal pay for equal work, the right to organization and collective bargaining, and the regulation of working hours and working conditions to those who work on digital labor platforms.
- **Ratifying and complying with pertinent international treaties:** India must sign and ratify the ILO Conventions 87, 98 and 131 on Freedom of Association and Protection of the Right to Organize, Right to Organize and Collective Bargaining, and Minimum Wage Fixing, respectively. These Conventions can offer relevant guidance on how to center labor protection in a rapidly digitalizing economy, and serve as a benchmark for all platform workers, irrespective of their employment status.
- **Protecting workers' data rights and ensuring algorithmic accountability:** Workers on AMT are governed by an algorithm that runs on the engine of data. Considering this, labor legislation must also incorporate provisions that protect workers' data rights, and recognize their right to be free of undue surveillance at the workplace. The 'right to explanation' must be given a strong legislative push to ensure that workers have an opportunity to challenge seemingly arbitrary decisions taken by AI, and are also guaranteed an explanation for the same.
- **Governing transnational business activities and promoting workers' human rights:** As the government develops its road-map for the digital economy, ensuring the obligations of platforms towards workers is a vital piece. Regulating competition and instituting watertight taxation policies, while crucial, are not wholly sufficient to ensure that workers' civil, political, and economic rights are protected in the digital economy. The government must, therefore, also govern the activities of transnational corporations in line with the Second

18. The Code on Social Security 2020 attempts to bring platform and gig workers within a formal social security framework. However, neither the Code nor the Draft Rules clarify how contributions from platforms will be assessed, the grounds on which they may be exempt from making such contributions, or the granular workings of any proposed government scheme. The issue of protecting workers' personal data, which will be collected while developing databases for the provision of social security, is also left unaddressed.

Revised Draft of the UN Binding Treaty on Business and Human Rights, which includes provisions on the rights of victims, human rights due diligence, access to remedy, and the legal liability of businesses that infringe human rights.

Local economies as future hubs of productive digital activity

- **Prioritizing investment in local economies:** Livelihood security of women workers is predicated on how local economies in a post-pandemic world can be regenerative. Investments are needed in planned digitalization of regional industries and different economic sectors, enabling more women to benefit from jobs in the local economy. The emergence and sustainability of local digital labor marketplaces and platforms requires wide ranging regulatory action to ensure that winner-take-all models in the platform economy are reined in.
- **Enhancing domestic digital and human capabilities:** Digital infrastructure is crucial to harness the benefits of the Fourth Industrial Revolution for women's social and economic empowerment. Investments are also needed for universal data subsidies as well as initiatives for skilling, reskilling, and lifelong learning to equip women to participate in AI-based value chains.

5.2 Recommendations for AMT and other digital labor platforms

Microwork in the intelligence economy fuels a race to the bottom, exploiting women's labor. The AMT ecosystem needs drastic and urgent reform. Despite claiming to be a neutral party, the platform determines the fate of workers through its algorithmic architecture. AMT is, thus, directly accountable for the human consequences of automated decisions governing worker actions.

- **Adhering to international guidance on business and human rights:** AMT and other transnational platforms must undertake to comply with and operate within the parameters of the UN Guiding Principles for Business and Human Rights, irrespective of whether there is a national law to that effect. Digital labor platforms must especially take note of Pillar II on the Corporate Responsibility to Respect Human Rights, that requires corporations to comply with the ILO's Declaration on Fundamental Principles and Rights at Work as well as pay special attention to the rights of women workers.
- **Complying with national laws:** Where clear laws exist and the status of platform workers and their employment is clearly defined, platforms must comply with domestic labor law on wages, collectivization, working conditions, and social security.
- **Developing labor standards for platform self-regulation:** Digital labor platforms must adopt self-regulation standards that include obligations towards its workers. This includes wage-setting standards that are developed keeping in mind the global value chains they engender. It has been

recommended, for instance, that platforms set a common minimum wage for all labor-providing countries equivalent to the minimum wage of the most developed country from which they draw their labor (Martin et al. 2017).

5.3 Recommendations for multilateral governance

National economies rely on customs and taxation, including corporate income tax, as sources of revenue for development, poverty alleviation, the provisioning of public services, and physical and social infrastructure – all vital for women’s economic participation. For developing countries, this revenue stream is an especially valuable fiscal resource that can finance domestic schemes for unprotected categories of workers. The ILO also needs to play a renewed role in articulating, and achieving consensus on, the rights of platform workers. Reforms to the multilateral system adequate to the digital moment are, therefore, much needed.

- **Ending the global customs moratorium:** The moratorium on customs duties for electronically transmitted goods and services agreed by member states of the WTO in 1998, must be ended. Given that developing countries are primarily the importers of such goods and services, without the benefit of tariffs, they are likely to be at a perennial disadvantage in the digital economy.¹⁹
- **Addressing corporate tax evasion:** The global digital taxation system also needs immediate reform. The practice of base erosion and profit shifting, frequently deployed by multinational technology companies to evade paying taxes by taking advantage of their virtual operations, must be arrested.
- **Developing international norms for wages:** Global digital platforms should be held to an internationally-applicable norm of minimum-wage setting. This is an urgent task for the ILO, and needs to be seen as potentially beneficial for crowdworkers in the Global North, by way of limiting off-shoring and to workers in the Global South, by providing them with decent and comparable wages.

5.4 Recommendations for civil society, unions, and researchers

Civil society organizations, unions, and researchers must work together to continue uncovering the gendered and racialized dimensions of global platform capitalism. Their contributions can come in the form of robust evidence, as well as strong advocacy pushes for progressive and urgent policy changes

- **Leveraging unions for all workers:** The gig economy has seen positive developments in the form of recent union activity in India. These gains must be converted into persistent collective action and

19. The financial loss for developing countries as a result of this moratorium has been estimated to be nearly USD 10 billion, stripping them of the financial resources necessary to invest in their local economies and development. See Banga, R. (2020).

advocacy efforts that includes the leadership and voices of women workers. Strategies must target platforms operating in India, with due attention to workers' rights over their data. Building cross-sectoral solidarities with other workers impacted by the digitalizing economy – such as small traders affected by e-commerce supply chains – should also be prioritized by unions.

- **Developing metrics to evaluate platform conduct:** Research and advocacy based on evaluation of platform conduct can serve as a useful catalyst for long-term change. One such example is the multi-site Fairwork Project, run by the Oxford Internet Institute.²⁰
- **Encouraging consumers to hold platforms accountable:** Consumers and civil society organizations must also come together to 'name and shame' misconduct by platforms, holding them accountable, and paving the way for more sustainable and conscientious choices.
- **Collaborating for change:** Changes to the law and improvements in the working conditions of women workers also depend on sustained engagement of, and collaboration among, trade unions, civil society organizations, and research scholars. These stakeholders must come together to frame the issues, build normative frameworks, democratize the debate, and evolve local-to-global strategies for change.

20. See Oxford Internet Institute, "Fairwork Project," : <https://fair.work/en/fw/homepage/>

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