CATALYSING WOMEN'S PARTICIPATION IN THE LABOUR FORCE: THE ROLE OF DIGITAL LABOUR PLATFORMS

July 2022

Acknowledgements

Authors

Disclaimer

This report has been produced by a team from Sattva Consulting as a product for the Sattva Knowledge Institute (SKI). The authors take full responsibility for the contents and conclusions. Any participation of industry experts and affiliates who were consulted and acknowledged here, does not necessarily imply endorsement of the report's contents or conclusions. To quote this perspective, please mention: Sattva Knowledge Institute, *Catalysing Women's Participation in the Labour Force: The Role of Digital Labour Platforms,* July 2022. Use of the report's figures, tables or diagrams, must fully credit the respective copyright owner where indicated. Reproduction must be in original form with no adaptations or derivatives. For use of any images in the report please contact the respective copyright holders directly for permission.

About Sattva Knowledge Institute

Sattva Knowledge Institute (SKI), established in 2022, is our official knowledge platform at **Sattva**. The **SKI** platform aims to guide investment decisions for impact, shedding light on urgent problems and high potential solutions, so that stakeholders can build greater awareness and a bias towards concerted action. Our focus is on offering solutions over symptoms, carefully curating strong evidence-based research, and engaging decision-makers actively with our insights. Overall, **SKI** aims to shift intent and action toward greater impact by influencing leaders with knowledge. All of our content proactively leverages the capabilities, experience and proprietary data from across **Sattva**.

CONTENTS

Executive Summary

India faces the challenge of a low Female Labour Force Participation Rate (FLFPR), with women kept out of the workforce due to a combination of social and economic factors.

India has the lowest FLFPR in South Asia and the 11th lowest globally. Due to a combination of social norms that compel them to prioritise unpaid domestic responsibilities over paid work, and the lack of appropriate job opportunities, women continue to be relegated to the home. Where women are able to participate in the labour force, their work is characterised by high levels of informality, with little to no formal labour guarantees or social protection. Women workers are also over-represented in the care economy, in sectors such as domestic work, healthcare, beauty and wellness.

The platform economy is a promising development touted as an enabler of women's participation in paid work.

Digital labour platforms, through which work is allocated, evaluated and monitored through the use of algorithms and data, are a turning point in the world of work. These platforms provide flexibility, helping women work from home at convenient times, and allowing them to fulfil domestic responsibilities while undertaking paid work. The platforms also provide connections to training opportunities and financial services, which afford a degree of formality to the women's labour.

However, the opportunities the platform economy presents require careful demystification as legacy issues follow women into platform work, while newer challenges emerge as a result of digital intermediation.

Legacy issues that have plagued women's work, such as occupational segregation, the wage gap, and unsafe working conditions are also present in the platform economy. Gendered patterns of smartphone ownership and access to the internet limit women's ability to access work through digital platforms. In the absence of supporting social security and care infrastructure, women bear the double burden of domestic responsibilities as well as paid work.

The state, digital labour platforms, community-based organisations and philanthropies all have a role to play in determining the future of the platform economy.

To ensure that the gains of a rapidly platforming economy accrue equitably to women workers, certain interventions are necessary to ensure that women can:

    i) access work on digital labour platforms;
    ii) undertake dignified work in transparent and safe working conditions and
    iii) balance domestic caregiving duties with the support of social and care infrastructure.

An Overview of Women and Work in India

Low Female Labour Force Participation Rate (FLFPR).

The years between 1999 and 2005 saw an unprecedented rise in the number of female workers in India as rural women joined the labour force in large numbers (IAMR 2013). However, the trend reversed in recent decades, with India's FLFPR bucking the global trend of rising women's participation by falling from 32% in 2005 to 19% in 2021. Paradoxically, the falling FLFPR has also coincided with unprecedented economic growth (IAMR 2013).

Several factors conspire to keep women out of the labour force. Societal expectations compel them to bear a disproportionate share of productive, reproductive, and care work at home while socio-cultural norms continue to privilege their place in the home rather than outside of it. Concerns for safety and the lack of adequate public transport and sanitation infrastructure are logistical impediments to their participation in the labour force (Sattva 2022). Additionally, a mismatch between women's qualifications and available jobs, and limitations in skills and literacy also operate as hurdles to their participation in the labour force.

Pervasive informality and occupational segregation in paid work.

Where women are able to enter the workforce, informality emerges as a pervasive feature of their labour. Women comprise nearly half of the workers engaged in the informal sector in India, numbering about 96 million in total (Singh 2021). According to the International Labour Organization, 81.8% of women's employment in India is in the informal sector (ILO 2018). Informal work accounts for 99.9% of women's employment in agriculture, 95.9% in manufacturing and 95% in the services sector (Raveendran 2016). In fact, Indian women's participation rate in the formal economy is among the lowest in the world (India Today 2022).

Reproductive labour and unpaid care work (which includes child care, cleaning, cooking etc.) is a defining feature of women's labour, both in India and across the world (IGI Global n.d.). Patriarchal norms force women to undertake this unpaid work while benefitting from it in more ways than one. The 'care economy' for instance, relies disproportionately on women workers, with the paid care sector accounting for a significant proportion of women's labour force participation. There are between 20 to 80 million domestic workers in India, of whom a majority of workers are women (Sehgal et al. 2022). An estimated 1.4 million women make up the Anganwadi workforce, providing crucial last-mile and grassroots assistance for women and child development in India (Guruswamy et al. 2018). This illustrates how women's caregiving responsibilities percolate into their labour force participation.

The Reformative Promise of Digital Labour Platforms
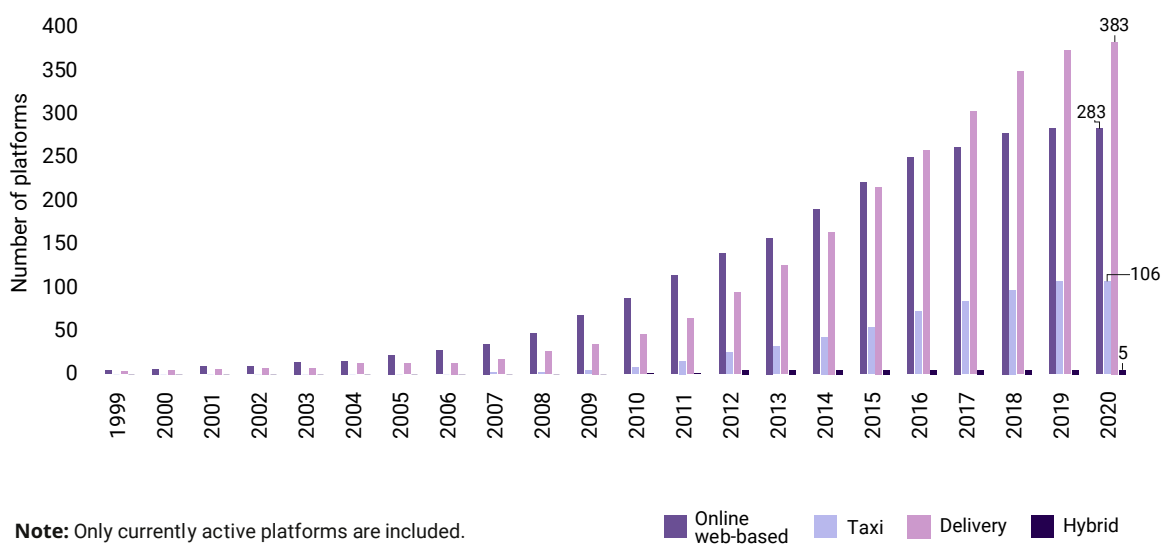
Growth trends in the platform economy.

Digital labour platforms have seen exponential growth in recent years and have been touted as catalytic enablers of women's participation in paid employment, characterised by a certain degree of formality (BusinessLine Bureau 2021).

These ICT-enabled and data-driven platforms, which use algorithms to allocate, evaluate and monitor work, have emerged as a turning point in the world of work over the last decade (Rani 2021; Berg et al. 2018). This economy is also referred to as the 'platform economy,' defined as economic and social activity facilitated by digital platforms (IGI Global n.d.).

India has emerged as a crucial geographic lever for digital labour platforms. In 2021, 7.7 million workers were engaged in the gig and platform economy, a workforce projected to expand to 23.5 million by 2030 (NITI Aayog 2022). Additionally, as per the Online Labour Index, India is the world's largest supplier of online labour, with women forming up to 28% of this available labour force (Kässi et al. 2018).

In this context, digital labour platforms are seen as an important pathway for developing countries, and women, in particular, to harness the rapidly growing opportunities of the digital economy and engage in paid employment (Banga 2020).

Figure 1: Number of active digital labour platforms globally

Note: Only currently active platforms are included.

Legend: Online web-based — Taxi — Delivery — Hybrid

(ILO 2021)

Typologies of digital labour platforms and implications for women's work.
Digital labour platforms are of two types: online web-based platforms where workers perform tasks online or remotely (e.g. UpWork, AMT etc.), and location-based platforms where workers carry out tasks in person in predetermined locations (e.g. Uber, Swiggy, Zomato etc.). While they share certain common characteristics, such as the use of algorithms and data to allocate, evaluate and monitor work, the differences in their implications on women's work are nuanced, depending on whether the paid work is undertaken within the home or outside of it.

Figure 2: Typologies of digital labour platforms
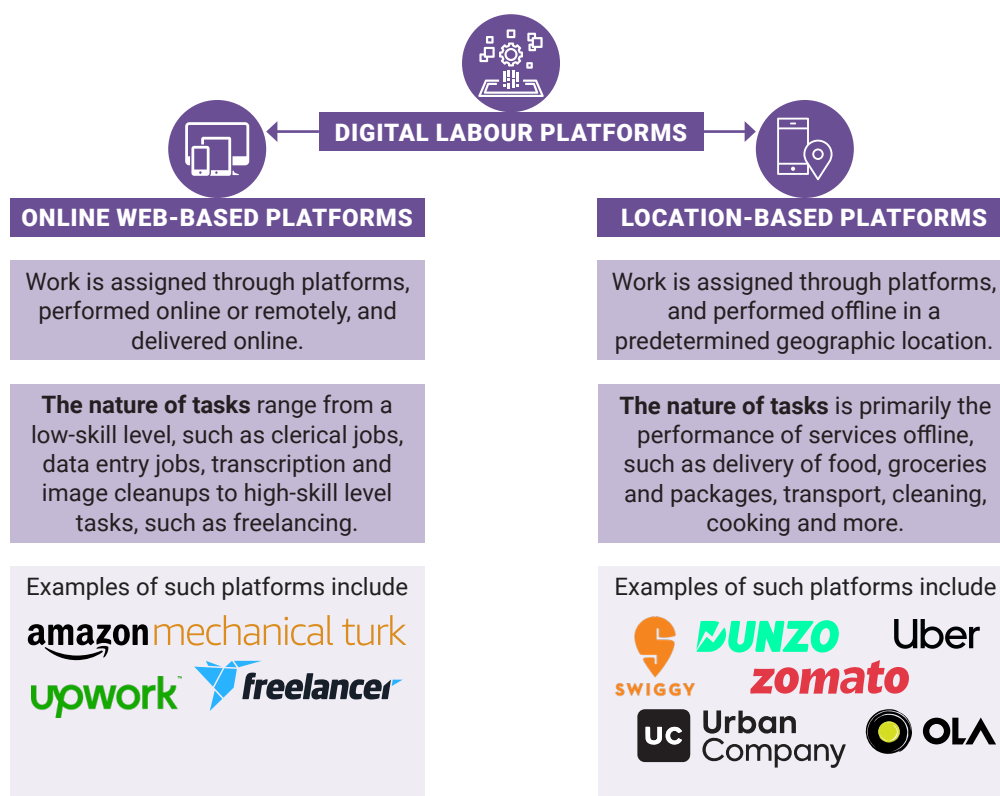
(Berg et al. 2018)

Location-based platforms
These platforms are referred to as 'location-based' because the customers and workers are both located within a certain geographical limit. Workers carry out tasks such as food and grocery delivery, taxi services, cooking, cleaning, etc. in person, even though work allocations are now digitally mediated (ILO 2021).

Where women's work is concerned, digital labour platforms now play a prominent role in labour market intermediation. For instance, as of 2019, the metropolitan cities of Delhi and Bangalore had over 17 digital platforms for domestic work. Between 2011-16, over 270 platforms came into existence in home-based service work, a workforce dominated by women. Sectoral examples include beauty, cooking, cleaning and other care-based

industries (Chopra 2017). These trends suggest that sectors women have relied on for paid work are fast becoming absorbed by digital labour platforms. In this regard, it is helpful to think of platforms as a layer over existing economic activity, rather than a separate economic sector in their own right.

Digital labour platforms have the potential to improve the existing working conditions in these sectors. They can open avenues to formal banking and financial services, in addition to providing training, skilling and upskilling opportunities (Tandem Research 2018). Urban Company, for example, conducts sector-wise training programmes for beauty and salon work, home-cleaning and more, in addition to enabling access to credit (UC Desk 2022; Shanker 2020). They can also function as a quasi-formal social protection system. The economic distress induced by the pandemic was alleviated for platform workers by the support provided by platform companies, despite some shortcomings in the implementation and design of these schemes (Rathi et al. 2021).

Online web-based platforms

Online web-based platforms outsource work to a geographically dispersed crowd, located all over the world (Berg et al. 2018). While freelancers who provide professional services requiring a high level of skill and knowledge also use these platforms, the most common type of web-based platforms are 'microtask' platforms. On microtask platforms, workers are enlisted to perform and deliver small, clerical tasks remotely through the internet. Examples of tasks include image identification, transcription, data entry, data cleaning, and translation (Berg et al. 2018).

These platforms represent a significant shift in the world of work. Workers and customers are scattered across national borders without geographic limitations. For women, the primary benefit of these platforms is the ability to work from home, with only a laptop, smartphone and internet access. Patriarchal controls on women's mobility have restricted even educated women from participating in paid employment. However, the design of microtask platforms aligns with women's place within the home, enabling them to simultaneously fulfil their assigned reproductive roles as well as contribute to the household income. Considering the dearth of employment that women face, microtask platforms open doors to a wider pool of customers and recruiters and have the potential to enhance women's access to employment opportunities (Gurumurthy et al. 2021). Moreover, in contrast to location-based platforms which are concentrated in urban India, women from small towns and rural areas are also able to reap the gains of web-based platforms (Gurumurthy et al. 2021).

In conclusion, the potential for digital labour platforms to positively impact women's working lives in India is immense. The platform economy offers a degree of flexibility, enabling women to balance their unpaid care work with engagement in productive employment (Berg et al. 2018). Over 85% of women cite flexibility as the most attractive feature of platform work (Chaudhary 2020). Moreover, platform work has the potential to reduce women's reliance on the informal social relations that have historically mediated their access to the labour market (Collett et al. 2022). The ability to work from home, as in the

Figure 3: Opportunities for women in the platform economy

Temporal flexibility allows women to balance unpaid care work with productive paid work.

Geographic flexibility allows them to work from home.

Training and skilling interventions increase women's skills, thereby enabling access to better jobs.

Connection to financial services enables access to formal financial networks and credit.

Digital intermediation makes women workers less reliant on informal social networks to access jobs to access paid jobs.

Increased autonomy arises from the ability to exercise control over working hours and choice of tasks.

(Berg et al. 2018)

case of web-based digital labour platforms, also allows them to mildly escape the stigma and social barriers that continue to relegate them to working within the home rather than outside of it (Gurumurthy et al. 2021). Recent research also suggests that women value the independence and autonomy associated with platform work, allowing them to circumvent poor working conditions and hostile employers (Srivastava et al. 2022). Lastly, platform work offers a degree of formality that has hitherto not been afforded to India's working women.

Challenges Women Encounter in the Platform Economy

The above-mentioned advantages have positioned platform work as a solution to address India's low FLFPR and improve women's working conditions in the paid workforce. Despite the benefits of the platform economy, women remain underrepresented in this form of work. The opportunity narrative of women's work in the platform economy requires careful analysis to understand the challenges that still confront women and subsequently address them through appropriate interventions. While some challenges are more pronounced in either type of platform, the digital intermediation of labour has brought to the fore certain shared issues that are common across all types of platforms.

Figure 4: Challenges faced by women in the platform economy

Accessing work on digital labour platforms
- Gaps in women's internet access and smartphone ownership.
- Limited digital and English-language literacy.

Working conditions on digital labour platforms
- Opaque determination of wages and persistence of the wage gap.
- Gender-based discrimination in pay and allocation of work.
- Unsafe working conditions and the risk of sexual harassment.

Absence of social security and care infrastructure
- Lack of social security benefits such as pension and insurance.
- Absence of care infrastructure, such as maternity benefits and daycare centres, that alleviate domestic burdens.

(Shanahan 2021; Sehgal et al. 2022; Soni 2021; Tandon 2021; ILO 2021; People's Union for Democratic Rights 2021)

Accessing work on digital labour platforms.

Digital gender divide
At the outset, access to a smartphone and the internet is a prerequisite to working in the platform economy. However, the persistence of the digital gender divide means that women are not able to access platform work with the same ease as their male counterparts. As per the latest data on women's digital access, only 26% of Indian women own smartphones, in contrast to 49% of men (Shanahan 2022). While this figure rises to 52% in urban areas, urban women also trail their male peers, 73% of whom own smartphones. More concerningly, this gender gap is the widest in South Asia, at 41% (Shanahan 2022).

Literacy barriers
Working through digital labour platforms requires two-pronged literacy – digital and linguistic. In developing economies such as India, cultural norms maintain a digital literacy gap that decreases women's access to digital labour platforms. Only 38% of households in India are digitally literate, with the rate for women being even lower (Mothkoor et al. 2021). For instance, only 43% of women in India have ever used the internet, with the figure falling to 34% in rural areas (Rasheed 2021). Digital literacy rates are also especially low for Scheduled Caste and Scheduled Tribe communities, with Scheduled Tribe households reporting the lowest digital literacy at only 21% (Mothkoor et al. 2021). Additionally, the terms of service on most platforms are in English and not in vernacular languages. This leaves women from non-English speaking backgrounds, mostly from the working class, unable to discern the exact terms of engagement on platforms, thereby compromising their autonomy in working relations (Sehgal et al. 2022).

Working conditions on digital platforms.

Occupational segregation

The stratification of employment by gender, caste and religion has not been completely erased by the platform economy. Occupational segregation is rife in the platform economy, replicating the division of workers into masculinised and feminised occupations. The delivery and ride-hailing sectors, requiring the 'masculine' skill of driving, are dominated by men. For instance, among the 220,000 personnel working on Swiggy, only 1,000 are women. In contrast, one-third of the 32,000-member workforce of Urban Company, which provides salon, spa, beauty and home-cleaning services, are women due to the 'feminised' nature of these tasks (Soni 2021). Additionally, the workforce in the paid domestic work and care sectors on platforms are overwhelmingly Dalit, Bahujan and Adivasi women from caste-oppressed communities (Tandon 2021). Information asymmetry in the platform economy entrenches this inequality rather than erasing it, as customers are privy to workers' caste, religion and other personal information, allowing them to select service providers based on these criteria, while workers remain in the dark about the details of their customers. Women are also underrepresented in the professional task sector of web-based platforms, with the participation of Indian women on these platforms being the lowest in the world (Raman et al. 2021a).

Wage determination

Wages on digital labour platforms are a complex variable determined by a combination of fixed commissions, incentives, surge pricing, and hours worked on the platform. The platform algorithm usually decides the wages, making decisions on the above-mentioned factors. However, while women's earnings on digital labour platforms are an improvement from the income earned from traditional labour markets, the wage gap, which is the difference between the earnings of men and women, continues to affect them on digital labour platforms as well. Recent data reveals a gap of eight to ten per cent between the earnings of men and women working on digital labour platforms (Raman et al. 2021a). Additionally, due to the unpaid care work that women are forced to prioritise, they can only perform paid labour during the day or in certain areas, meaning they are often unable to take advantage of the platforms' incentive structures or meet the requirement of a certain minimum number of hours worked (Raman et al. 2021a). With women more likely than men to depend on digital labour platforms as their primary source of income (ILO 2021), these factors diminish the potential of these platforms to further women's economic empowerment.

Discrimination on labour platforms

As previously stated, platform algorithms allocate work on digital labour platforms. While several platform companies contain non-discrimination clauses in their terms of service, information asymmetry allows for workers to be filtered, especially on the basis of gender (Kasliwal 2020). Algorithms can thus further the discrimination that women encounter in the labour market, for instance, assigning domestic and care tasks only to women and penalising women for their shorter and scattered working hours (One Future Collective 2022). Women working from India, and other Global South countries, encounter double

discrimination, as they are also discriminated against for belonging to developing countries. For instance, workers on web-based platforms in developing countries earn approximately 60 per cent less than their counterparts in developed countries (ILO 2021).

Unsafe working conditions and the risk of sexual harassment.
For women working in sectors that require direct interaction with customers, there is a risk of sexual harassment and unsafe working conditions. The Sexual Harassment of Women at Work Place (Prevention, Prohibition and Redressal) Act, 2013 does not apply to platform companies, who therefore are not legally responsible for the safety of women workers (Torgalkar 2022). Considering that women working in the domestic work, beauty, and wellness sectors often find themselves within customers' homes where the power dynamic favours customers, the risk of sexual harassment rises exponentially putting them in unsafe situations (Velayudhan et al. 2022). Workers also depend on favourable ratings from customers to improve their earnings and task allocations, making retaliation difficult (People's Union for Democratic Rights 2021).

Absence of social security and care infrastructure.

Lack of social security
In law and policy, 'employment status' i.e. the presence of a formal employer-employee relationship, is the pathway through which workers access protections such as minimum wage guarantees, social security benefits, occupational safety, and the right to collective bargaining. In the platform economy, however, there is no such relationship between the platform and its workers. Consequently, formal social security nets funded by employers and the state remain out of reach for workers. For women platform workers, these would have meant entitlements like maternity leave, sick leave, and any paid time off, thus compromising their earning potential on these platforms (Raman et al. 2021b).

Absence of care infrastructure
The primary impediments to women's participation in the paid workforce remain their unpaid reproductive and care responsibilities. In the absence of supporting care infrastructure, women's work in the platform economy will continue to be determined by patriarchal forces that compel them to prioritise their role as caregivers rather than as workers (Kasliwal 2020). Women remain "time-poor" and are compelled to perform both unpaid care work as well as platform work, which exacerbates their burden and restricts their economic participation.

Recommendations

It is crucial that regulation and governance frameworks for the platform economy are designed to appropriately address the legacy issues women contend with in the workplace in India. At the same time, newer issues are also coming to the fore, such as the navigation

of an algorithmic and opaque work environment, violations of privacy, and unregulated processing of worker data. While recognising that new opportunities, economic independence and autonomy are benefits the platform economy brings, interventions are nevertheless necessary to ensure that the gains of this platform economy accrue to all women, while easing their entry into it.

ACCESSING WORK ON DIGITAL LABOUR PLATFORMS

Actor	Action	Rationale	Best practice
State	Enable monetary incentives for platform companies that assist women workers with entering their workforce.	Financial incentives for platform companies that support women in overcoming barriers to entry can catalyse platform-led solutions for women's participation in this economy.	Atmanirbhar Package 3.0 outlines incentives for employers (Pillai et al. 2022).
	Improve digital penetration and literacy for women.	Enabling internet and smartphone access in rural and remote areas and improving the digital literacy of women can help them leverage technological know-how for paid work.	The elements of the Indian government's Digital Literacy programme can be redesigned to incorporate livelihood elements (National Commission for Women n.d.).
Communities	Provide community-based skilling and training services that feed into platform work .	Civil society and community organisations can provide services that enable women to overcome barriers to entry into the platform economy.	LabourNet's Shikhsha programme feeds into platforms for services, in sectors such as beauty and home services (LabourNet n.d.).
Philanthropy	Support the geographic diversification of digital labour platforms.	The concentration of digital labour platforms in urban areas can be addressed through interventions that connect rural women's livelihoods to digital labour platforms, thus enabling equitable access to work on digital platforms.	The Platform for Inclusive Entrepreneurship is a producer-centric digital platform that aims to transform rural farm and non-farm livelihoods (Vrutti n.d.).
	Fund digital skilling and literacy initiatives.	Limitations in digital literacy prevent women from accessing work through digital labour platforms, while improving their access and digital capabilities can unlock newer livelihood opportunities in the platform economy.	The Digital Economy Project in Kosovo has enabled rural women to access work on freelance platforms and provide high-skill professional services (World Bank 2021).

WORKING CONDITIONS ON DIGITAL PLATFORMS

Actor	Action	Rationale	Best practice
State	Expedite the passage and implementation of the Personal Data Protection Bill.	Section 13 of the bill outlines safeguards for the protection of workers' data, thus enabling transparency and accountability in the algorithmically governed working conditions of platform workers.	General Data Protection Regulation (2016) protects workers' data from manipulation by platform companies.
	Extend collective bargaining rights to platform workers.	Unionisation and collectivisation can reduce the alienation inherent in platform work and the power imbalance between platforms and workers, enabling workers to voice their needs.	Unions such as the Indian Federation of App-Based Transport Workers and the All India Gig Workers Union have emerged as strong forces that work toward improving the working conditions of women workers (Mehrotra 2022).
Communities	Develop proof-of-concept models.	Civil society and research organisations can use their knowledge to develop proof-of-concept design elements that improve the working conditions of women workers.	The Centre for Internet and Society, a civil society organisation, published a report outlining design recommendations for domestic work platforms that further women's autonomy and dignity at work (Sehgal et al. 2022).
	Gather evidence to improve the ecosystem's knowledge of platform work.	Evidence on the specific challenges faced by platform workers is patchy, and improved knowledge can catalyse the emergence of evidence-informed interventions.	Oxford Internet Institute's FairWork initiative collects country-wise information on how platforms treat their workers and ranks them accordingly, thus enabling transparency around platform workings (Oxford Internet Institute 2022).
Platforms	Improve wage transparency and stability.	Instituting minimum-wage guarantees and providing information on how wages are calculated can improve income predictability for women workers.	n/a
	Institute gender sensitivity in algorithms.	Accounting for gendered labour market dynamics in algorithms can incentivise women to take up work in the platform economy while improving their safety.	Urban Company's program matches women workers to women customers (Pillai et al. 2022).
	Conduct training sessions on the prevention of sexual harassment for workers and customers and institute strong redressal mechanisms.	To improve women's safety while working on digital labour platforms, both workers and customers need to be informed of sexual harassment policies. Strong redressal mechanisms are necessary to ensure accountability.	BigBasket, Dunzo, Flipkart, Swiggy, Urban Company and Zomato have adopted policies for grievance redressal in cases of sexual harassment (Fairwork 2021).
Philanthropy	Fund alternative platform models.	Data and platform cooperatives, owned and run by workers themselves, have emerged as an antidote to challenges faced by workers on traditional labour platforms.	The Green Taxi Co-op in Denver has demonstrably improved worker well-being (Green Taxi Cooperative 2022), while SEWA Bharat is launching a platform for beauty services run by its members (Scholz 2018).

ABSENCE OF SOCIAL AND CARE INFRASTRUCTURE

Actor	Action	Rationale	Best practice
State	Implement the Code on Social Security, 2020.	This law provides for state-funded social security for platform workers but is yet to be implemented by state governments.	Several countries (Austria, Sweden, Luxembourg, Hungary etc.) extend social protection to all workers regardless of employment status (Gurumurthy et al. 2020).
	Ensure platform companies provide social security to workers.	Platform companies currently operate in legal limbo and are not obliged to provide social security to their workers, despite most women workers depending entirely on platform work for their income.	Uruguay has mandated the provision of social security as a pre-condition for platforms to operate in its jurisdiction (Gurumurthy et al. 2020).
Platforms	Support the provision of care infrastructure to women workers.	Provision of maternity leave, creche and childcare support for women can alleviate women's unpaid care burden and allow them to undertake paid work in the platform economy.	n/a

References

- Banga K 2020, *'Can the digital economy help mitigate the economic losses from COVID-19 in Kenya?'*, Overseas Development Institute, 20 April, viewed 9 September 2022.

- Berg J., Furrer M., Harmon E., Rani U., Six Silberman M 2018, *Digital labour platforms and the future of work - Towards decent work in the online world*, International Labour Organization, Geneva.

- BusinessLine Bureau 2021, *'Gig economy to boost women's employment in formal sector: Study'*, The Hindu Business Line, 23 July, viewed 8 September 2022.

- Chaudhary R 2020, *India's Emerging Gig Economy: The Future of Work for Women Workers*, The Asia Foundation and Initiative for What Works to Advance Women and Girls in the Economy.

- Chopra A 2017, *'How UrbanClap grew one on-demand service at a time'*, LiveMint, 20 March, viewed 13 September 2022.

- Collett C., Neff G., Gouvea Gomes L 2022, *The Effects of AI on the Working Lives of Women*, United Nations Educational, Scientific and Cultural Organization, Organisation for Economic Co-operation and Development and Inter-American Development Bank.

- Fairwork 2021, *Fairwork India Ratings 2021: Labour Standards in the Platform Economy*, Fairwork.

- *General Data Protection Regulation 2016* (EU), viewed 13 September 2022.

- *Green Taxi Cooperative* 2022, viewed 13 September 2022.

- Gurumurthy A., Chami N., Sanjay S 2020, *The gig is up! Worker rights for digital day labour in India*, FriedrichEbert-Stiftung.

- Gurumurthy A., Zainab K., Sanjay S 2021, *The Macro Frames of Microwork*, IT for Change.

- Guruswamy A., Kuruganti K 2018, *'Anganwadi: A workforce of women with a near-impossible mandate'*, Ideas for India, 26 October, viewed 12 September 2022.

- India Today Web Desk 2022, *'Despite rise in gig economy, women's participation still less than 30%'*, India Today, 8 August, viewed 7 September 2022.

- International Labour Organization 2013, *Low Female Employment in a Period of High Growth: Insights from a Primary Survey in Uttar Pradesh & Gujarat*, prepared by the Institute of Applied Manpower Research, New Delhi.

- International Labour Organization 2018, *Emerging technologies and the future of work in India*, prepared by Tandem Research.

- International Labour Organization 2018, *Women and Men in the Informal Economy: A Statistical Picture*, ILO, Geneva.

- International Labour Organization 2021, *World Employment and Social Outlook: The role of digital labour platforms in transforming the world of work*, ILO, Geneva.

- Kasliwal R 2020, *'Gender and the Gig Economy: A qualitative study of Gig platforms for women workers'*, Observer Research Foundation, 11 May, viewed 12 September 2022.

- Kässi O., Lehdonvirta V 2018, *'The Online Labour Index'*, Oxford Internet Institute.

- LabourNet n.d., *'Shiksha.ai'*, LabourNet, viewed 13 September 2022.

- Mehrotra K 2022, *'How woman gig workers are protesting an Indian unicorn's unfair practices'*, Quartz India, 14 January, viewed 13 September 2022.

- Mothkoor V., Mumtaz F 2021, *'The digital dream: Upskilling India for the future'*, Ideas for India, 23 March, viewed 8 September 2022.

- National Commission for Women n.d., *'Digital Literacy and Online Safety Programme'*, NCW, viewed 13 September 2022.

- NITI Aayog 2022, *India's Booming Gig and Platform Economy Perspectives and Recommendations on the Future of Work*, NITI Aayog, New Delhi.

- One Future Collective 2022, *'Gig Workers and Social Security'*, OFC, 23 February, viewed 13 September 2022.

- Oxford Internet Institute 2022, *'A Fairwork Foundation: Towards fair work in the platform economy'*, OII.

- People's Union for Democratic Rights 2021, *Behind the Veil of Algorithms: Invisible Workers - A Report on Workers in the 'Gig' Economy*, PUDR.

- Pillai R., Nayyar A., Bajpai S., Gupta V., Dwivedi M., Keshav S 2022, *Challenges and Opportunities in the gig economy in a post-COVID world: Investigating the interactions between gig workers and platforms*, Sattva Consulting.

- Raman S., Saif R 2021a, *'Gender pay gap and occupational segregation have followed Indian women into gig economy'*, The Scroll, 12 January, viewed 9 September 2022.

- Raman S., Saif R 2021b, *'Gig Jobs Give Women Higher Incomes But Little Security'*, India Spend, 11 January, viewed 13 September 2022.

- Rani U 2021, *'The role of digital labour platforms in transforming the world of work'*, Rosa-Luxemburg-Stiftung, 20 July, viewed 8 September 2022.

- Rasheed N 2021, *'How Digital Literacy Can Bring in More Women to The Workforce'*, United Nations Development Programme, 27 April, viewed 28 September 2022.

- Rathi A., Sekharan A., Furtado C., Sanjay S 2021, *COVID-19 and Platform Work: Reflections on Institutional Responses*, Centre for Internet & Society and IT for Change.

- Raveendran G 2016, *The Indian Labour Market: A Gender Perspective*, UN Women.

- Scholz T 2018, *'We Are Poor but So Many": Self-Employed Women's Association of India and the Team of the Platform Co-op Development Kit Co-Design Two Projects'*, Platform Cooperative Consortium, 4 September, viewed 13 September 2022.

- Sehgal D., Yatharth 2022, *Designing domestic and care work platforms: A case study of Urban Company*, Centre for Internet & Society.

- Shanahan M 2022, *The Mobile Gender Gap Report 2022*, GSM Association.

- Shanker N 2020, *'The 'Whatever It Takes' Company'*, Urban Company, 25 September, viewed 9 September 2022.

- Singh S 2021, *'In India's informal economy, crores of women face gender bias and insecurity'*, The Scroll, 5 April, viewed 7 September 2022.

- Soni Y 2021, *'The gig workforce is growing but female participation remains low'*, The Hindu Business Line, 24 November, viewed 12 September 2022.

- Srivastava D., Patwal G 2022, *'Making India's Gig Economy Gender Inclusive'*, The Governance Post, 10 March, viewed 13 September 2022.

- Tandon A 2021, *'Gender and gig work: Perspectives from domestic work in India'*, London School of Economics, 21 October, viewed 12 September 2022.

- Torgalkar V 2022, *'India's gig economy is failing women workers'*, The Equal Times, 19 April, viewed 13 September 2022.

- UC Desk 2022, *'#UCUpskill — Rising with Urban Company'*, Urban Company, viewed 9 September 2022.

- Velayudhan S., Venkataraghavan S 2022, *'Women participation in gig economy: Why Urban Company's suit against protests by its "partners" calls for legal intervention'*, The Leaflet, 5 January, viewed 12 September 2022.

- Vrutti n.d., *'Platform for Inclusive Entrepreneurship (PIE)'*, Vrutti, viewed 13 September 2022.

- *What is platform economy* n.d., IGI Global, viewed 12 September 2022.

- *What is Reproductive Labour* n.d., IGI Global, viewed 12 September 2022.

- World Bank 2021, *'Kosovo Digital Economy (KODE)'*, World Bank, viewed 13 September 2022.

- World Bank 2022, *'Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate) - India'*, viewed 13 September 2022.