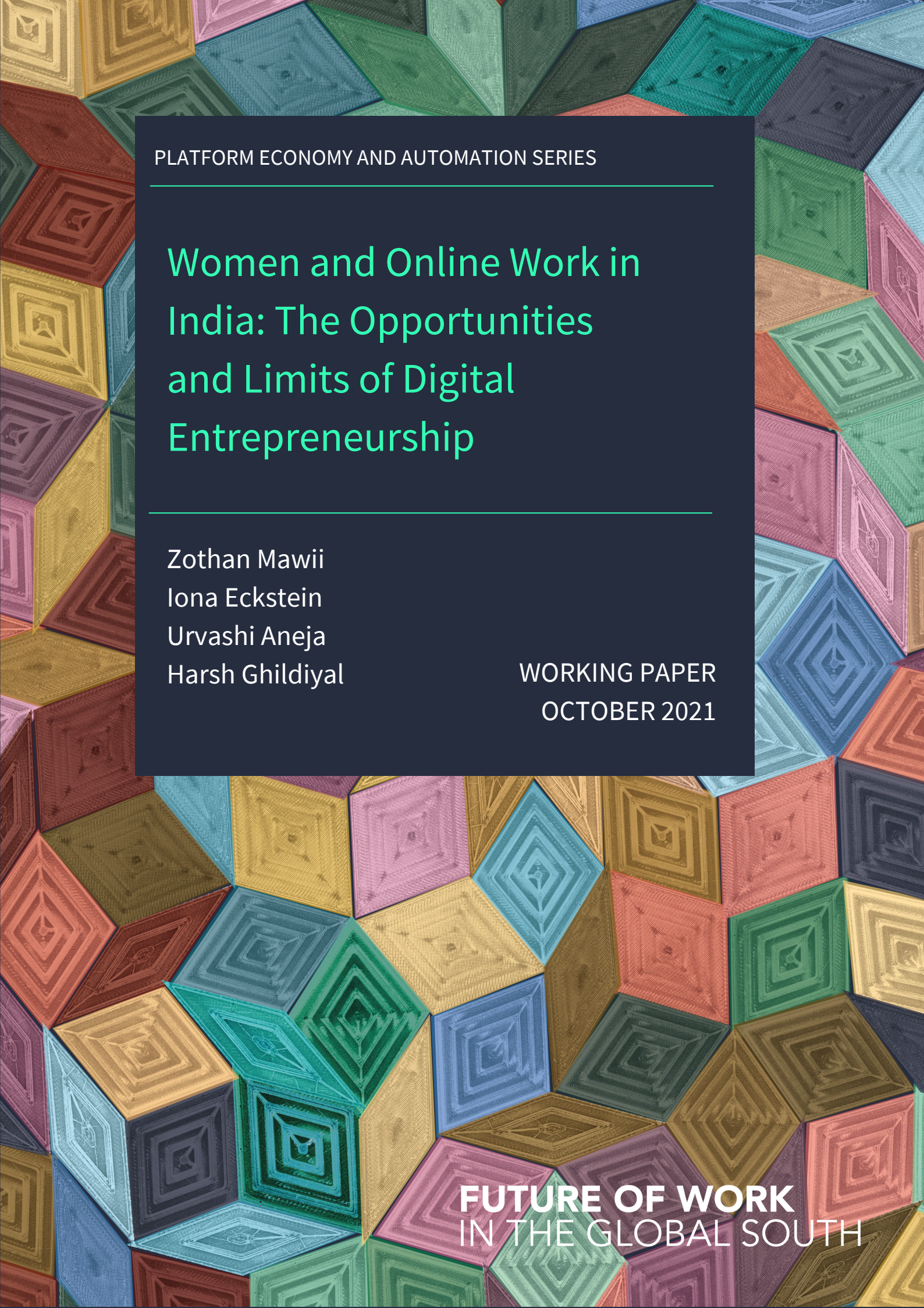

PLATFORM ECONOMY AND AUTOMATION SERIES

Women and Online Work in India: The Opportunities and Limits of Digital Entrepreneurship

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About Tandem Research

Tandem Research is an independent research collective that generates policy insights at the interface of technology, society and sustainability.

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Glossary of terms

Cloud-based platforms: A type of digital labour platform where the work is distributed via the platforms and can, in theory, be performed anywhere via the internet.

Crowdwork: In crowdwork, the task is outsourced to an undefined, generally large group of people in the form of an open call. Crowdworkers are sometimes compensated by requestors (like on Amazon Mechanical Turk) or could be performing the work voluntarily (like editing Wikipedia pages).

Digital labour platforms: Digital labour platform uses digital resources to mediate value-creating interactions between clients and individual service-providing workers. The work undertaken on these platforms is also referred to as gig work or platform work.

Digital Economy: The digital economy is defined as that part of economic output derived solely or primarily from digital technologies with a business model based on digital goods or services. It consists of the digital sector plus emerging digital and platform services.[1]

Freelance work: Work undertaken by an individual who works as an independent contractor and not for a company. Typically, the work available on freelance platforms ranges from simple data entry, to transcription, translation, copywriting, accounting, and graphic design, among others.

Freelance platforms: Matching workers with tasks required by clients or businesses at a lower cost than traditional firms and without the need to abide by the protections associated with an employment relationship.

Gig Economy: In the gig economy, workers are hired under 'flexible' arrangements, as 'independent contractors' or 'consultants,' working only to complete a particular task or for a defined time.

Gig Work: Gig work usually refers to piece rate work performed by workers in the gig economy. However, researchers have pointed out that "gig work" exists outside of the digital economy and is prevalent in labour markets with widespread informality

Microwork: A series of small computing tasks which together comprise a larger, unified project undertaken by individual workers through internet-based platforms.

Location-based work platforms: The work on location-based platforms are geographically tethered and must be performed within a specific geographic location.

Online Work: Online work refers to paid work allocated and delivered via internet platforms without an explicit or implicit contract for long-term employment.

Online outsourcing: Online outsourcing is the business process of contracting third-party providers to supply services that are delivered and paid for via the internet.

[1] Retrieved from Bukht, R. and Heeks, R. (2017). Defining, Conceptualising and Measuring the Digital Economy.

Executive Summary

Digital labour platforms have had a significant impact on work and labour markets, creating both a global outsourced workforce, and hyper-local on-demand workers to perform a range of services and tasks.

The impact of digital labour platforms on the Global South has been mixed. On one hand, they create a precarious workforce where workers must contend with fluctuating wages, few safety nets, and poor working conditions. On the other hand, they lower barriers to entry, offer marginally better wages than what may be available in traditional offline markets, and have helped standardise some work processes.

This study focuses on women in India who engage in online work through freelancing platforms and microwork platforms. It uses a mixed method approach to examine the following questions:

* What motivates women to join digital labour platforms?

* What impact do these platforms have on their access to work and financial autonomy? What are their working conditions?

* Do these platforms and digital entrepreneurship enable women's economic empowerment?

The findings are based on a survey with 365 respondents and 22 semi-structured interviews with women working on online platforms.

Online work and women

In 2019, only 21 percent of women in India were engaged in the workforce despite their increasing access to higher education and the declining birth rates. Reasons for low rates of female labour force participation rate include the unavailability of suitable work, the burden of care work, and the expectations of the family after a woman gets married.

Digital entrepreneurship through online platforms provides women with job opportunities. Because online work can be done remotely with flexible timings, it helps women balance paid work and the care responsibilities.

However, digital entrepreneurship is a socio-material process, inscribed within the social and historical contexts in which it operates, and technically and materially defined. Entrepreneurial activities on digital platforms are determined by the architecture of the platform. The features of a platform and its affordances determine the experience of workers and their ability to earn an income in the long-term. In addition, women's experiences and capacities for digital entrepreneurship are shaped by their unequal access to digital infrastructure, financial institutions and the social hierarchies in which they are situated.

A survey of Indian women and online work

The quantitative survey corroborates some of the existing literature on women's shift to online work. The split between women in metropolitan cities and smaller cities (tier 2) was even - 53

percent of freelancers were from metropolitan cities and 47 percent from tier 2 cities. Among microworkers, this split was 43 percent from metropolitan cities and 57 percent from tier 2 cities.

The women engaged in online work had high educational qualifications - 46 percent of freelancers surveyed had at least a bachelor's degree while 16 percent had a postgraduate degree or higher. Among microworkers, 49 percent had a bachelor's degree and 10 percent had a postgraduate degree or higher. Most had previous work experience - 38 percent of freelancers were in full-time employment compared to 41 percent of microworkers.

Among freelancers, being able to work from home was the most cited reason to shift to online work. For microworkers, it was the ability to earn more money. 83 percent of freelancers from metropolitan cities and 62 percent from tier 2 cities stated they earned more than in their previous jobs. The average monthly income was between INR 10,000 to INR 20,000. Most microworkers earned less than INR 10,000 and stated that they earned less than in their previous jobs. Freelancers reported an increase in earnings during the pandemic. The majority of respondents stated that their families approved of their online work.

Gendered experience of online work among Indian women

Through the qualitative interviews, we were able to gain deeper insights into women's experience of working online. The majority of women stated that they shifted to online work from their previous jobs in the formal sector after getting married or having children so that they could better balance paid work with care work responsibilities.

For the most part, the income earned on online platforms was not a significant contribution to household income, but was referred to as "pocket money" to be spent on personal expenses or on their children.

Since online work allowed women to stay at home and shoulder their familial responsibilities, their families were largely supportive. In most cases, the desire to work came from the women themselves and not from their families, specially where there was no pressure to earn an additional income. Some women said that online work gave them something to do with their time, while for others working was important for their own fulfilment or to set a good example for their children.

The promise of financial independence through platform work may not come to fruition as the women stated that their income was not a significant contribution to household income. Platform architecture only allows very narrow entrepreneurial activity, differing in degree based on the platform. This also had an impact on women's satisfaction in using the platform.

Most women recognised the limitations of online work for long-term career progression. Online work can represent a deskilling of workers - over 40 percent of freelancers and microworkers had at least a bachelor's degree and around 10 percent had postgraduate degrees. This deskilling is not caused by platform work alone, but reflects a broader labour market conditions and socio-cultural factors which may compel women to turn to online work. Although many said they had learned new skills from online work, both freelancer and micro workers did not think this would help them to find offline jobs.

The choice of platform was determined by need. Those with more immediate monetary needs or with focused goals turned to microwork as they could earn almost immediately without first having

to build a profile and establish themselves. Those who looked to online work as a longer-term plan invested time in establishing good ratings on platforms.

Women employed adaptive strategies while working on different platforms. It was hard to establish their profiles and ratings when they first started out. Those who had recently joined the platform faced more difficulties in getting their first assignment compared to those who had been doing it for a longer time, due to increased competition on the platforms. Among freelancers, the tactics used to get the first assignment included sending prospective clients a small segment of the completed task to demonstrate their ability, or lowering their rates so that clients would offer them the job. This was not an option available to microworkers due to the nature of microwork platforms. A more common strategy employed by microworkers was the use of plug-ins and other tech tools to automatically accept tasks or get alerts when new tasks were posted.

Although there were no joining costs, the women still had to make significant financial investments to participate, especially those in microwork. They sometimes had to pay for subscriptions that would enable them to bid for more jobs, or for devices to work on. Some even had to purchase accounts from existing workers on the platform, since they were unable to create their own accounts on the platform. As existing literature has pointed out, the demand for online work comes largely from countries in the Global North, so the women had to adjust their working hours so they could bid on jobs as they come in.

While online platforms allow women to participate in earning opportunities, the existing frameworks of gender inequality and socio-cultural norms affect women's motivation to join online work and their experiences of it. Existing inequities are also replicated online. The gender pay gap, for instance, persists because of women's inability to commit as many hours as men due to care work responsibilities. Some women need to make financial investments to participate in online work and the need for financial support from family members or their own savings could affect their entry into online work.

In the study we see that online labour platforms make a positive difference at the household level but the broader macro impact on women's employment and empowerment remains to be seen. Future research should be directed towards longitudinal data on the impact of online labour platforms and women's participation in the labour force in India and globally. Alternative platform ownership models, like social enterprise models which target certain marginalised groups, or co-operatively-owned platforms could potentially address some of the challenges faced currently by workers.

1. INTRODUCTION

1.1 Context & Research Questions

A significant change to working practices in recent years is the emergence of digital labour platforms that mediate between workers and hiring agents (Jarrahi et al., 2020; Erickson and Jarrahi, 2016). This has created both a global outsourced workforce, and hyper-local on-demand workers available to perform a variety of tasks or services (Gary & Suri, 2019). Digital labour platforms have been hailed by national governments and international development agencies as a way of creating jobs for populations in the Global South (Melia, 2020; Graham et al., 2016). The rise in remote digital labour platforms is often credited with creating opportunities for micro-entrepreneurship. Many governments in the Global South are actively supporting the growth of platforms to stimulate employment growth. The Ministry of Information and Communication Technology in Kenya, for example, has partnered with Mastercard Foundation for Ajira Digital, a programme to provide infrastructure and train people with digital skills to perform online work (Melia, 2020).

Digital labour platforms have enabled an "interplanetary labour market" (Graham et al., 2016) where workers can compete globally and circumvent some of the existing conditions in local labour markets. The export of IT services through digital labour platforms, some argue, could offer opportunities to create employment in some developing countries (Melia, 2020). The COVID-19 pandemic has renewed the focus on online labour platforms. According to the data from Online Labour Index (OII, 2020), registrations to online work platforms increased during the pandemic. Demand for workers with expertise in information technology and software development also steadily increased during this period (Stephany et. al., 2020).

Emerging literature on online work has found that digital labour platforms engender precarious working conditions as workers are not provided any safety nets like minimum wage guarantees, paid holidays, health benefits, or employer-funded pension plans or insurance (Berg et al., 2018). Some researchers argue that platforms have shifted risks to workers and eroded worker rights. The absence of collective bargaining, misclassification of workers as "independent contractors", stringent algorithmic control, and rampant worker monitoring have weakened workers' agency (ILO, 2021; Tandem Research, 2019).

At the same time, literature from the Global South points to the role that platforms have played in standardising work to a limited extent in informal markets, providing marginally higher wages than alternatives in local labour markets, and enabling access to financial institutions that were not possible before (Surie & Koduganti, 2016; Raval and Pal, 2019; Aneja and Shridhar, 2019).

In India, there is an ongoing discussion about how to enable more women to access paid work opportunities, as India currently has one of the lowest female labour force participation rates in the region, despite an increase in women accessing higher education and a declining birth rate (Ghose, 2013; Mondal et al., 2018). Policy makers and development agencies have been optimistic about the opportunities that digital platforms provide for women, specially as they enable them to balance care work and paid work.

This study examines women's participation in digital labour platforms in India.

* What motivates women to join online work platforms?

* What are the implications in terms of access to work, earnings, and financial autonomy? How do online labour platforms impact women's working conditions?

* Is participation in digital labour platforms enabling economic empowerment for women?

This conversation is relevant to the ongoing discussion around the platform economy, regulatory frameworks and labour standards in India. The pandemic has brought into focus the potential of online work to provide employment opportunities. Gig work has grown as even traditional sectors like business process outsourcing and information technology have moved to gig work models to adapt to the shocks caused by the pandemic. This is especially pertinent because the female labour force participation rate was declining even before the pandemic. Early estimates suggest that women have been disproportionately affected by the pandemic. Most job losses were among women, many of whom had to exit the workforce in order to address the care work burden.

Types of Online Work

Digital labour platforms facilitate interactions between service providers and hiring agents for labour (Graham and Wood, 2018). Online work can be broadly categorised into online freelancing and microwork. Online freelancing is where clients contract professional services to distributed third party workers. It often requires a higher level of expertise than microwork, with workers typically possessing technical or professional skills. Online freelancing tasks tend to be larger projects that are performed over longer durations of time - hours, days, or months (Kathuria et al., 2017: 10). Work can include more high skilled tasks related to data analysis, software development, programming, content writing and graphic design. Because of the more complex nature of the tasks, success in this area requires a high level of expertise and specialist skills.

Microwork (sometimes known as Crowdwork) is a form of "online outsourcing that breaks down the work into a number of simple and repetitive tasks." (Kathuria et al., 2017). Microwork consists of a range of relatively simple tasks including image identification, transcription, data labelling or annotation, filling out surveys, or up-rating posts (Berg et al., 2018). Although microwork is considered 'low-skilled' and remunerations are low, many high-skilled individuals are performing the work. In a recent ILO study on global microwork, it was found that Indian workers, in particular, were well educated, with 57 percent holding a bachelor's degree and 37 percent a postgraduate degree (Berg et al., 2018).

Much of the existing literature on the impact of digital platforms, including our own previous work in the area, takes a gender-neutral view of the experiences of platform workers (see Surie & Koduganti, 2016; Aneja and Shridhar, 2019; Fairwork Foundation, 2020). Most literature focuses on location-based platforms in the Global North. There is an emerging body of literature that examines gender-specific experiences on domestic work platforms and beauty service platforms in India, Kenya, and some other countries in the Global South. These studies contextualise the experiences of women on platforms to local labour markets and socio-cultural norms. There are few studies that examine the gendered experience of online work in India.

1.2 Method

We employed a mixed-methods approach, using a quantitative survey, qualitative interviews and focus groups to gather data from participants across the two sites - freelance work platforms, Freelancer and Upwork, and microwork platform, Amazon Mechanical Turk (AMT). Apart from participant interviews, we also interviewed expert stakeholders (see Appendix 1 for details of the expert stakeholders).

The quantitative survey establishes baseline data on the profile of women online workers: their educational qualifications, their previous work experience and their decision to shift to online freelancing. It also covers women's experiences of working and work practices such as their working patterns, earnings, and impact on household income. The qualitative interviews focus on why women joined online platforms. They helped understand women's experiences on the platform and how they perceived their work and ambitions*Recruiting participants*

Our target population was Indian women aged 18 or over, with an income from freelance or microwork, who had been registered on the platform before the Covid-19 pandemic began in March 2020.

For the *quantitative* phase of the data collection, we designed a survey to gather baseline data on the often-hidden community of women working on digital platforms. The survey questions sought information on demographics, previous work, platform work, finances and household situation (see Appendix 2). The questions were available in both English and Hindi. We sought the help of a survey company to conduct the survey, using their mobile survey tool, as we faced challenges in sampling and targeting during the COVID19 pandemic and subsequent lockdowns. We gathered responses from 365 women - 316 freelancers and 49 micro workers - in September and October 2020.

For the *qualitative* phase of the research, we had to use a combination of strategies to recruit participants, because of the different structures of the digital platforms we were targeting. Our recruitment strategy therefore remained flexible, allowing us to adapt our methods when reaching out to different groups of women.

For the *qualitative interviews*, we chose Upwork and Freelancer as they are globally popular and a high number of Indian freelancers are registered with them. We posted tasks to the platforms to invite women to participate in the interviews and a focus group 'project', then hired women for these. We also used snowball sampling, where our participants reached out to other women they knew who also worked as online freelancers. The platforms did not facilitate access to the participants. For the *microwork qualitative interviews*, we recruited women registered on Amazon Mechanical Turk (AMT) by posting a short survey on the platform and then inviting women to participate in a longer interview

In order to recruit participants for the *interview*, we used two strategies – (i) direct recruitment through the platforms and (ii) recruitment through a snowballing strategy through social media. First, we administered a short sampling survey to 55 respondents, of whom 40 were on AMT. The survey results were analysed and we selected 20 from this group to participate in the interviews. Those selected had indicated an interest in the qualitative interview and fit the profile of workers

we were looking for. Following this initial survey, we were able to contact and set up interviews with only 3 participants.

We were unable to recruit more participants directly from the Amazon Mechanical Turk. This could be attributed to the features on AMT that restrict interaction between workers and client and its terms of use. Unlike the freelance sites, AMT does not have a feature which allows requesters to contact workers. The platform prohibits interaction between workers and requesters through direct instructions and also by penalising workers who break terms of service by deactivating their accounts. This is especially pertinent for Turkers in India as they cannot easily create accounts again, nor are there any processes for grievance redressal. We recruited more participants for the study through a snowball strategy, by posting an invitation to the interview on a Telegram group used by one participant.

An important point is that our sampling across the freelancer platforms and the microwork platform is that it was heavily influenced by algorithmic filtering built into the platforms. As we were posing as clients, or customers requiring a service, the women we were able to contact were selected by the platforms' algorithmic filtering, based upon their level of experience, rating and time on the platform. Therefore, we also used snowball sampling. Despite this, we believe our sample is skewed towards women who have been particularly successful on platforms. This concern prompts us to highlight the importance of alternative sampling methods for future research around digital platforms that do not rely so heavily on the platforms themselves.

We interviewed 22 participants across the three platforms, Freelancer, Upwork, an Amazon Mechanical Turk. These individual interviews had a semi-structured format, allowing respondents to speak freely about matters important to them (see Appendix 3). Interviews were conducted over a telephone or video call in English, Hindi and Tamil. We also used one focus group to elicit responses in a group scenario. One remote focus group was conducted in English. It had 4 participants who were recruited from freelance platforms. We designed a focus group guide using vignettes, or short narrative descriptions, to encourage our participants to reflect on their own experiences (Appendix 4).

Analysis

When we completed the qualitative data collection phase, we used a thematic analysis approach to draw findings from the data related to our key research questions. We then linked the qualitative findings to the quantitative survey results.

We used personas to present the findings from the qualitative interviews and focus group discussions. Personas, commonly used in user experience design (UX design) and human-computer interaction (HCI) research, are fictitious characters, based on composite archetypes and encapsulate behavioural data gathered from ethnographic data and empirical analysis of actual users to design for their needs (Cooper, 1999). When used in UX design and HCI research, personas take into account average users and boundary cases, as well as specific needs of special users. This helps product designers with the design process and makes the eventual product more inclusive and accessible. We chose to represent the experiences of the women we interviewed through personas, taking into account both shared experiences and exceptional circumstances, to demonstrate the

varied experiences faced by women who choose online work and represent the rich narratives that we were able to elicit through the qualitative interviews. Using personas also helps readers immerse themselves in the experiences narrated by the women we interviewed.

Ethical considerations

We ensured that our participants were not disadvantaged by taking part in the qualitative phase of this research. We began by making sure they understood the reason for the study. We also got their informed consent for recording any interaction. We have not used any identifying details, such as names, in this study. We provided a small monetary compensation to participants for their time and, where relevant, wrote them a positive review on their online digital profile, thus strengthening their opportunities for future work. The qualitative survey data were gathered between September and November 2020.

Methodological limitations

There were some limitations to our methodology, mostly related to difficulty in recruiting participants.

The structure of microwork platforms makes it difficult to contact potential participants. Additionally, the opaque algorithmic management of these platforms meant we were not sure we were accessing a cross-section of workers, as some sites showed only the top-rated workers, and some sites showed only those very new to the platform. However, we attempted to overcome this issue by recruiting women based on the number of hours worked. This, we felt, would allow us access to a cross-section of levels of experience. We also used snowball sampling to compensate for this problem.

2. ENTREPRENEURIAL WOMEN: PLATFORMS AND THE REALITY OF WOMEN'S WORK IN INDIA

2.1 Women and work in India

India has one of the lowest female labour force participation rates (FLFPR) in the world. In 2019, just 21 percent of Indian women were counted within the labour force (World Bank, 2020). The reasons for the declining FLFPR are complex, with multiple factors influencing women's ability to participate in paid employment, including the pervasive informal economy, participation in education, the care burden and family expectations following marriage (Ghosh, 2013; Mondal et al., 2018).

India's economy has been slow to diversify with jobs for women still concentrated in agriculture, manufacturing or the household sector, which constitutes domestic work and home-based work. According to NSSO data, around 94 percent of the female workforce is in the informal sector (NSSO, 2012). Widespread informality also impacts jobs available to women and their working conditions. Informal workers rarely have a written contract, health benefits, employer-contribution to social security funds, paid sick leave, minimum wage protections, or standardised hours of working.

As far as "high skilled" professions are concerned, the number of women in professions such as administrators, managers, professionals and associate professionals has increased - from 22.6 percent in 1993-1994 to 36.4 percent in 2011-2012 (Mondal et al., 2018). However, the majority were self-employed, some of whom were engaged in outsourced manufacturing work, characterised by low earnings, long hours of work and a lack of any type of social protection (Mondal et al., 2018).

A much-cited reason for the decline in the Indian FLFPR is that more working-age women and girls are in education, meaning that they are not represented in the labour force figures (Mondal et al., 2018). However, according to the All-India Survey of Higher Education (AISHE), whilst there has been a 1,350 percent increase in female enrolment in higher education between 2010-11, these figures have not yielded a high female employment rate for educated women (Sharma, 2018). Unemployment rates are highest among young educated women, compared with other groups (Mondal et al., 2018). Thakur (2018) and Mathew (2017) have found that the rise in the number of women pursuing higher education has actually resulted in a decline in their labour force participation. This is because, due to their educational achievements, female graduates have a preference for white collar jobs. But, given the growth in highly educated people trying to enter the labour force, there are just not enough of these jobs available.

However, as Ghose (2016) emphasises, participation in education does not fully explain the declining labour force participation of working-age women, as the numbers for non-student working-age women have also shown a declining trend. One of the key reasons for women being unable to participate in paid work is their unpaid care work burden. Care work is "the direct care provided to children, the elderly, ill and disabled people at the household and community level: as well as domestic work such as cooking, cleaning, washing and fetching water or firewood that facilitates this direct care" (Dutta, 2019). The prevailing perception of care work as inherently feminised means that women are burdened with caring and domestic responsibilities. This makes them time

poor, and potentially unable to participate in paid work, or contributes to their exit from the labour market. Even in cases where women work in high income jobs, care work is seen as something they must tailor their circumstances to (Daniels, 1987). Unpaid care work and other forms of feminised work are often devalued as a result of the separation between work in the public sphere performed largely by men, and work in the domestic sphere.

Another important factor affecting women's work in India is expectations around married life. A woman's marriage status affects her participation in the labour force in several key ways. First, a woman may withdraw from the labour market when she gets married due to caring and domestic responsibilities, sometimes referred to as the "marriage effect" or "housework penalty" (Kaur, interview, 2020). Second, marriage changes a woman's social position and status meaning she may only join the labour force if this is accepted by the extended family (Andres et al., 2017). If household income levels are sufficient to support the family, then a woman may be less inclined to work, instead doing unpaid household care work. On the other hand, if the household is struggling, a woman (and sometimes her children) is likely to enter the labour market (Andres et al., 2017).

2.2 Digital platforms and home-based entrepreneurship

One school of thought suggests that online work enables new forms of digital micro-entrepreneurship, helping circumvent existing barriers to accessing work, enabling labour to access global markets, while affording workers flexibility and autonomy. Digital platforms lower barriers to entry and democratise access to entrepreneurial activities for previously marginalised groups. By allowing users to be their own bosses and fix their own schedules and therefore their earnings, online work on digital platforms could provide workers with autonomy, flexibility, and a decent income (Kessler, 2017; Schor, 2020; Ravanelle, 2019). This is particularly relevant for developing countries, where domestic employment is slow or stagnating. Online labour platforms allow labour to access global markets (Graham and Anwar, 2019). Some have even suggested that the export of online work or impact sourcing could drive job growth (Melia, 2020; Heeks, 2013).

According to the Online Labour Index, India has the largest market share (34 percent) of online work compared with other countries such as Pakistan, Bangladesh, the United States, the United Kingdom and Russia (OLI, 2020). This includes tasks involving software development and technology, creative and multimedia, and data entry and clerical work (OLI, 2021). With a dearth of formal work opportunities, many Indians are turning to work opportunities advertised through digital platforms to earn an income (see Kathuria et al., 2017). The scope of work available covers a heterogeneity of skill levels, experience and wages. Online work platforms have allowed people to easily publish their profiles and products to a global audience of clients, allowing for a far more efficient and expansive search less constrained by geography (Kathuria et al., 2017, Graham and Anwar, 2019).

Among Indian workers, the stated advantages of online freelancing were flexibility of working from home, flexible hours, ability to make extra income, ability to pursue education or other work alongside and independence of choice of projects. This was true across both genders (Kathuria et al, 2017). This is echoed by findings in an ILO study on 3500 global microworkers - the two most popular reasons for engaging in microwork were "to complement pay from other jobs" and "prefer to work from home" (Berg et al., 2018).

2.3 Women in the digital space

For women in particular, 13 percent stated they could "only work from home", compared with just 5 percent of men. Around 20 percent of women combined microwork with caring for young children; these women often had to work evenings and nights, but only spent 5 hours less on the platform than their counterparts (Berg et al., 2018). This suggests these women have a "double-burden" of work and caring responsibilities.

Development agencies, multilateral organisations and governments have pointed to the benefits of online work for women who will be able to balance paid work and care work due to flexible timings and remote work. Women combine online work with reproductive work (Altenreid, 2020; see also Altenreid and Wallis, 2018; Bandaranayake et al., 2020; Berg et al., 2018; Kuek et al., 2015). The women take up crowd work to make up for lost income after leaving their jobs to take care of elderly or young family members or chronically ill family members. Altenreid (2020) places this type of digitally mediated home-based labour within the long history of home-based work such as European women's sewing work in the nineteenth century.

Bandaranayake et al. (2020) found that women in India and Sri Lanka had a positive attitude to online work related to their ability to balance care commitments with paid work on online freelancing platforms, stating that they had gained confidence and some financial independence. Women's families too were generally positive about their freelance work as they were earning an income but were able to work at home (Bandaranayake et al., 2020). This was a marked contrast to attitudes towards men's online work, as families did not consider online freelancing a 'proper' job for a man.

2.4 Recasting precarity

Other scholars have argued that the language of entrepreneurship and narratives around digital platforms enabling entrepreneurship (espoused mainly by platform companies) is inaccurate (ILO, 2021; Graham and Anwar, 2020; Rani and Cherry, 2020). Workers have little control over their wages, terms of engagement, and hours spent working on the platforms. Platforms hide behind language of entrepreneurship even while they exert control through algorithmic management systems and the very design of the platform. By classifying workers as "independent contractors", companies absolve themselves from providing any social security measures. Workers are wholly dependent on the platforms that supposedly empower them (Eglash, 2019), often setting wages, assigning work, directing interactions between workers and clients, and dictating terms and conditions of work through stringent and opaque algorithmic systems that remain inscrutable.

In location-based work, there is much discussion on appropriate employment status. There is less of a focus on employment status when it comes to online work due to its hidden and disparate nature. There is a growing body of literature on online work around the globe highlighting poor wages, underemployment, geographic discrimination, and the absence of safety nets (Wood et al., 2017; Berg et al., 2018; Graham et al., 2017; Silberman and Irani, 2016).

These concerns need to be seen in the context of labour market conditions in developing countries, such as those in South Asia where a large proportion of the workforce is in the informal economy,

characterised by low wages, weak labour standards, shrinking number of jobs, and precarity. Literature emerging from the Global South describes how digital labour platforms offer workers marginally better conditions of work, higher wages and some benefits, but continue to reproduce precarity.

Looking at precarity through a gender lens

Conditions on online labour platforms reflect circumstances in the offline world. Issues rampant in offline labour markets like the gender wage gap and unequal participation persists even in online labour markets. Adams-Prassl and Berg (2018) applied a gender lens to the ILO micro workers survey data (Berg et al., 2018) to analyse the gendered experience of online work, on platforms such as Amazon Mechanical Turk (AMT). Despite the anonymity of the platform, and the fact that workers' gender is not visible to clients or 'requestors', they found a gender pay gap with women earning just 82 percent of what their male counterparts earn. They conclude that, in the absence of overt gender discrimination, this must be due to the uneven burden of care and domestic responsibilities on women that limits their earning potential.

Som (2020) finds that algorithm-enabled biases can limit women from succeeding on online platforms. For example, digital work platforms such as Upwork, or Fiverr (where the gender of workers is visible on their profiles) which facilitate online freelancing projects, rank freelancers according to their experience, ratings and feedback. The ratings given to freelancers is likely to have been influenced by perceived gender and social stereotypes. This means that, in aggregate, women and other minority groups may appear to perform poorly in relation to their male counterparts. A study on TaskRabbit and Fiverr found that perceived gender and race are significantly correlated with worker evaluations, which could harm employment opportunities on the platforms (Hannak et al., 2017). Predictably, women and people of colour were ranked lower, affecting the volume or work they could access (Hannak et al., 2017). Consequently, women and other marginalised groups working on online platforms face discrimination in both hiring and renumeration that is reflective of traditional labour markets (Som, 2020).

Surie and Koduganti (2016), in one of the earliest studies of location-based platforms in India, point out how transportation platforms offer drivers marginally better wages, access to financial institutions, and some sort of standardisation of hiring practices and work (also see Aneja and Shridhar, 2019). Platform-based beauty workers, for instance, have found ways to exert agency and further their professional identities through platform work (Raval & Pal, 2020) even as they face gendered forms of monitoring and surveillance (Anwar, Hui & Pal, 2021).

Digital platforms present women opportunities for paid work in the absence of alternatives as Chaudhary et al., (2020) point out. In their study of location-based platform women workers in India, they found that in general, women were happy with the flexibility that gig work afforded them, providing time for their unpaid care work responsibilities, which more formal structured employment would not allow. They concluded that, although the gig economy can be viewed as a new dimension of 'informalisation' that involves a disappearing employer-employee relationship and a lack of adequate social protection measures, it is also important to recognise how it provides income opportunities for women, and other marginalised groups, who may not be able to do more regular formal work. These groups may choose not to participate in economic activities at all if there is no opportunity for flexible work.

2.5 Platform architecture and working arrangements

Digital platforms help mediate interactions between workers and clients and structure working arrangement, namely, the way work is distributed, evaluated, and compensated (Silberman and Irani, 2013). Broadly, there are two types of digital labour platforms. On job-matching platforms like AMT, the platform connects workers to tasks posted by requestors. Algorithmic management systems enable transactions between workers and requestors, distribute work, and evaluate workers. Market-making platforms connect workers to clients. These platforms provide mechanisms to "make a market" (Jarrahi et al., 2020; see also Ticona and Rosenblat, 2019), so that independent workers can perform a job directly for clients. Freelance platforms fall under this category.

Typically, market-making platforms match workers who have the requisite expertise with clients in search of workers to complete their projects. The platforms do not set wages or the terms of work. The platform architecture allows workers and clients to negotiate the terms. Therefore, the interactions between worker and client are more complex here compared to job matching platforms. The architecture of the platform reflects this complexity and offers certain functions such as a chat feature that allows workers and clients to speak to each other to discuss projects or negotiate prices, escrow accounts for payments so that workers' wages are protected and assured, detailed profiles where workers and clients can gauge the others' authenticity and experience.

Jarrahi et al., (2020) argue that market making platforms use not just algorithmic management systems but also platformic management systems which are a combination of algorithms, terms of reference, and platform features, to monitor and control workers.

The features of the platform present a number of affordances and constraints to workers. The digital intermediary helps workers achieve scale, a steady revenue stream, and trust between workers and clients (Jarrahi et al., 2020). However, information asymmetries between the platforms, workers, and clients and technological limitations undermine the autonomy of workers.

For example, platform architecture can make work and workers invisible. On AMT, this invisibility is rendered through the distance, anonymity, minimal communication and electronic exchange (Martin et al., 2014). Unlike market making platforms, job-matching platforms simply allow workers to accept jobs posted by clients. Wages and working terms are decided by clients and there is no room for workers to negotiate. The architecture of the platform limits interactions between workers and clients, and among workers themselves. Workers are often not identified through alphanumeric IDs, and the design of the platform inhibits interactions between workers and clients outside of the platforms. Martin et al., (2014) observe that working on Amazon Mechanical Turk (AMT) fulfils the criteria for invisible work offered by Star and Strauss (1994: 4) - "work can be devalued or rendered invisible more easily when workers are seen as 'non-persons.'" (Cited in Martin et al., 2014).

2.6 Entrepreneurship and empowerment as socio-material processes

The idea of digital entrepreneurship has been espoused by platform companies, some governments and development and aid agencies over the years to address slow job growth (Melia, 2020; Anwar and Graham, 2020; ILO, 2021). This enthusiasm for technological solutions has a long trajectory

among countries eager to take advantage of new technologies to leapfrog long-standing developmental issues (Arora, 2019). However, digital technologies and entrepreneurship both need to be contextualised to the social milieu in which they operate. Davidson and Vaast (2010) point out that entrepreneurial practices in the digital economy are inherently socio-material as they are "inextricably inscribed into a context that is not only socially and historically situated but also technically and materially defined" (Davidson and Vaast, 2010). A socio-material view of digital entrepreneurship brings focus to the importance of social contexts and power hierarchies within which entrepreneurship takes place. Institutions, whether formal or informal, cultural, social or political, create gendered contexts in the Global South, which thereby influence how entrepreneurship is perceived and how it is operationalised.

Entrepreneurial activity in the Global South often looks like 'hustling.' Workers in these contexts are often excluded from formal institutions and are forced to improvise for survival - this can be seen as an act of despair or innovation and flexibility (Thieme, 2019). 'Hustling' traditionally refers to income-generating activities that occur in the informal economy and has become synonymous with a type of job-adjacent work that looks like it is embedded in the formal economy but is governed by different state protections, which makes the work risky and those doing it vulnerable (Cotton, 2020). Thieme (2019) offers 'hustling' as a collective condition of individual insecurity disproportionately distributed amongst young people navigating uncertainty in irregular employment. Digital platforms have become an avenue for the hustle economy - the platforms serve as online labour markets where users create and monetise their digital products (Dewey, 2020).

Empowerment is a "process of increasing personal, interpersonal, or political power so that individuals, families, or communities can take action to improve their circumstance" (Guiterrez, 1990). It is meant to increase women's capacity to make strategic life choices (Kabeer, 2002), developing their agency to act effectively within structures of power, and helping women to be significant agents and actors in the process of change (Mehra, 1997).

In India, women's participation in digital entrepreneurship is hindered by their unequal access to digital tools, digital literacy and skills, and digital financial institutions and the social hierarchies within which they are situated. Although Internet usage in India has increased exponentially in recent years, only 16 percent of women have access to mobile Internet (GSMA 2019). Affordability is a contributing factor to low rates of mobile phone ownership among women in India. The second is cultural - mobile phones and Internet usage are considered corrupting forces that women must be protected from (Kovacs, Kaul-Padte & S.V., 2013).

We need to situate women's entrepreneurial activity within its broader social context. Entrepreneurial activities performed by women, especially in the Global South, where women are bound by patriarchy and socio-cultural norms, and have restricted access to resources like education, finance, and social capital, do not easily translate to empowerment. Institutions that hinder women's agency impact their ability to convert resources to empowerment outcomes (Al-Dajani & Marlow, 2014; Ojendiran and Anderson, 2020).

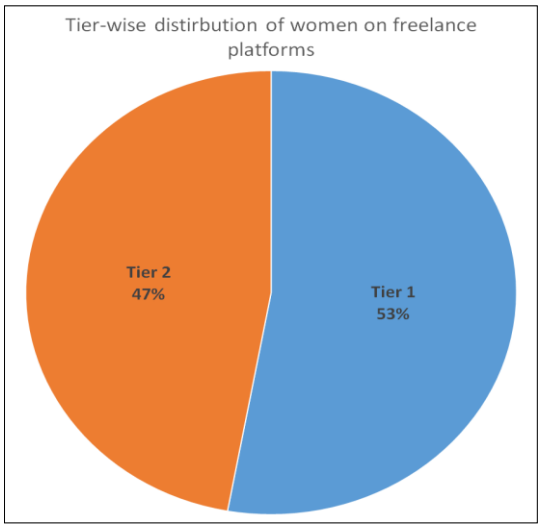
3. FINDINGS

3.1 Survey

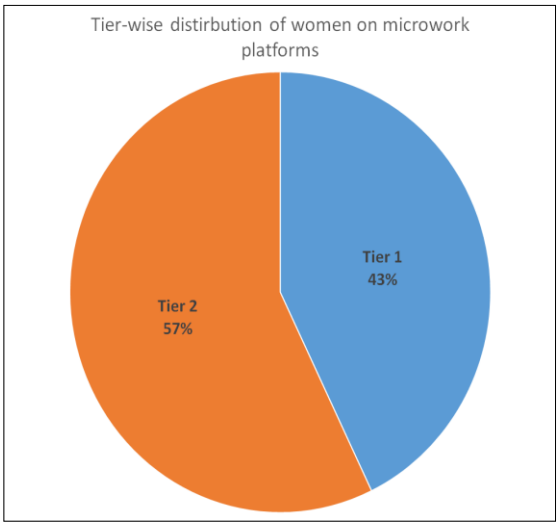
In this section, we present the results of the quantitative survey. The survey received 365 responses (49 microworkers and 316 freelancers). The survey covered issues around women's decision to join online work, their experiences of working online, and their families' perceptions of their online work.

Indian Cities are classified into Tier 1 and Tier 2. These classifications of cities, are based on population density. Tier-1 cities are densely populated and have higher living expenses. Tier 2 cities on the other hand are smaller cities with a population in the range of 50,000 to 100,000.

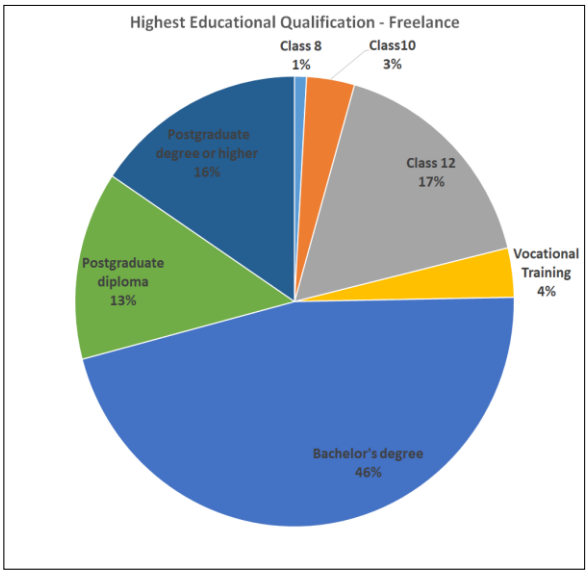
1. Distribution of women on Freelance Platforms



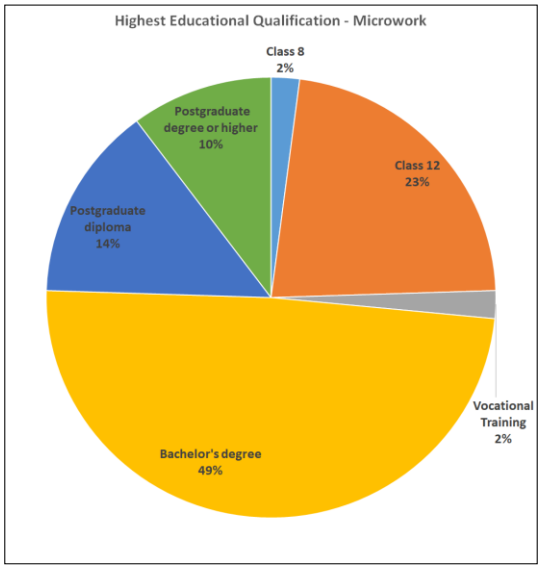
2. Distribution of women on Micro-work Platforms



3. Education qualifications on Freelance Platforms

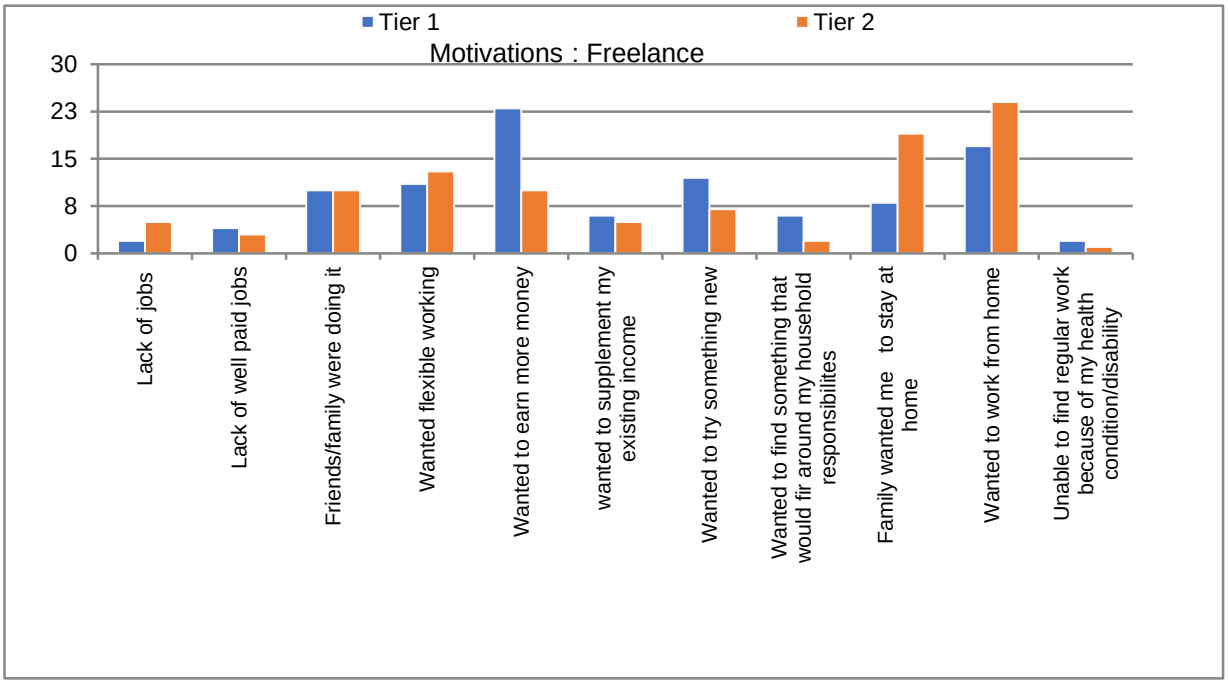


4. Educational Qualifications on Micro-work platforms

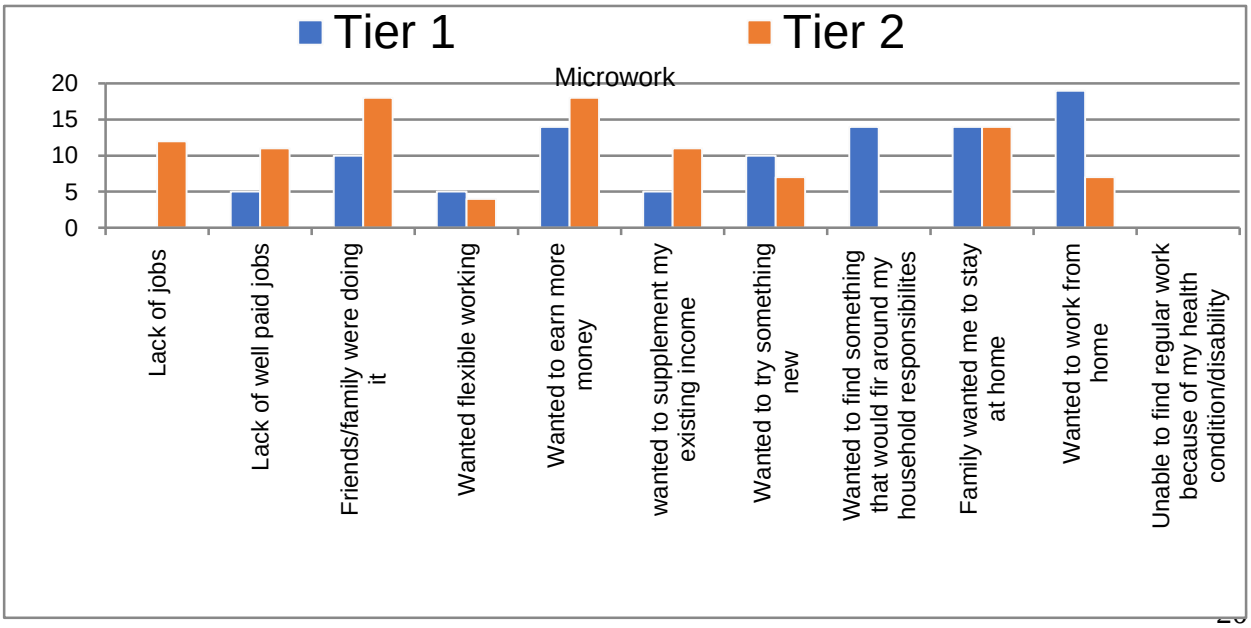


5. Motivations for joining Freelance Platforms

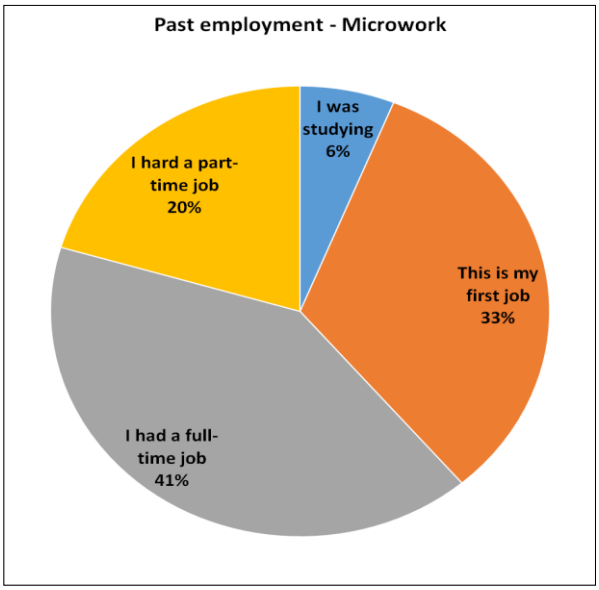
Being able to work is the most cited reason for joining, especially among women living in smaller towns where other job opportunities may be few. In metropolitan areas, a greater number of respond-



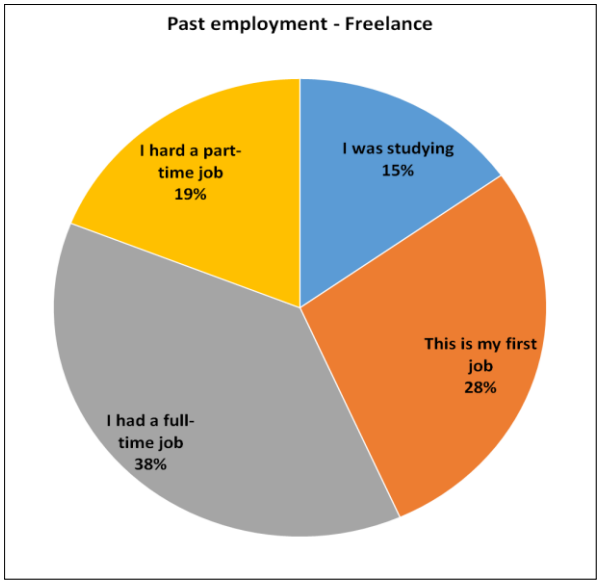
6. Motivation for joining Microwork platforms: For microworkers, the most important motivator is an increase in wages. Working from home is also an important



7. Past Employment : Micro-work

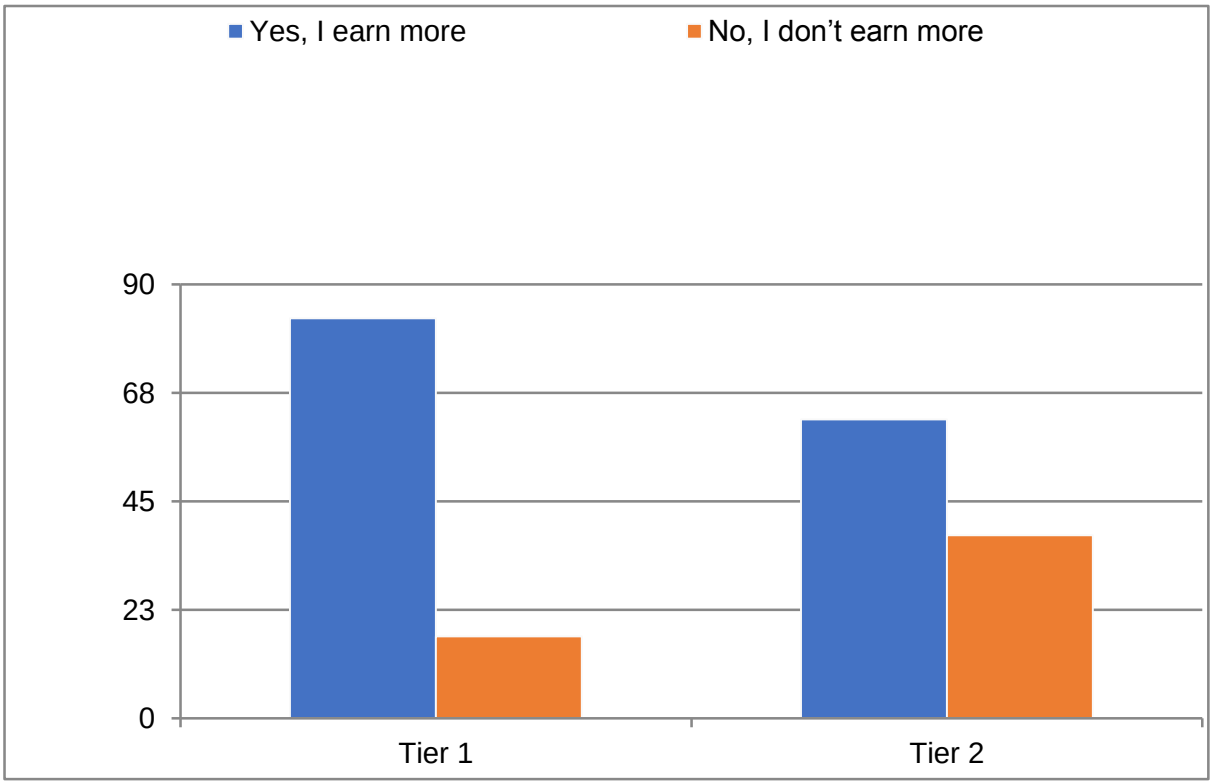


8. Past Employment : Freelance



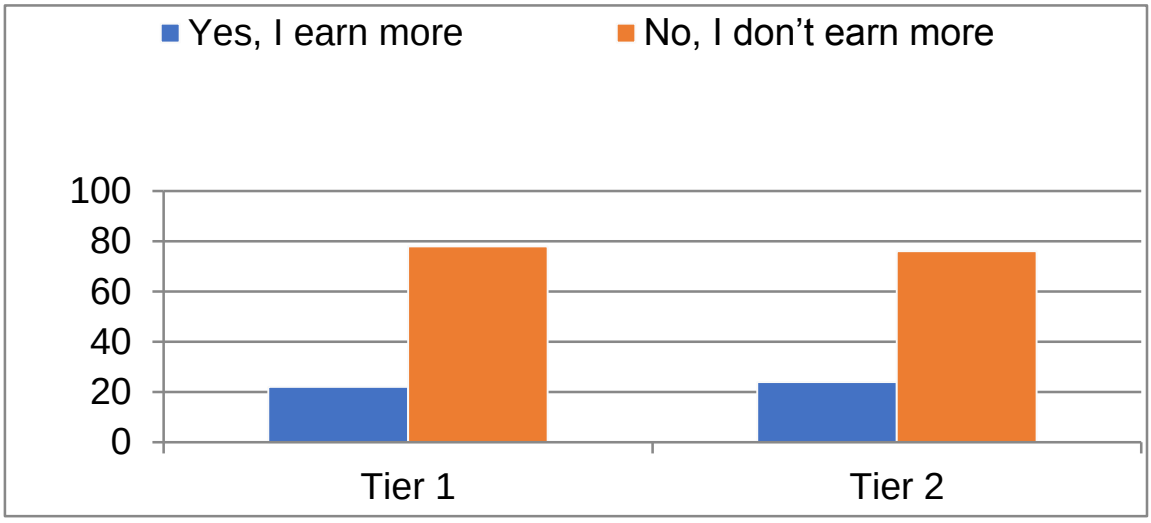
9. Earnings on Freelance platforms

Most freelancers say they earn more on online platforms than in their previous job



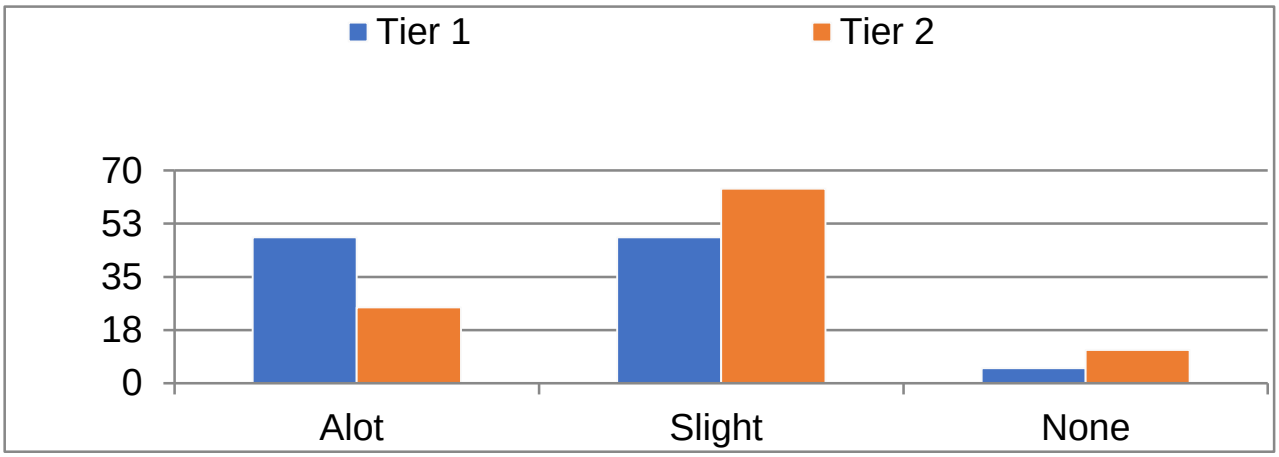
10. Earnings on Micro-work platforms

Most micro-workers say they make less money than in their previous jobs. Most earn less than INR 10,000 a month. Higher earnings are more prevalent in metropolitan cities.

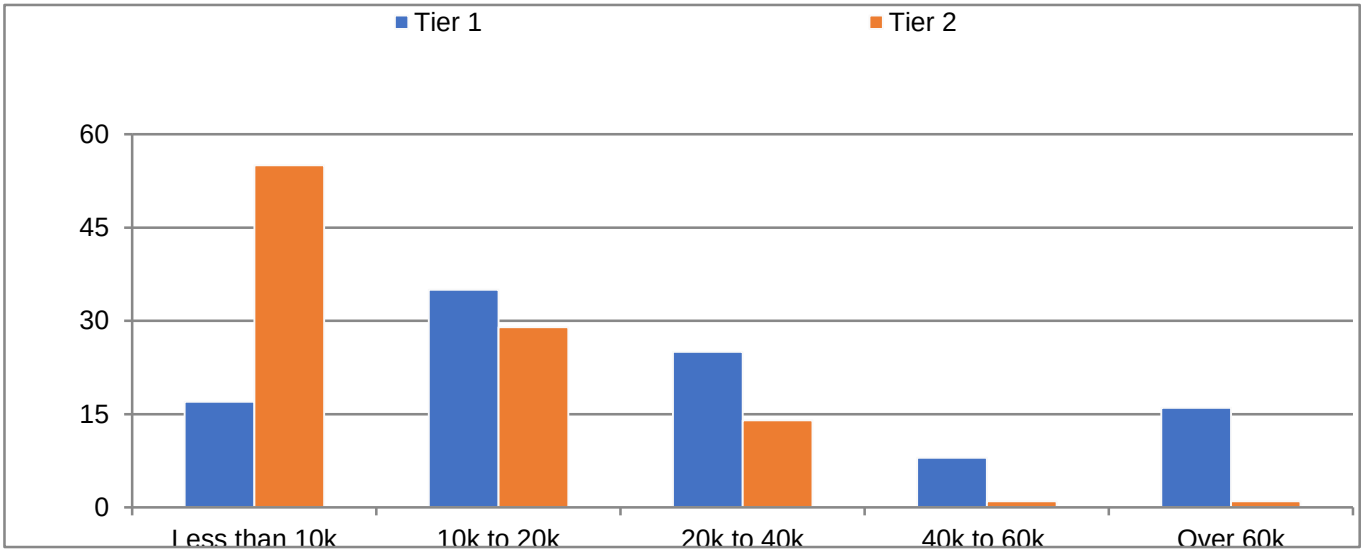


11. Income Variance on Freelance platforms

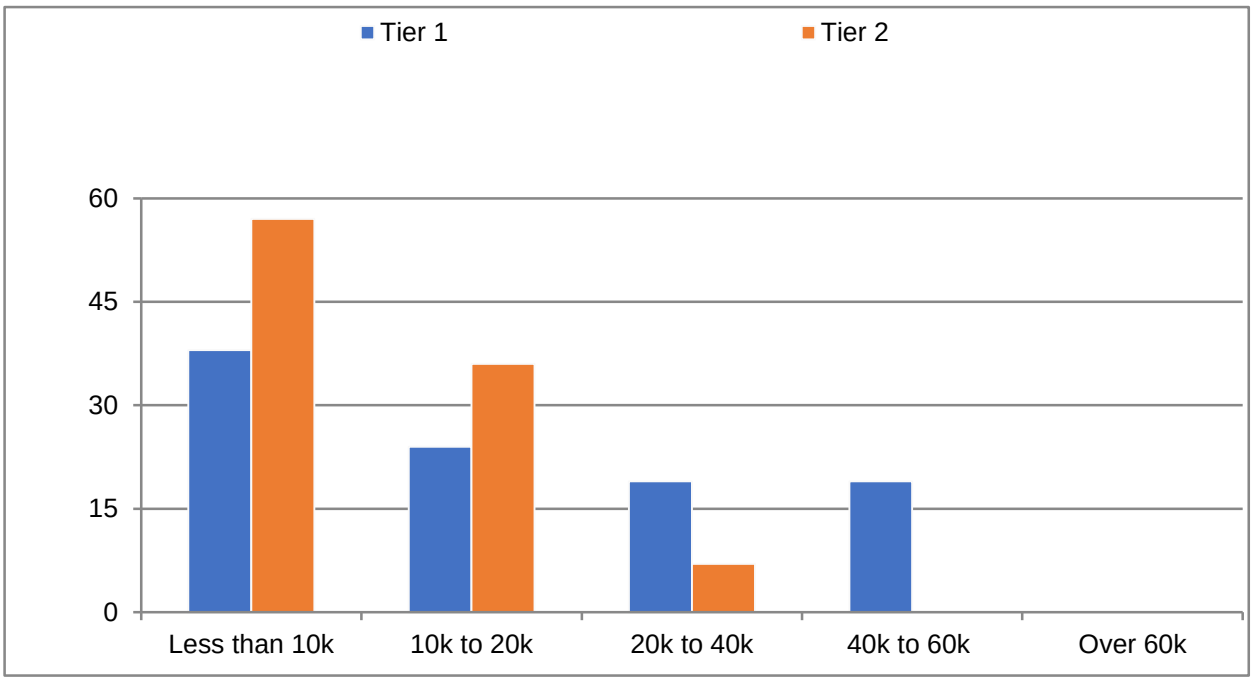
12. Income variance on Micro-work platforms



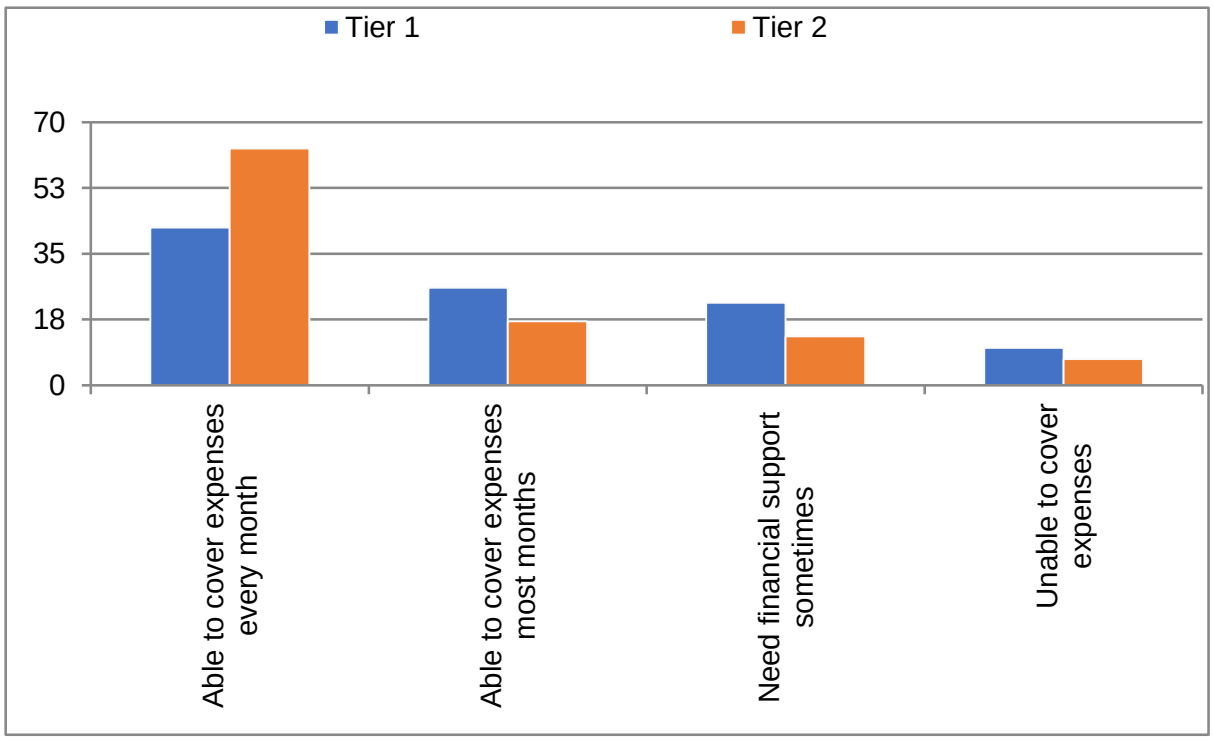
13. Average monthly income in INR over the last six months on Freelance platforms



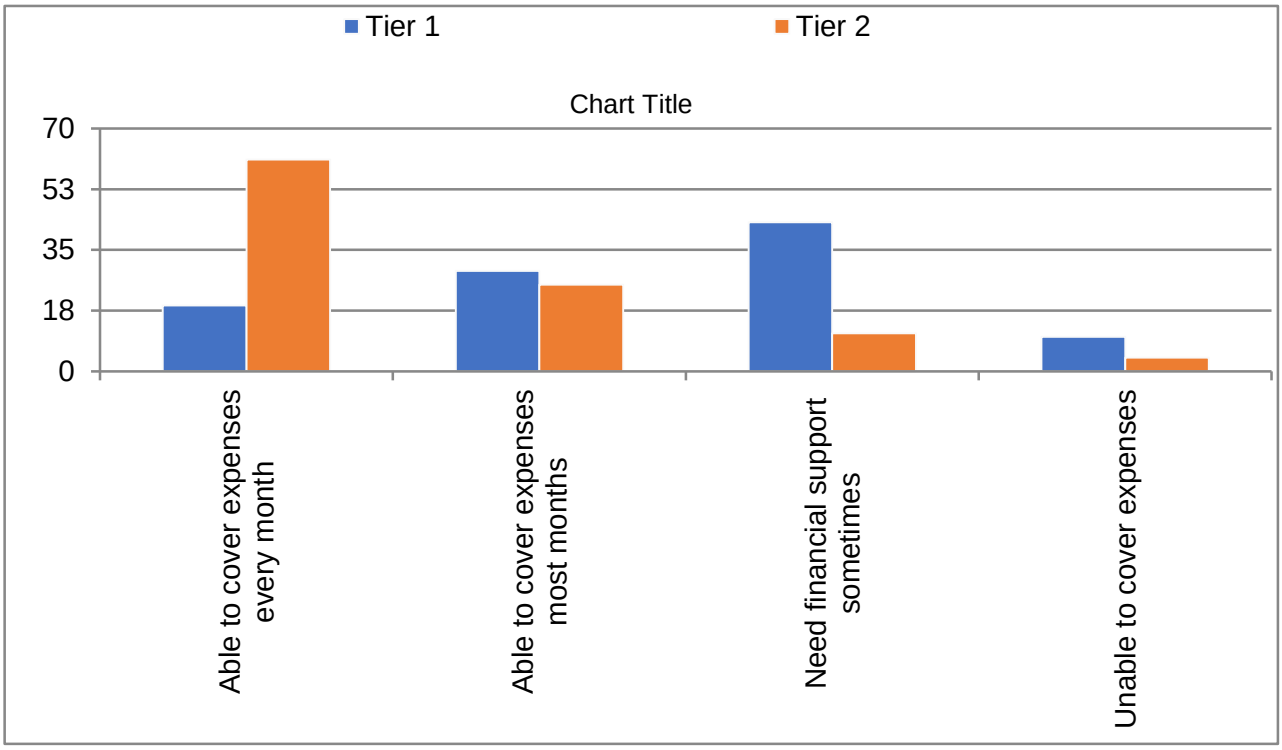
14. Average monthly income over the last six months on Microwork platforms



15. Income sufficiency on freelance platforms

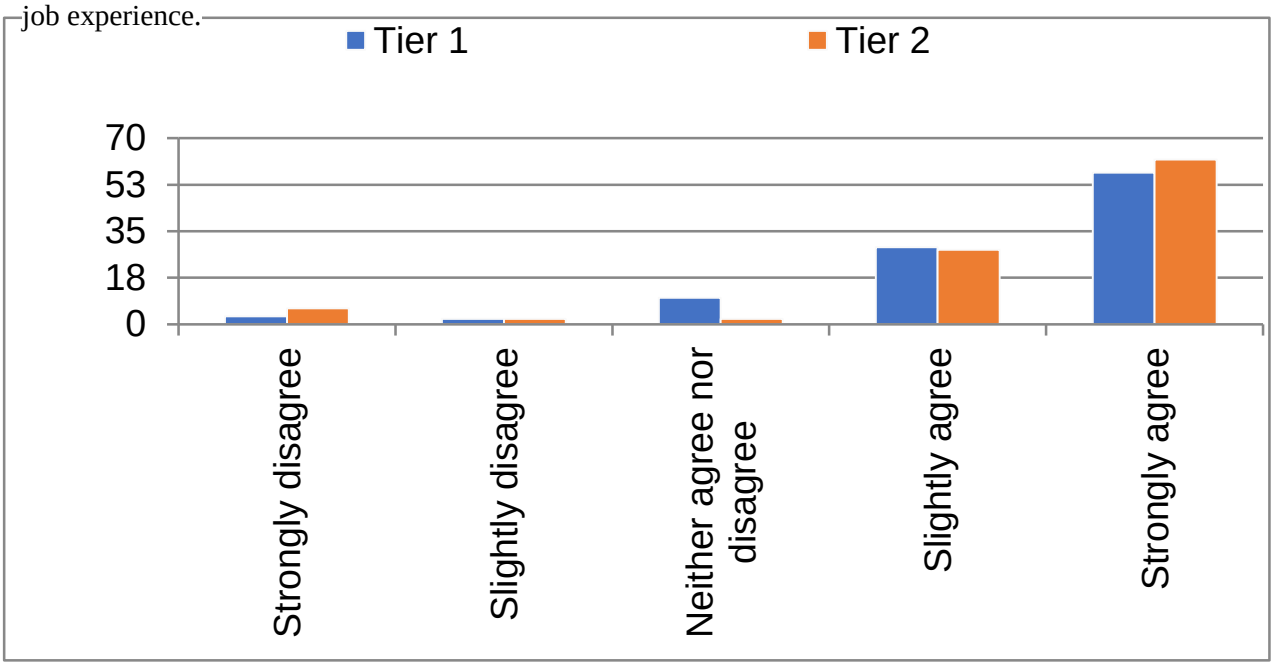


16. Income sufficiency on Micro-work platforms

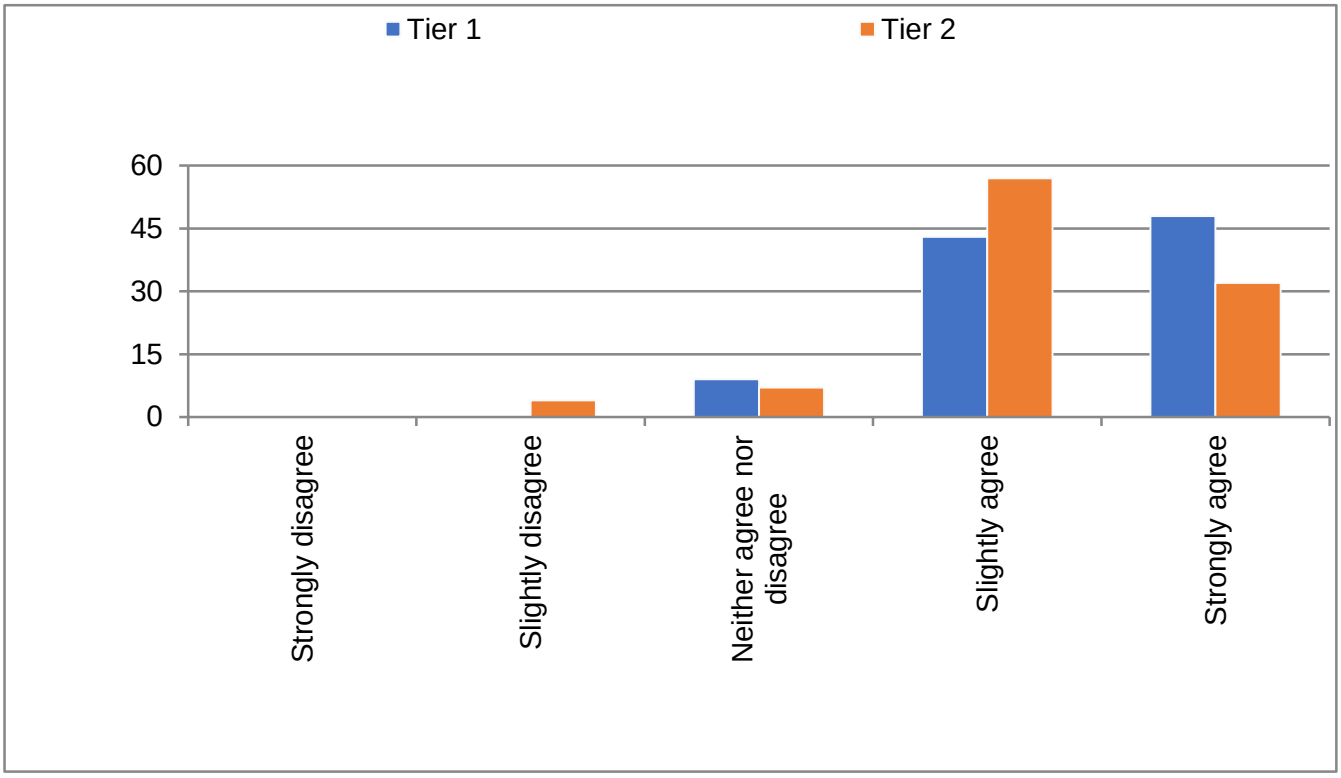


17. Has working on freelance platforms widened skills?

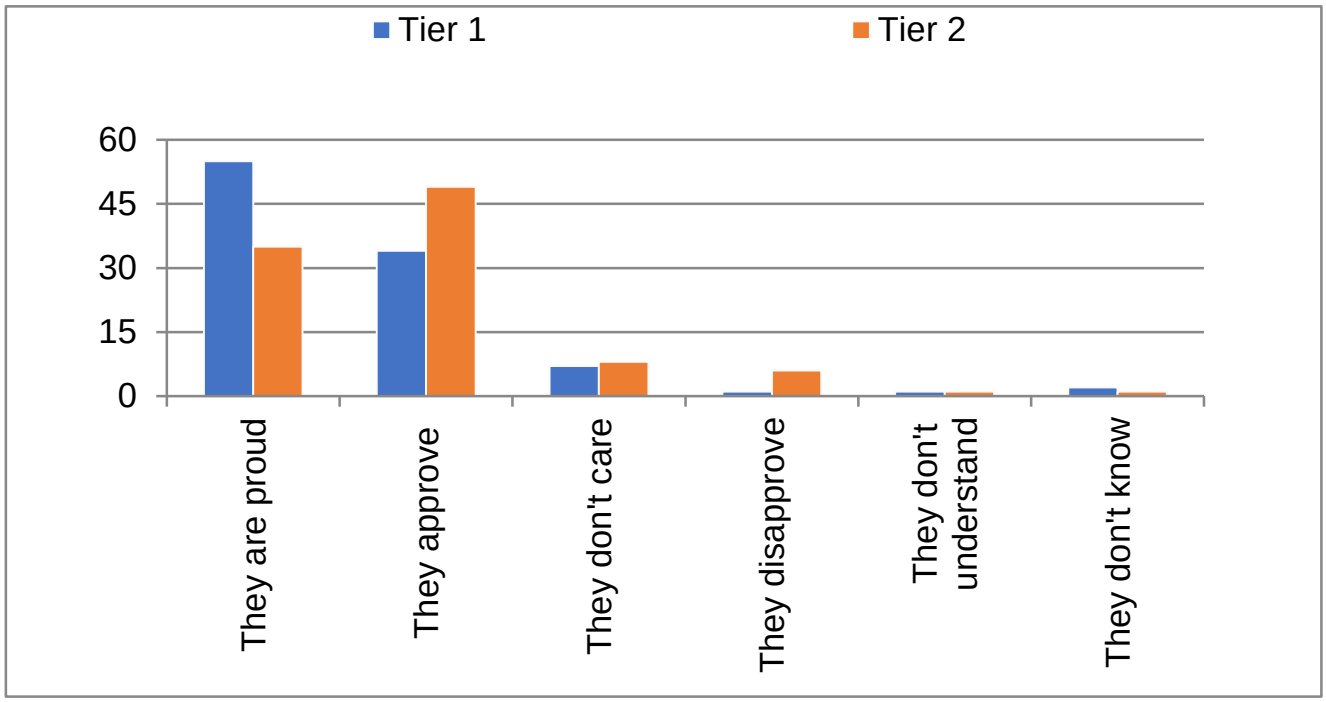
Most freelancers strongly agree that online work has helped them widen their skills and job experience.



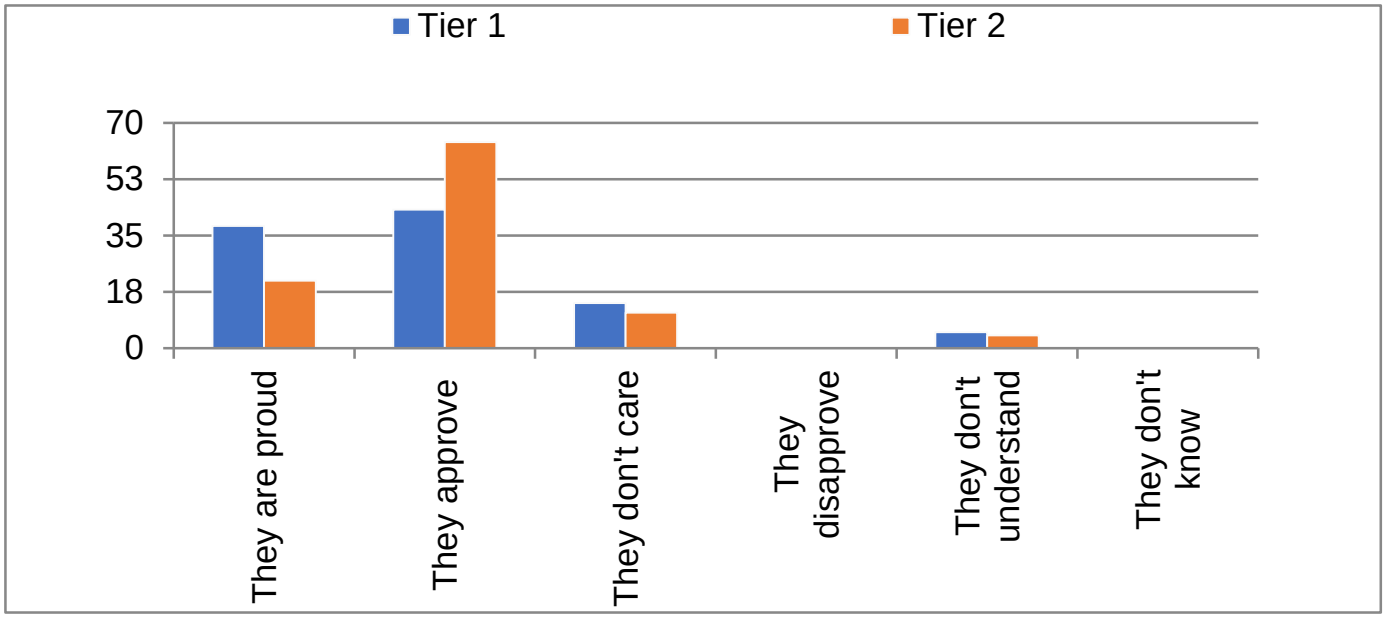
18. **Has working on micro-work platforms widened skills?** Micro-workers say it has advanced their skills; but this is less pronounced on micro-work platforms where compared to freelance platforms



19. Family perceptions of online work: Freelance



20. Family Perceptions of Online Work: Micro-work



3.2 Freelancing platforms

We spoke to women on two online freelance platforms - Freelancer and Upwork. There are conflicting data on the number of active freelancers on similar sites as data from platform companies are not forthcoming. A recent study estimates that 40 percent of registered users on these platforms are female and 1 in 5 Indian freelancers is female (Payoneer, 2020). Freelancer and Upwork were included in this study as these are the largest by number of registrations and have been functioning for the longest time in India. There are reportedly 16 million registered users on Freelancer and 8 million on Upwork.

How do the platforms work?

Freelancer and Upwork, as market making platforms (Kuhn and Maleki, 2017) direct and manage workers through platformic management (Jarrahi et al., 2020) - a combination of algorithmic management, terms of use, and platform design features. A market making platform differs from a job-matching platform in significant ways. In order to register as a worker on either platform, workers in India must use their real identities and submit identification documents, a photo, PAN card, and bank account details. Workers must create a profile listing their skills and qualifications and they can start bidding on jobs once their IDs have been verified. This verification process was introduced recently. Long-term users who joined the platform in its early days were not required to submit their IDs at the time they joined but have been recently asked to complete this verification process. Clients, on the other hand, do not have to go through a similar verification process. They can start posting jobs after creating a profile on the platform. These differences lead to power and information asymmetries which often result in fraud and harassment, as a few women pointed out to us.

Workers can bid only on a limited number of jobs. They can browse job listings based on their area of expertise, bid on them and send a cover letter or a note to the client. Clients are then directed to their profiles which will usually list all the details added by the workers themselves - this includes their name, photograph, their rating, their skills, and the number of hours they have worked or the number of projects they have completed successfully. Crucially, clients can also see a worker's rating and reviews left by previous clients. These reputation management systems play a vital role for workers, clients, and the platforms themselves. For workers, reputation management systems determine the jobs they may successfully book; for clients, the ratings and reviews establish a worker's reputation and the quality of their work; for platforms, it is a mechanism to communicate standards and quality control to clients and workers alike.

Once a worker books a job, payment is taken from the client and held in escrow. Once the worker submits the completed assignment, payment is released to the worker. This is to ensure that workers receive payments; to prevent clients from withholding payment for work that has been completed and submitted. The platform has an in-built payment system which it encourages workers to use. The platform takes a commission (10 percent) for each task completed. The platform encourages users to keep all communication and payments with clients within the platform, in order to deter fraud. The chat or message function allows clients and workers to interact. It is probable that platforms encourage all interactions to take place internally to ensure they do not lose their

commission which would happen if transactions took place outside the platform. Workers who break these rules may have their accounts blocked or suspended.

Freelancer and Upwork have introduced features which seemingly help workers and provide opportunities for "entrepreneurial" activities. At the same time, these features are monetised to generate revenue for the platform companies. The two platforms do not charge a joining fee. In theory, workers do not have to pay to use the platform and bid for jobs. However, in practice, workers must buy weekly or monthly subscriptions to increase the number of projects they can bid for. There are also subscriptions that make 'premium' jobs visible to workers who subscribe. The opaque nature of algorithmic management systems makes it difficult to examine the extent to which these subscriptions dictate the likelihood of getting a job. Clients also have access to similar subscriptions where only highly rated workers can bid on the projects they post or if they need their work completed urgently.

The platforms offer workers courses to upgrade their skills and get certifications within the platform. Workers can choose paid courses offered by the platform in different areas like English language skills or data analysis. Upon completion, they receive badges for certification that are made visible on their profiles next to their reviews and ratings, which they are told will increase their chances of winning bids. These certifications are valid only within the platform and cannot be migrated to other platforms, nor are they recognised in offline workplaces.

The workers and their work

The women on freelance platforms we interviewed were between 25-38 years of age. A large proportion of the women were married, and many had children. All had a bachelor's degree and some had or were working towards obtaining a postgraduate degree. This corroborates findings from the survey, in which 46 percent of freelance workers have at least a bachelor's degree, 16 percent have a postgraduate degree or higher and 17 percent have at least a high school degree.

The types of jobs available on Freelancer and Upwork are similar and include a range of tasks - data entry, content writing, software testing, virtual assistant roles, accountancy, programming, design and photoshop, to name a few. Women engaged in a wide variety of professional engagements including data entry, transcription, research, writing, virtual assistant and graphic design. In our interviews, we observed a large number of women on Upwork worked on low-complexity tasks like data entry and virtual assistants, whereas the women who had established themselves on Freelancer were working in content creation.

The women we interviewed as well as those who responded stated that they had previous work experience - 38 percent of the women surveyed were in full-time employment before they started working on a platform. 19 percent of the women had a part-time job prior to using platforms and for 28 percent of respondents, using freelance platforms was their first job. Most left their jobs after getting married or having children. The few who didn't previously have jobs were still in university. Through the interviews we found that, for almost all the women, care responsibilities and family expectations were key factors that directed their decision to shift to online work. 41 percent of those surveyed stated that they made the shift so that could work from home. Women from tier 2 cities were more likely to state this as a reason for working online. Those who were in paid employment before shifting to online work had between 2-8 years of work experience. They

had held jobs as teachers, bank tellers, in marketing, public relations, IT, consultancies, or in the public sector. Most had access to government insurance schemes (Employers State Insurance Corporation) and employer provided savings options (Employee Provident Fund Organisation), and paid holidays. Some had even availed themselves of maternity benefits at their previous workplace before quitting shortly after returning to work.

Networking played an important role in getting women to online platforms. Most had heard about freelance work through friends and family. Most of the women we spoke to were involved in data entry, content writing, virtual assistant roles, or sales and marketing. We did not come across women working in the STEM fields, such as IT or software testing, even though data from OLI suggests that India is the top supplier of IT workers on online platforms. Even women with IT backgrounds were taking on data entry or marketing jobs on the platform. This could be attributed to limitations of our sampling strategy.

There seemed to be a perception among long-term freelancers that the quality of jobs available on the platforms had fallen in recent years - they were able to find lots of lower paid tasks like data entry and virtual assistant jobs but fewer higher paid content writing or marketing jobs on the platforms. Some were able to rely on repeat clients for work that interested them; others had to switch to tasks that were available.

Working hours differed, though most of the women we interviewed said they scheduled their work around their home and care commitments, echoing much of the existing literature. The women we spoke to reported working 3-4 hours during the week, and 6-7 hours during the weekend when, with childcare support from spouses, they were able to work longer hours. A lot of time was spent looking for jobs, and some said this had increased in recent years.

The average monthly income reported by women in the survey was between INR 10,000 - INR 20,000. 35 percent earned less than 10,000 per month, 32 percent earned INR 10,000 - INR 20,000 per month. Most of the women reported fluctuating income. 48 percent stated that their income varied “slightly”, compared to 44 percent who stated that their income varied “a lot”. Those who had been using the platforms for a number of years, said that their earnings had declined over time. Newcomers corroborated this, noting that they found it challenging to find work, and were unable to earn enough from the platform. For most, their income from online freelancing was referred to as “pocket money” and spent on personal expenses, their children's needs, or everyday household expenses; their spouses were the main breadwinners and it was through their spouses’ full-time jobs that some had health insurance coverage and access to savings and pensions plans. Interestingly, the survey results showed that 52 percent respondents felt their income was sufficient to cover their monthly expenses. 20 percent stated that they were able to cover their expenses on most months, and 18 percent stated that they sometimes needed financial support.

Many talked about the struggles to get their first client. The women had to come up with adaptive strategies. For instance, several women offered to work for free for the first assignment, to build up reviews. Some said they offered very low rates to entice clients, but then negotiated a new fixed price for the job if the clients were satisfied and came back to them with more jobs. When bidding for a job with new clients, some offered to do part of the work for free so the client could review the piece and if both parties agreed, the work was given to them. Most preferred assignments with a fixed rate rather than an hourly rate as hourly rate arrangements often required installing monitoring software.

Several women paid a subscription fee to the platform to receive more bids per month. Many stated that in the beginning, winning bids is a numbers game - the more jobs you bid for, the more likely you are to win at least one - and therefore having a subscription is key. There seemed to be a perception among those who had joined recently that subscriptions were needed to build up a good rating and therefore a steady stream of work.

Reintermediation - where successful workers repost the job on the platform and hire others to complete it is common on platforms (Graham et al., 2017). Upwork has recognised this and even added features that allow highly rated, successful workers to establish an "agency" on the platform. Agency owners bid on the projects, hire workers and pay them through the platform, then submit projects from their own profiles. One woman we interviewed established an agency and hired other workers to complete tasks. Instead of hiring workers already registered on the platform, she invited her friends - other women who did not work full-time and were looking for similar opportunities - to join the platform and distributed work to them through her "agency". We spoke to one woman who had joined the platform and got work through the "agency" who stated a few advantages of joining this way. It gave the new joinees a good opportunity to build up their profiles. They were able to get assistance from their friend in navigating the platform and their tasks. In other cases, it was done informally - women posed as clients on the platform to hire other freelancers to help them complete existing tasks.

Melia (2017) argues that these virtual small, medium enterprises (SMEs) could help promote clusters of online workers providing jobs in hyper local contexts in developing countries. However, Graham et al., (2017) point out the downside of such arrangements. In their study of workers in Kenya, Nigeria, Philippines and Vietnam, they demonstrate how reintermediation benefits workers with high ratings and typically those who have been on the platform longer and critically disadvantages newcomers. For many who are starting and have not yet developed their profile with ratings and reviews, these are the types of jobs that they can access. They are forced to accept lower wages and find it more difficult to raise their ratings.

The majority of participants felt they had learnt new skills since they started on the platform and were satisfied with their current work trajectory. 59 percent of those surveyed "strongly agreed" that online work had helped them acquire new skills. They often took an active role in developing new skills through the platforms' offerings, available tools online, or training that some clients offered. However, there was a general understanding that these skills would not necessarily help them get jobs offline. There was also an understanding that in the future they would continue to do the same kind of work online and that there were limited avenues for career growth or expansion to other types of work. They recognised the limitations of online work and the difference between online freelancing and the types of jobs available to them and traditional jobs in the offline job market. Although the majority of women were happy to continue with online freelancing, a few raised questions about the longevity of online work in their career trajectory and talked about the possibility of going back to offline work if familial commitments permitted and if there were "appropriate" jobs available to them.

Several women shared instances of harassment they faced on platforms. Upon accepting a job listing, some said they had been asked to get on a video call with the client and asked to undress or engage in sexual activity. Others said they had been asked to write or record pornographic material. Some were duped into making payments to the client to accept a job offer. They stated that after having had these bad experiences they had learnt to recognise fake or dodgy profiles or job

listings. They could now recognise the warning signs and respond appropriately, e.g., by not accept video call offers, or video calls with new clients, or knowing they don't have to make any direct payments to a client to start a project. Women can report and flag these profiles and make complaints against them. For the most part, the platform removes these profiles. Interestingly, we heard more instances of harassment or fraud on Freelancer than we did on Upwork. The process to post jobs on either platform or verify clients is similar and quite minimal. It is possible that Upwork has more stringent flagging tools at the backend to remove these posts.

In most cases, the families were supportive of their work as they could stay at home and still earn money. Those with supportive spouses who agreed to shoulder some of the care work burden seemed to be doing quite well on the platform as they had more time to spend working. In cases where families did complain, it stemmed from concern over their wellbeing and overwork. For most of the women, income from freelance work was personal income, some even called it "pocket money", and did not contribute significantly to household income. Their parents or parents-in-law sometimes did not understand why they chose to work so hard.

We spoke with one woman who was a single parent. She had worked intermittently on freelance platforms for nine years, and for around three years it was her primary source of income. She had since taken a job in the public sector but still took on freelance gigs because it was more in line with her interests. She had been successful in her freelance career and reported earning over INR 60,000 (around USD 797) when she was doing it full time. She reasoned that a public sector job was more respectable and prestigious for her especially as a single parent, even though her freelance gig paid her far more. She had to make a trade-off in order to mitigate the scrutiny and judgement that divorcees and single mothers have to face in Indian society.

Person 1: Freelance Platforms

Priyanka is 30 years old, and lives with her husband and two young children. She grew up in Delhi. When she was 21 and had just graduated from university with a Bachelor's degree in Computer Science, she got her first job in a telecom company. Although she enjoyed some aspects of the job such as meeting up with her colleagues, she worked long hours from Monday to Saturday, for a very low salary. She commuted up to three hours a day in Delhi traffic. When she got married, she left her job to move out of the city to her husband's hometown, Lucknow.

She signed up to work on Upwork 5 years ago after relocating to Lucknow. She primarily does simple data entry and transcription tasks, and has built up a good profile with a number of positive reviews from repeat clients over the years. Online freelancing is her only income source, but her husband is the main breadwinner of the family. Her freelancing is a way to pass the time at home, in-between looking after her kids, cleaning and cooking. Her husband is supportive, but he would prefer she did not spend so much time doing online freelancing. He does not understand why she wants to spend her time on her laptop, as he earns enough money to support the family.

Priyanka sometimes has a lot of work from her repeat clients, and she doesn't always have time to meet the deadlines if she is looking after her children. When this happens, she outsources work to a few of her cousins. However, these days, she feels there is more and more competition for work on the platform, compared with when she started in 2015. She thinks that now, many people are trying to earn an income from online freelancing as they have probably lost their jobs during the Covid-19 pandemic.

Persona 2: Freelance Platform

Nithya is 28. She is married and lives with her husband and three children in a small town in Uttar Pradesh. She used to work as a teacher at the local school, but she had to leave after her pay was cut and she could no longer make ends meet. She decided to set up a small tiffin business, and sells lunch boxes to her local community. However, the family was still struggling financially. Her husband has a job, but does not earn enough to support the family on his own. Nithya decided to look for alternative work opportunities online, and signed up for an online freelance account as a flexible 'side hustle', to earn some extra money.

Starting out was tough. In the first month, she was tricked into sending money to a scammer by a fraudulent job posting. But now she can tell genuine job postings from fakes. At first she found it difficult to convince clients that they should hire her when she had no ratings or previous work on her profile, so she offered to complete the first project for free, in the hope that clients would hire her. After 6 months of hard work - applying to every job she could and long nights of working online, Nithya's profile is starting to be noticed by clients. She has a steady stream of data entry projects to do, which she manages alongside her tiffin business and household responsibilities. Her income from online freelancing now exceeds her income from her tiffin business. Between her two income streams and her husband's income, they are able to make ends meet and are even able to put away some money as savings.

The platform introduced a new 'subscription' service, where freelancers must pay a monthly fee to apply for projects. This subscription fee eats into her monthly earnings from the platform, but without the subscription she can't find enough jobs. She's had to budget carefully so that they can cover all their expenses.

3.3 Microwork

When we started this study we focused on Amazon Mechanical Turk (AMT) and Clickworker to get insights into the experiences of women working on microwork platforms. Our sampling strategy involved posting tasks on the site and then soliciting interviews from among the workers who completed the task. However, on Clickworker we were unable to find ways to contact workers after they submitted their responses to the task. Clickworker worker forums that included Indian workers and specifically Indian women workers were hard to identify and our attempts to contact potential participants this way also fell through. In the end, we continued with only the respondents from Amazon Mechanical Turk. Our initial difficulties align with the literature that explores how the architecture of microwork platforms limits interactions between workers and clients and contributes to our further understanding and analysis of how this might impact workers.

Working on Amazon Mechanical Turk

In 2013 Amazon Mechanical Turk placed restrictions on new accounts being registered from Indian IP addresses. To create new accounts, workers had to use either virtual private networks (VPN) to conceal their location, or ask friends and acquaintances in other geographies to create accounts for them. These restrictions have led to a thriving black market where accounts are traded, sold, or rented. Accounts can be quite expensive - one woman we spoke to paid INR 10,000 (USD 133) for an account while another paid INR 60,000 (around US 801). Another rented an account from somebody and paid her 10 percent of her earnings as a fee. The financial investment needed to start Turking is significantly higher, although the remuneration is much less than freelancing.

Brokers who oversee these transactions also provide "training" where they teach new Turkers[1] how to complete certain tasks for a fee – giving birth to informal learning networks.

Users who rent or buy existing AMT accounts must submit a PAN card[2] and bank account details to which the payments are routed. Once this is verified and approved they are registered as Turkers and are able to start accepting HITs. 4 out of 7 of the respondents we interviewed got access to their accounts in this way. The other three signed up to the platform while they were in university. Our research confirms findings in others where some users of AMT have been doing so for a long time, usually starting in university, and continuing intermittently as they enter the workforce (Berg et al., 2017). For men, it is likely to supplement their existing income. For women, it is, as we found, because they have dropped out of full-time employment and use AMT as a way to pass the time while balancing unpaid care work or as an alternative source of income.

The architecture of AMT limits interactions between workers and clients. There is no chat or messaging feature that allows a two-way interaction for workers. Only requesters can initiate interaction through this feature. Requestors leave contact information in the HIT so that workers can respond or seek clarification. Requesters can send high-performing Turkers[3] a bonus and a note via the platform. Requestors can also leave feedback and ratings for Turkers on the platform. However, Turkers have no way to respond to these comments or ratings. If workers perform poorly, their work is often rejected and they are not paid. Consistent rejections and poor ratings could lead

[2] Permanent Account Number (PAN) card is an identifying alphanumeric document that Indian tax payers need to file income tax. It is often used as a supporting identity document for purposes like banking, fulfilling employment contracts, etc.

[3] Workers on Amazon Mechanical Turk are often called Turkers

to account deactivation. AMT ensures that Turkers comply with its rules and strives to maintain standards through these features. Turkers have few avenues for grievance redressal and the women we interviewed stated that AMT usually ignores their complaints. This is especially risky for workers in India who spend a significant amount to buy accounts.

The workers and their work

Echoing existing literature on microworkers, those who took the survey and those we interviewed had high levels of education. 49 percent had a bachelor's degree, 14 percent had a postgraduate diploma, 10 percent had a postgraduate degree or higher, and 23 percent had a high school degree.

41 percent of microworkers surveyed stated that they were previously in full-time employment, 20 percent had a part time job and for 33 percent, working on AMT was their first job. Eight women we interviewed were married with children and had home and care commitments. They left their jobs after getting married or after they had children, and turned to microwork as they could fit it around care work commitments. Some chose microwork because they had done it previously and had accounts already; others did it because they heard about it from friends and it was relatively easier to get human intelligence tasks (HITs) and start earning, compared to freelance platforms. A few had tried freelance platforms but gave up after being unable to find any jobs. For some, microwork was their primary source of income but for most it was to supplement existing revenue streams. Most were married with children, and had home and care commitments.

Some women said that they used plug-ins and similar tools to increase their chances of getting HITs and to spend less time looking for work. They found out about these tools through social media groups for Turkers.

Unlike freelancers, Turkers seemed to interact with other Turkers more - they were part of Telegram or Facebook groups where they shared tips or available HITs with each other. They had been added to these groups by friends. Given that interactions on AMT are so limited, it is surprising that this is the case. A likely reason could be traced back to the large informal network that has emerged for AMT users - Turkers are added to these groups by "brokers" or the people they bought or rented their accounts from. Another could be that many Turkers started in university and some of these connections have held over the years.

The women we interviewed had a range of experience on the platform - from 1.5 years to 12 years. All the women talked about how difficult it was to find HITs on the platform. Those who had been using the platform for longer felt that the number of HITs had reduced over the years. Compensation for HITs had also dropped and they found that they had to work much longer hours to find work and earn money. They also said the Covid pandemic had led to a further drop in the availability of work. Earnings depend on the time spent working on the platform - those who reported longer working hours reported higher earnings and vice versa. Earnings ranged from $30 to $250 per month. The average monthly income of AMT workers surveyed was less than $133 (49 percent of respondents). 57 percent stated that their income varied "a lot" and 35 percent stated that their income varied "slightly". 43 percent were able to cover their monthly expenses with their earnings, 26 percent were able to cover expenses for most months and 24 percent sometimes needed financial support.

The women stated that they enjoyed answering surveys posted by universities, because they were more reliable and would be paid, and because it was interesting work. Other tasks like software testing required slightly higher technical skills and understanding, which some of the women did not possess. Some focused on data entry or image labelling tasks. Even so, the women agreed that working on AMT had helped them widen their skill sets - 51 percent “slightly agreed” that AMT had helped.

They all had to adjust their working hours since most HITs came from the US or UK. They worked either late into the night or early in the morning. Based on their needs, they worked varying hours. One mother caring for her young child only managed to work 3-4 hours while her child was asleep. A differently-abled mother who was the sole earning member of her family worked 18 hours a day while taking care of her two daughters - one of them chronically ill - and her differently-abled husband.

AMT seems to attract workers who have immediate needs. Workers do not have to spend weeks and months building their profile - they can start earning almost straight away and adjust their working hours to meet their needs. This makes it easier for workers to dip in and out of working on AMT. Freelancers, on the other hand, have to maintain their ratings and reviews so that clients will look favourably on their profiles. On AMT, since work is distributed algorithmically and workers bid on a first-come first-served basis, absences from the platform are not as detrimental to workers.

Turkers seemed to speak more fondly of their previous work, probably owing to the practice of work engendered by AMT. Turking is an isolated activity (Martine et al., 2014; Kapur et al., 2014) and possibilities for interaction are limited. Workers are under a lot of pressure to look for and complete as many HITs as possible, most of which are very mundane, routine tasks with little room for mental stimulation. The women spoke of feeling isolated and lonely. In comparison, they spoke fondly of their relationships at their previous workplaces and the friends they had made. Freelancers, on the other hand, interact directly and in some cases, quite closely with clients. Their skills are also probably better matched to the jobs they are performing. Freelancers also have the possibility of career progression - the women we spoke to started with data entry and progressed to other jobs that matched their skills and interests. For Turkers, the likelihood of upskilling and making progress via the platform is extremely limited. However, one Turker stated that she had learnt new skills so that she could do more types of jobs on the platform.

PERSONA 3: MICROWORK

Aishwarya is 24 years old and lives in Chennai. She is studying for a BTech degree in Engineering, and hopes to pursue a Master's degree. She lives with her parents in their apartment in the city, and has been saving up to fund her next degree. She describes herself as 'tech savvy', with an understanding of digital technologies picked up while studying for her Engineering degree.

She found out about AMT after a friend added her to a Telegram group with lots of Indian microworkers, who shared tips and sold account IDs amongst one another. She decided she could fund her Masters' studies through working on AMT, instead of looking for an offline job. Initially, Aishwarya rented an account from someone she met on the Telegram group. She had to pay a portion of her earnings to the account owner. After 6 months, she decided to buy her own account for which she paid INR 1.5 lakhs. It took her three months to earn that back. She often works at night when she knows that there are more HITs being released. Through her own research and tip-offs from the Telegram group, Aishwarya has learnt how to use plug-in applications that allow her to increase the number of HITs to which she can apply. She has almost hit her target and plans to stop once she has enrolled on the Master's programme. She plans to rent out her account during that time so she can earn something from it even if it's not much so that her account remains active and her ratings are maintained, in case she ever needs to use it to earn money again.

PERSONA 4: MICROWORK

Anita is 28 years old and lives in Salem, a small city in the southern Indian state of Tamil Nadu. She lives in a joint family with her husband, their two young children, his parents and his older sister. She met her husband while they were both working at a technology services firm. She got the job through the campus job placement programme at the university where she completed her BTech in Computer Science. They got married soon after. Her husband's parents wanted her to stay at home so she quit her job. And with her first baby on the way, she thought it was a good idea too.

Used to spending her days at the office working with a team in a high energy environment, she found herself feeling quite unstimulated. Her husband suggested that she go back to using AMT, a microwork platform, in her free time. During her university days, she and her friends used AMT to earn a bit of extra pocket money. They fit it around their study schedule, and because they were familiar with many of the tasks posted on the platform, they made a fair amount of money.

Anita took her husband's advice and went back to using AMT. She wakes up early and tries to get some time on AMT. Since most clients are in the United States, she has to make sure she's online when the tasks are released. She lines them up early in the morning and continues with all her morning chores - getting her kids ready for school, preparing and packing lunch for her husband and kids, and seeing her husband off to work. When she's finally done with these chores, she completes her online tasks. It takes her about 2-3 hours to complete. In total she spends about 3-4 hours every weekday on the platform. She likes to keep herself free on the weekends to spend time with her family.

She's making a lot less money now than she did in her university days. The remuneration for each task has reduced drastically. So, where she used to be paid $2 or $3 for a survey, she now gets 40 or 50 cents. Also, the work available for her has reduced drastically. She's heard from friends in other places that this is because the clients and the platform have limited the tasks being given to workers in India. Because of this, she doesn't even get work from repeat clients the way she used to. Earlier, she relied on them for the bulk of her tasks. She barely makes $25-$30 a week these days. There was a time when she made over $100 per week.

She's glad that she doesn't have to rely on her AMT income to support her family. Her husband's income and the rental income her parents-in-law receive cover the household expenses and their savings. So, she's free to spend the money she's earned as she pleases. She spends it primarily on her kids or for her personal needs.

4. DISCUSSION

This study supports findings in literature that online platforms can enable access to work for women, and is even a preferred option because of the flexibility offered by remote work. Our survey and interviews suggest that women viewed platform work positively as they were able to balance paid work with care work. Some women who left their jobs because they had to relocate to their spouse's place of work found it difficult to find jobs in new places with few networks. For them, online work offered a way to continue working and adapt to changes dictated by marital and familial commitments. Women's families and in-laws were also largely supportive of them working from home and balancing care work.

4.1 Choice of platform determined by need

A variety of considerations influence the choice between freelancing and microwork. It takes longer to make money and establish profiles that look favourable to potential clients through freelancing. Some women had to wait several months before they got their first gig and established positive ratings and reviews on the platform. Some women chose to work on both freelance and microwork, filling the time between freelance gigs with quick tasks from microwork. Others picked microwork because they were familiar with it or because they could not commit the time it takes to build a freelancing profile because of their family's needs. Microwork enables targeted or goal-oriented income generation although the pay per job is lower than freelance work. The women made up for this by committing more time to work.

Therefore, the choice of platform is dictated by financial need as much as it is by the women's ability to complete the tasks that are available on their platform of choice. Those guided by immediate financial needs or targeted goals may choose a microwork platform that allows them to earn money almost immediately. Women who have more time to craft their profiles and raise their rankings seemed to prefer working on freelance platforms on tasks that were more aligned to their skill sets and offered, in their understanding, more space for career progression and higher earnings.

4.2 Move out of formal work, job satisfaction, and deskilling

However, there are several pitfalls to online work. First, as the literature shows, there is a deskilling of labour as those with high levels of education and skills are performing tasks that are low in complexity and do not require specialised skills. For example, in our study many of the women engaged in microwork were engineering or STEM graduates.

Freelance work showed some possibility of skills matching and some limited opportunities for career progression - some women started by accepting low-complexity tasks and were able to move towards jobs that better aligned with their skill set and interests.

The type of work available on freelance platforms also impacts levels of job satisfaction. Freelancers have a greater level of control and creativity over how they complete their tasks compared to microworkers whose tasks are often mundane and repetitive. This could be why women engaged in microwork looked more fondly at their previous work. The skills mismatch compounded with the low pay on microwork platforms is indicative of larger problems in the Indian labour market - there are no jobs available for highly educated graduates; the education they receive is not preparing them for available jobs; socio-cultural norms that dictate women's position within a family have not changed to be more accommodating of women's labour force participation.

Additionally, the number of "good quality jobs" - well paid jobs, that matched the interests of workers, were of medium to high complexity, and offered workers some amount of a learning curve, seemed to have dropped in recent years.

The literature points to the trend of highly educated women dropping out of the workforce when household incomes permit and online work seems to capture a very small number of these women. Women's agency to participate in the labour force is determined by socio-cultural norms, their class and caste position and the gendered division of labour. In this respect, online work offers one avenue where they can continue to work. However, limitations of the platform and other familial and care work commitments continue to constrain their agency.

4.3 Does platform work enable economic empowerment?

Most of the women stated that they were satisfied with their income, but this was dependent on whether they were the primary breadwinner or not. For those who were not, (as were most of the women we interviewed), income from platforms went towards their "pocket money". For those who were the breadwinners, income from platforms was much more vital. They also felt the fluctuations in income and the absence of safety nets more keenly. For others, their social infrastructure acted as a buffer against the fluctuations. As they had access to other sources of income and to insurance and savings, fluctuations in income from their online work did not have as serious an impact on their day-to-day lives.

The opportunities presented by online work for the economic empowerment of women also differ, based on the platform. On the platforms we investigated we heard that women were having a harder time getting jobs pointing either to an oversupply of labour, or a decreased number of jobs, or a combination of the two. As a result of these circumstances, workers report a decrease in earnings or having to work much longer hours to make ends meet.

The women we spoke to adapted to these changes by employing various strategies like using plug-ins or other tech tools to find more work. Some adjusted their working hours to have a better chance of getting the right bids while others offered to complete part of the jobs for free so that clients could assess their work beforehand. The women who employed this strategy stated that although it meant they had to do some unpaid work, it paid off if they were able to get paid gigs and raise their ratings.

Financial independence through platform work is limited, as the income is largely used to support their own personal expenses and does not make a significant contribution towards the household,

leaving the women still dependent on their spouses or other family members for support. The absence of any safety nets from the platforms themselves or social security from the public sector makes them vulnerable to income fluctuations.

4.4 Confined entrepreneurship?

This study also shows how platform architecture limits and dictates the flexibility and autonomy that women actually have over their work or hours of working. Algorithmic management and platformic management through terms of service and design features have a direct bearing on how women experience their working conditions and pay. Although the women stated flexible timings and autonomy as reasons for preferring online work, upon closer inspection we found that most women worked seven days a week - from 3-4 hrs to over 10 hrs per day. This was broadly the same across freelance and microwork platforms. In addition to any other care commitments they may have, this makes for very little leisure time. They could choose when they worked but rarely how much they would work. This was determined by the number of jobs of HITs they managed to find. Even when it comes to the type of work, few women have complete control over the type of work they pursue. More often than not, their work depends upon the availability of jobs. Furthermore, the ratings and reviews system and stiff competition on the platform means that freelancers are always looking for jobs and striving to improve their ratings in the hope of getting better jobs.

Platform architecture also has a direct bearing on the practice of work and therefore how women view their working conditions. Market making platforms like Freelancer and Upwork are more complex than labour matching platforms like AMT. Market making platforms use algorithmic management to direct work but also use the terms of service and other platform design features to ensure that workers meet standards and quality of work, that their payments are protected, and concerns addressed by grievance redressal mechanisms. This allows for greater skill matching and workers have some more agency to choose the type of work that interests them. Workers can interact with clients and get feedback on their work, which contributes to a feeling of progression. For these reasons, freelancers seemed to have a more positive outlook about their prospects. However, the oversupply of labour on freelance platforms and low availability of well-paid, high-complexity jobs that allow some creative thinking have limited the choices for workers.

Labour matching platforms like AMT on the other hand, rely more heavily on algorithmic management to distribute jobs to workers. Interaction between requestor and workers remains limited. The type of work available is task-based and usually low complexity, mundane and repetitive. Many have pointed out how a microwork platform renders humans as a service (Irani and Silberman, 2013) or how it adheres to Taylorist structures of work where work is broken up into tiny parts and workers are removed from the larger picture. The work is completed in isolation because interactions are limited by the very design of the platform and the type of work available. There is little scope for progression and workers are aware that these skills will not be of use in the offline labour market. AMT workers were less likely to see it as a long-term plan and be keen to re-join the offline workforce.

4.5 Replicating gendered inequities

Literature points to the existence of a gender pay gap on platforms because of women's inability to commit as many hours as men due to care work. This seems to hold in relation to our study as well. The married women we spoke to fit online work around their schedule and other responsibilities around the home, indicating they were only able to commit a limited amount of time to their online work. Compared to men working on the same platform, they were likely to be working fewer hours and therefore making less money. We also found that one strategy women employed to win more bids was to lower their hourly rates. This likely lowered their rates further compared to the men bidding for the same jobs since evidence shows that women under-report and under-charge anyway (Murray-Close and Heggennes, 2018).

The only statements of overt gender-based discrimination were in the context of sexual harassment experienced by some women. However, in one case, the platform allowed a woman to overcome the sexist behaviour of another worker, a male, with whom she had to work. She identified his behaviour as being rooted in Indian cultural norms where "men don't like to take orders from women". She notified her client - a man from the United States of America - of her difficulties and he ensured that she did not have to work with him.

Material and social factors impact women's ability to participate in online work. Some women had to make financial investments to participate - either to purchase devices, upgrade internet connections, or even to pay for the accounts themselves. This financial support came either from their own savings from previous jobs or from family members. All the women we interviewed had a baseline level of computer literacy in addition to high levels of education which allowed them to learn and adapt to what the platforms demanded of them. English language skills were a necessity, since all the jobs available were largely in English. Additionally, entrepreneurial skills determined progression. Those who were able to market themselves better, either by writing favourable profiles or offering to work for free or by hiring others to complete tasks, were able to win bigger projects and keep their ratings high.

The study underscores how online work is experienced within the framework of existing gender relations. Gender norms shape the motivation for women seeking online work, the amount of work they do, and the way they manage their work and earnings. Online work is deemed more respectable and appropriate for women as it allows them to balance paid work with care work and in this respect fits into earlier patterns of home-based work.

In the study we see that online labour platforms make a difference at the household level but the broader macro impact on women's employment and empowerment remains to be seen. In the cases we observed, most of the women shifted from formal work to informal work. Online work is not currently recognised as work and this has a number of implications - it remains unregulated, workers have no means of reporting themselves and they remain hidden from labour market data; platform workers have no access to social security and working conditions remain poor as they are controlled only by market mechanisms; being an invisible workforce there are no interventions to address their circumstances.

That being said, empowerment is a process through which women gain social, political and personal agency. Social and political factors and institutions play a role in shaping the process. Platforms and online work can be an enabling force towards empowerment. The women we interviewed talked about the importance of online work to their personal development and independence. They emphasized how they enjoyed working and being able to work even if their working conditions weren't always ideal. Some stated how important it was for their children's development and sense of gender equality to see their mothers working.

The structural changes brought on by online work may not be evident yet but interventions to recognize this type of work are crucial at this stage. Recognition of this work could help raise standards. The inclusion of platform workers in India's Code on Social Security, in this respect, is significant in helping provide the safety net that workers need and in bringing recognition and respectability around platform work. Currently, the perception that online work is respectable for women and not men (Bandaranayake, 2020) is prevalent, revealing a double standard. The gendered segregation of online work will further devalue it, as has happened with other gendered job roles like teaching, nursing, or domestic work.

5. CONCLUSION

This mixed method study on the experiences of Indian women engaged in online work emphasizes the importance of a socio-material lens when evaluating the promise of online work for women's economic empowerment. Digital platforms and especially online work have been seen as an opportunity to increase women's labour force participation by multilateral agencies, policymakers, and governments.

Through a quantitative survey of 365 women and qualitative interviews with 22 women, the project demonstrates how existing conditions in the labour market, socio-cultural norms, the gendered segregation of work - both paid and unpaid - and the architecture of platforms contribute to women's experience of online work and the potential to enable empowerment. Most of the women moved from formal work or education to online work after getting married or having children to be able to balance paid work and care responsibilities. Flexible timings and remote working through online labour platforms enabled the women to continue working although their earnings were less and, in many cases, did not align with their areas of expertise or interest. Their earnings did not contribute significantly to household income. Online work still remains unrecognized and excluded from labour market data in India, owing perhaps to the dispersed and hidden nature of online work. The lack of longitudinal data also makes it difficult to determine the impact online work has had on women's labour force participation at the macro level.

While the impact at macro level may take longer to unravel, the impact at the household level and individual level is significant. For many of the women in the study, online work gave them a sense of an occupation and allowed them to continue working, addressing in small ways, their aspirations and personal development. Work, for them, is not solely a means to meet economic ends.

Future research should be directed towards longitudinal data on the impact of online labour platforms and women's labour force participation in India and globally. Online work remains dispersed and invisible from labour market data globally making it difficult to effectively advocate for policies and interventions to promote online work and improve working conditions. Alternative platform ownership models like social enterprise models that target certain marginalised groups or cooperatively owned platforms could potentially address some of the challenges faced by current workers. More research and capacity building into these alternative models could help inform the design of more inclusive platforms.

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Appendix 1 - Expert stakeholders

List of experts interviewed

1. Ashwini Deshpande
2. Ravinder Kaur
3. Salonie Muralidhar
4. Vigneswara Illavarasan
5. Mansi Kedia

Appendix 2 - Quantitative Survey

Freelancers (316 Total Responses)

Questions	No. of Responses
Age Band	
32-45	177
25-30 years	85
18-24 years	52
46 and over	2
What is your highest qualification?	
Bachelor Degree	147
Postgraduate degree or higher	52
Class 12	48
Postgraduate diploma	43
Class 10	12
What is your current occupation?	
Data entry	90
IT and Networking	42
Accounting	40
Customer Service	31
Engineering and Architecture	15
What were you doing before finding work through online work platforms?	
I had a full-time job	119
This is my first job	89

I had a part-time job	60
I was studying	48
For how many years did you work before using online platforms to find work?	
1-3 years	65
More than 6 years	51
4-6 years	35
Less than 1 year	28
Do you earn more through online platforms than you did in your past employment?	
Yes	133
No	46
What are your reasons for choosing online platform work?	
Wanted to work from home	64
Wanted to earn more money	53
Family wanted me to stay at home	41
Wanted flexible working	38
Wanted to try something new	31
Do you have other sources of income apart from online work platforms?	
No	174
Yes	142
What are your other sources of income?	
Part time job	51
Full time Job	48

Rental income	18
Business owner	15
Other freelance networks	10
4 More than 4 years	33
How often do you have repeat clients?	
Sometimes	139
Usually	66
Never	62
Always	49
Do your clients allow flexibility in choice of work days and work timings?	
Yes	244
No	72
How do you access material that could help you improve your skills or grow your network?	
Through blogs that I find online	117
Through social media pages	111
The platform I work on has material	49
Are you part of a group of other freelancers?	
Yes	195
No	121
How much do you agree with this statement: "I like working on online work platforms"?	
Strongly agree	191
Slightly agree	74

Neither agree nor disagree	33
Slightly disagree	9
1 Strongly disagree	9
"Working online has helped me widen my job experience and skills", how much do you agree?	
Strongly agree	188
Slightly agree	89
Neither agree nor disagree	19
Strongly disagree	14
Slightly disagree	6
How do you financially support your family?	
I sometimes cover the expenses of my partner/family member	132
Yes, I am the sole financial provider for a family member/members	83
No, I cover only my own expenses	78
No, I receive financial support from my partner/family member	23
What was your average monthly income from your online freelance work in the last six months?	
Less than 10,000 per month	110
Between 10,001 - 20,000	101
20,001 - 40,000	63
40,001- 60,000	14

Over 60,000	28
How much does your income vary	
A lot, as I earn a different amount every month	140
Somewhat different amount each month	152
Not at all I earn the same amount every month	24
Is earnings from your online platform sufficient to cover your monthly expenses?	
Yes, I am able to cover my expenses every month	164
I am able to cover my expenses most months	68
I sometimes need financial support	56
I am not able to cover my expenses	28
Attitude to platform work	
I consider finding work online to be a good way to earn an income	222
Finding work online gives me income security	24
I feel like I have control over my work doing online work	19
I would prefer not to do online work	18
I see my current job as a temporary job	15
What does your family think about your online work?	
They are proud	144
They approve	129
They don't care	23
They disapprove	11
They don't know	5

Microwork

Questions	No. of Responses
Age Band	
32-45	21
25-30 years	0
18-24 years	5
46 and over	23
What is your highest qualification?	
Bachelor Degree	24
Postgraduate degree or higher	5
Class 12	11
Postgraduate diploma	7
Class 10	0
Class 8	1
What have you attained a degree or diploma in?	
Computers	15
Other	19
Engineering	3
Law	
Secretarial Course	

What were you doing before finding work through online work platforms?	
I had a full-time job	20
This is my first job	16
I had a part-time job	10
I was studying	3
For how many years did you work before using online platforms to find work?	
1-3 years 2	17
More than 6 years 4	5
4-6 years 3	6
Less than 1 year 1	2
Do you earn more through online platforms than you did in your past employment?	
Yes	23
No	7
What are your reasons for choosing online platform work?	
Wanted to work from home	6
Wanted to earn more money	7
Family wanted me to stay at home	7
Wanted flexible working	0
Wanted to try something new	0
Lack of well-paid jobs	5
My friends and family were doing it	6

Do you have other sources of income apart from online work platforms?	
No	25
Yes	24
What are your other sources of income?	
Part time job	7
Full time Job	9
Rental income	4
Business owner	2
Other freelance networks	1
How long have you been using online platforms to find work?	
6-12 months	27
1-2 yrs	17
2-4 yrs	5
More than 4 years	0
How often do you have repeat clients?	
Sometimes	19
Usually	21
Never	5
Always	4
Do your clients allow flexibility in choice of work days and work timings?	
Yes	28
No	21

How do you access material that could help you improve your skills or grow your network?	
Through blogs that I find online	14
Through social media pages	18
The platform I work on has material	10
Through my own network	7
Are you part of a group of other freelancers?	
Yes	23
No	26
How much do you agree with this statement: "I like working on online work platforms"?	
Strongly agree	14
Slightly agree	31
Neither agree nor disagree	2
Slightly disagree	1
Strongly disagree	1
"Working online has helped me widen my job experience and skills", how much do you agree?	
Strongly agree	19
Slightly agree	25
Neither agree nor disagree	4
Strongly disagree	
Slightly disagree	1
How do you financially support your family?	

I sometimes cover the expenses of my partner/family member	15
Yes, I am the sole financial provider for a family member/members	8
No, I cover only my own expenses	25
No, I receive financial support from my partner/family member	1
What was your average monthly income from your online freelance work in the last six months?	
Less than 10,000 per month	24
Between 10,001 - 20,000	15
20,001 - 40,000	6
40,001- 60,000	4
5 over 60,000	
How much does your income vary	
A lot, as I earn a different amount every month	17
Somewhat different amount each month	28
Not at all I earn the same amount every month	4
Is earnings from your online platform sufficient to cover your monthly expenses?	
Yes, I am able to cover my expenses every month	21
I am able to cover my expenses most months	13
I sometimes need financial support	12
I am not able to cover my expenses	3

Attitude to platform work	
I consider finding work online to be a good way to earn an income	27
Finding work online gives me income security	7
I feel like I have control over my work doing online work	4
I would prefer not to do online work	
I see my current job as a temporary job	5
Finding work online does not give me income security	2
What does your family think about your online work?	
They are proud	14
They approve	27
They don't care	6
They disapprove	
They don't understand	2
They don't know	

Appendix 3 - Semi-structured Qualitative Interviews

Questionnaire

1. Age
2. Educational Qualification
3. Current Occupation
4. Location (city or town/state)
5. Living situation (with partner/single/family)
6. What did you do before using platforms such as this one to find work? Can you tell us a little more about the kinds of jobs you did? (Probe: Employment history. Area of work/expertise/sector)
7. How many years of work experience do you have?
8. Did you work in the same area as the subject area that you studied? (Probe: does educational/professional qualification align with current job)
9. Working hours/working patterns
10. Did you have a weekly holiday/ paid time off/ medical leave
11. Health insurance/EPF/ESI/Maternity leave (Probe: Employer provided SS and benefits where applicable)
12. Income range (Probe: commensurate with market rate according to experience and qualifications)
13. Were you able to cover your expenses with the money you earned?
14. Were you able to save? Did you consider saving a financial goal? Were you saving towards anything in particular?
15. How do you feel about your previous work? Relationship with colleagues, quality of job, etc. Did it contribute to your success/ career trajectory? (Probe: Did you find your job 'satisfying')
16. What were your reasons for leaving your job?
17. Tell us about your current work/your online freelance work? (Probe: how they identify themselves)
18. For how long have you been doing this work? (Probe: level of experience, perception of current career trajectory)
19. How did you come to work on *platform*? (Probe: What prompted the decision to work online, do you know others who do?)
20. How does the work you do on the platform relate to the area of study/ previous area of work? (Probe: did you switch career paths?)
21. How many hours do you spend looking for work? How many hours do you spend doing the work you've found?
22. What about holidays or days off?
23. Do you receive any social security benefits or Insurance through your work?
24. Is this your only source of work? (Probe: Are they using this work to support other work/ projects/ regular vs irregular work. Patterns of working life)
25. Income range (Probe: commensurate with market rates)
26. How do you feel about your earnings?
27. Have you seen a change in income since working on *platform*? How has your income changed from the time you started working to now? (Probe: Are you able to cover expenses/save/save more)

28. Rating system? What are your thoughts about this? Do you think it is fair? Have bad ratings negatively affected you?
29. Do you receive assistance from the platform/company? What kind of assistance? What kind of assistance do you wish they would provide? (Probe: Platform involvement/ accountability)
30. Can you tell me a little about the payment system? Do you link your bank account/digital wallet?
31. What can you do if you face issues with payment/a client? Have you ever experienced this? What did you do? (Probe: grievance redressal/ how involved are platforms in interactions between workers and clients)
32. Can you/do you interact with others working on the platform? Are you a member of any FB/Whatsapp groups for Turkers?
33. Did you sometimes ask family/friends/other support groups for help with tasks that you've found?
34. How do you think you have progressed in your job since you've joined? (Probe: adapting to new skills as needed, learning on the job etc)
35. Did you have to purchase a computer/device to work on *platform*? (Probe: access to devices)
36. Do you share this with anyone, or do you always have access?
37. What about internet access? (Probe: access to internet, mobile internet/broadband internet, bills)
38. Did you have to make any payments/financial investments to start this job? What were these for? (Probe: Cost of working on platform)
39. How did you cover these expenses (Probe: assistance from family/other network/loans/financial security before starting the job)
40. Have you faced harassment on the platform?
41. Can you tell us a little more about it? How do/did you deal with it?
42. Has your working situation changed during the Covid-19 pandemic (probe: Do you have more or less work?)
43. How has Covid-19 impacted your household? (probe - children out of school? Partner out of work? Worry about parents?)
44. Do you have to cover the financial expenses of any financial dependents? Can you talk about it in a little more detail? (Probe: financial dependents, type of support, type of expense)
45. Do you have to take care of family members/children? Do you do this alone? Do you have help? (Probe: division of care work/ paid work)
46. How do you divide responsibilities with whoever is helping you? (Probe: responsibilities, burden, who helps and how much)
47. Contribution to household financially, how does it compare to other members' of the family - (note: how does this impact expectation of performing household responsibilities, income/contributions from other members)
48. Do you receive financial advice from family/friends/partners? How important is their opinion to the financial decisions you take? (Probe: Are you able to make decisions regarding your finances independently?)
49. What are your major expenses? (Probe: how do they spend money? Is it largely expenses for themselves/for the household? Re-investing in themselves)

50. Do you receive financial help from family/friends? How do they help you? (Probe: Financial support from family/ independent working, financial viability of job in relation to lifestyle)
51. How do you feel about your current work, the way your career is progressing and the things you have learned along the way? (Probe: perception of own career trajectory)
52. How do you think working on this job has contributed to your learning curve (Probe: new skills learned, career growth, new opportunities)
53. What do your parents/partner/husband think about your work? (Probe: perception of job, quality of job, "suitability" of job)
54. How do their reactions to platform work compare to previous work you have done off the platform? How do you feel about their reactions?
55. What are your future plans work wise? (Probe: do they see this as a career/ a stopgap/ inspired to try other things?)
56. Side projects/extra gigs (if any)How do you plan to work on your side projects alongside the work on the platform (Probe: sustainability of 2 jobs/ do they prefer it)

Appendix 4 - Focus Group Discussion with Freelancers

Vignette 1

"Priya has been looking for a job in marketing for 6 months. She lives with her parents and they have asked her to contribute to household expenses.

She sees a banner on social media advertising opportunities to earn money online. As she is not currently working, she signs up for this, while she continues to look for a job in an office. She signs up and gets her first job after one week. She applies to as many jobs as she can and she gets accepted for some.

After completing about 5-6 jobs, she decides to switch to working full-time online, and stops looking for an office job. She is looking for resources she can use to improve her skills so she can make more money"

Questions

1. Does this situation have any similarities for you? In what ways?
2. What do you think about Priya's decision to prioritise online work
3. What would you do if you were Priya?

Vignette 2

"Sunitha is a graphic designer, she lives with her husband and in-laws.

She works part time at a company and goes to the office 3 days a week. She also uses several online freelance platforms to find work. She has been working this way for 3 years.

She has just won a large project that needs to be completed fast. She posts on a Facebook freelancing group to ask someone to help her with it. A young woman starting out as a freelancer offers to take on some tasks.

Her husband suggests that she quits her office job, and does online freelancing full time as she could earn more money online. Her in-laws also agree with his suggestion."

Questions

1. What do you think about Sunitha's experience of online work? What are the similarities or differences?
2. What do you think about Sunitha hiring another freelancer to help her with her project?

What do you think about Sunitha's husband's suggestion that she quit her office job?

About the authors

Urvashi Aneja is the Director of the Digital Futures Lab and served as Founding Director of Tandem Research. She is also an Associate Fellow at Chatham House, a Tech and Social justice champion at the World Economic Forum, and a former member of the T20 Task Force for the Future of Work in the G20.

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About FoWiGS

The Future of Work in the Global South (FoWiGS) is an initiative supported by the International Development Research Centre (IDRC) and coordinated by the Center for the Implementation of Public Policies Promoting Equity and Growth (CIPPEC).

It aims at understanding the implications of technological change on jobs from a Global South perspective bringing data, knowledge, and policy frameworks to build evidence-based narratives on the future of work in developing countries.