IT for Change Policy Brief | February 2019

Making the digital economy work for informal sector women in India



Anita Gurumurthy, Nandini Chami and Ira Anjali Anwar

1. Women's economic participation in India

Over the past two decades, women's labour force participation in India has been steadily falling and at 27.2%,ⁱ it is currently one of the lowest in the world. Between 2005-2012 alone, over 19 million women dropped out of the workforce, of which 53% were rural women.ⁱⁱ About 65% of economically active women are in the agricultural sector, 15% in manufacturing and 20% in services, as per the unit level data sets of Employment-Unemployment Surveys by the National Sample Survey Organisation (2011-12).ⁱⁱⁱ As noted by UN Women's 2016 analysis of the labour force in India, 99% of women employed in agriculture, 95% of women employed in manufacturing, and about 75% of women in the service sector are in informal employment.^{iv}

2. Digital restructuring of the economy and impacts on women

As the United Nations Conference on Trade and Development (UNCTAD) has highlighted in its Information Economy Report 2017, the global economy is being restructured by the forces of digitalisation. The digital economy today is not only about the production of ICT goods and services, but also about how 'digital intelligence' has led to a paradigm shift in business processes. Digital automation and robotisation of manufacturing, cloud computing, big data analytics, and AI technologies have led to a highly inter-operable and modular platform ecosystem that has altered business models in all sectors as well as the terms of competition.^v By extending the organisational and geographical fragmentation of work into new realms, especially R&D, product design, and other knowledge-intensive and innovation-related business functions, these changes, predicated on the digital revolution, reflect new pathways for economic power. This evolving digital economy is influencing global digital trade in goods and services that is growing exponentially. Global e-commerce has now become a force to reckon with, galloping from 16 trillion USD in 2013 to 25 trillion USD in 2015.^{vi} How developing countries can leverage new technologies for competitive advantage in the global value chain will have a bearing upon the future economic prospects of their population. The Indian economy, too, is in the thick of this transition. Economists predict that by 2025, the digital economy will be worth USD 1 trillion, contributing 18-23% of the national GDP.^{vii}

Exploratory research in the Indian context suggests that digital automation of manufacturing and platformisation of low-paid service work may make informality "an enduring, if not accelerating, condition" of labour markets

Research on the future of work clearly suggests that this ongoing digital restructuring of the economy will disrupt existing gendered patterns of employment.^{viii} Multi-country studies indicate that digital automation contributes to the polarisation of labour markets and the hollowing out of middle skilled jobs,^{ix} with women-dominated jobs at the greatest risk of being lost to such technology-led job displacement.^x Automation of manufacturing has also been observed to bring forth a gendered skill bias, with employers showing a preference for men.^{xi} Similarly, in the platformisation of service work, studies suggest that in global value chains, women from the global South are relegated to low-income service work,^{xii} furthering a gendered and racialised global division of labour.

Exploratory research in the Indian context suggests that digital automation of manufacturing and platformisation of low-paid service work may make informality "an enduring, if not accelerating, condition" of Indian labour markets.^{xiii} The wave of Industry 4.0 technology adoption has been co-terminus with the expansion of contract employment in India's manufacturing sector. Currently, it is male-dominated, capital-intensive manufacturing that is at the forefront of the adoption of Fourth Industrial Revolution (4I) technologies.^{xiv} But the highly feminised, labour-intensive, manufacturing segment of apparel/ garments is also expected to be significantly impacted in this regard.^{xv} Between 2011-16 alone, over 270 platforms cropped up in women-dominated, home-based service work (such as cleaning, cooking and beauty).^{xvi} In this gig economy¹ that is mediated by technology, platform companies may provide training for workers they on-board and facilitate access to jobs. While this provides a veneer of formalisation, studies have highlighted that it may not necessarily lead to an improvement in working conditions and bargaining power of the women workers involved.^{xvii} Also, experiences of gig workers in

¹ Gig economy refers to the current labour market scenario characterised by the prevalence of short-term contracts or temporary jobs. The advent of platforms/apps through which workers sell their labour on a task-by-task basis has led to the breakdown of permanent jobs into piece-meal contract work.

transportation and delivery/logistics platforms (such as Uber/ Swiggy)^{xviii} across different cities in India portend serious concerns about rights-violations, including of close surveillance, and lack of social protection for workers.

The agriculture sector that is the largest employer of women in India is also being rapidly re-organised by digital technologies. In recent years, several digital start-ups have sought to enhance efficiency and maximise value on agriculture value chains; providing farm advisories, access to financing, product aggregation and processing, price intelligence, and logistical support. Similarly, government agencies have attempted to use digital platforms to bring greater transparency in market prices and procurement processes. Yet, these measures have not really accounted for structural exclusions characterising women's unequal economic status and lack of access to resources like land, credit and technology. Marginal women farmers may not really benefit from market price information, given that they have no choice but to turn to land owners or local intermediaries for wage employment, credit and market linkages. Digital-only solutions obfuscate the real problems of lack of public policy support for agriculture, including in quality inputs, warehousing, transportation, minimum price support etc. Corporate players have stepped in to fill these gaps, platformising agriculture through digitally augmented logistics and business management systems, steering agriculture in the direction of 'farm-to-fork' consolidation.^{xix} In these emerging agro-supply chains, small-scale cultivation practices in which women predominate are displaced by corporate farming.^{xix} Data and research on the impacts of these shifts on women's livelihoods, local sustainability and economic sovereignty is necessary for appropriate policy interventions.

To understand gendered consequences of the digital economy, we should surface the 'lost livelihoods' that tend to be invisible, and address the precarity that makes survival a struggle.

There is very little research on how women engaged in retail trade (over 90% of whom are in informal street vending) are affected by the monopolistic and anti-competitive practices of e-commerce platform companies.^{xxi} While trader bodies such as the Retail Association of India have been very vocal about the adverse impacts of deep discounting and predatory pricing by platform companies such as Amazon and (Walmart-owned) Flipkart on neighbourhood stores, little is known about how street hawkers/vendors are affected. In the transition to the digital economy, *"we may not realise what job opportunities are being taken away, because in the first place, the majority are in the informal sector and may not be easily visible".*^{xxii} To understand gendered consequences of the digital economy, therefore, we should constantly surface the 'lost livelihoods' that tend to be invisible, and address the precarity that makes survival a struggle.

Impacts of the digital economy must be assessed in relation to trends in India that suggest a decline in work participation rates of women,^{xxiii} increasing informalisation,^{xxiv} and a distinct downward spiral in the employment

prospects of rural and dalit populations.^{xxv} Evidence before us suggests that the digital transition of key economic sectors – manufacturing, home-based services (mostly care work), agriculture, and retail trade – is relegating the large majority of women workers to an economic future marked by precarity.

3. A policy roadmap for transforming the lives and livelihoods of women in the informal sector

The flux catalysed by digital restructuring of the economy, especially an informal sector squeeze, urgently calls for new strategies to promote women workers' livelihoods and wellbeing. The task before us is to find creative and innovative pathways in the digital economy to expand women's real choices in the domain of work and employment, improving working conditions, enhancing opportunities for upward mobility, ensuring their access to social protection, and strengthening their sense of agency and autonomy.^{xxvi} The following recommendations outline the necessary policy action in this regard.

3.1. Appropriate laws to guarantee the rights of women workers in the digital economy

Upgrading labour laws: Informal workers in manufacturing and platformised service work need to be effectively protected through new legal frameworks that account for gendered trends in the digital economy. From minimum wages to decent work, social protection, and prevention of workplace discrimination, legacy laws need to be revisited. One issue that needs specific attention is the blurring of lines between 'employees' and 'independent contractors' in on-demand service work² that results in platform companies escaping employer liability. Given that women in informal service work have historically lacked access to trade union membership and collective bargaining power, platformised domestic work brings new challenges. See **Box 1**.

Box 1. Guaranteeing labour rights in platformised domestic work

On-demand domestic work platforms are not currently under any obligation to disclose details about the contractual terms under which they engage workers, including worker-client matching.^{xxvii} They often introduce discriminatory demographic criteria (such as caste, religion and marital status of workers) in the matching process.^{xxviii} The obligations of platforms to guarantee fair wages and safe working conditions in the client households are not very clearly spelt out. Considering that domestic workers are already an extremely vulnerable constituency with limited bargaining power, such protections must be put in place. Regulation that encompasses platform accountability in respect of fairness and non-discrimination as well as application of existing laws for protection from sexual harassment and workplace exploitation is urgently needed. Women workers in platform-based service work must have mandatory access to information about their rights.

Regulating platforms operating in retail and agriculture: Platform companies are not just marketplaces. They are orchestrators of the entire market ecosystem, modularising and controlling every aspect of production and distribution (from inputs to warehousing, inventory management, logistics and, even, credit). Their market power derives from their hold over the intelligence capital they accrue from big data analytics, which allows them to

game and capture the market. In order to safeguard women street vendors from the monopolistic and unfair trade practices of e-commerce companies, we need clear rules to maintain the digital marketplace as a level playing field. The proposed national e-commerce policy under deliberation in India is seeking to address some of these aspects – curbing deep discounting, predatory pricing and other competition law violations by e-commerce platforms, alongside regulating their data practices.

The livelihoods of marginal women farmers must be protected against the onslaught of corporatised and centralised farming models introduced by agriculture/horticulture platforms. Consumption-driven cultures of farm practices can undermine traditional farming practices, adversely affecting food security and long term economic sovereignty and sustainability. Policies on market access conditionalities for agriculture platform companies (which could include de-limiting the crops/ geographic areas in which they can operate, regulating the terms on which small farmers are on-boarded, setting quotas for sourcing produce from women farmer cooperatives etc.) are urgently required. Alternative platform models that enable marginal women farmers to benefit from the new efficiencies of digital intermediation and data analytics in the agricultural value chain must also be explored. See **Box 2** below.

Box 2. How platform models can benefit women farmers

Platform models in agriculture can be designed to ensure that small producers – lacking in access to appropriate market information, timely and appropriate agro-inputs, credit and bargaining power and often subject to exploitative terms – enjoy a fair share of economic gains in the market. IT for Change's research on such models shows how support from intermediary organisations like social enterprises that are embedded in the local context can enable farmer producer organisations to adopt digitally augmented methods.

Ekgaon, a social enterprise operating in Mandla district in Madhya Pradesh, India, has set up an e-tail platform and an interlinked Farming as a Service (FaaS) model that markets over 190 organic commodities primarily sourced from women farmer producer companies from 250 villages. Ekgaon uses data analytics to provide personalised advisories, credit matching services, price intelligence for marketing, and pooling of land parcels of member farmers for enhancing productivity. Working within this context of small land holding and tight finances, the organisation has created a platform model offering productivity gains and livelihoods guarantee for all players in the ecosystem. In addition to this, Ekgaon has engineered successful partnerships with state departments and agencies to create a system of support for the network of farmer producers that allows for more stable access to seeds, finance, storage and processing facilities and so on. The approach engages traditional intermediaries in the village supply chain such as village aggregators and traders, but ensures that value is equitably distributed among various actors. While Ekgaon pays traders above market rate, there is also a check on the commission for such intermediaries. All producer company shareholders on the Ekgaon platform also hold equal shares in the enterprise to counter elite capture. Value addition along the supply chain is also being experimented and localized in various ways and there is an effort to pass on/decentralise value as much as possible downstream in the supply chain.

IT for Change Policy Brief

Instituting social protection for unorganised sector workers: As noted, the majority of women in the workforce in India are in the informal sector, with no access to social security. The budgetary allocation of public-funded social security schemes for unorganised sector workers needs to be expanded considerably from the current paltry levels of 0.57%, in order to provide an effective social safety net for all women.^{xxix}

The Government of India has put forth a proposal for a Social Security Fund (through its draft National Social Security Code for Unorganised Workers). While the proposal implicitly recognises the fluidity of work in the gig economy and the need for portable social protection, the Fund needs some modifications. Firstly, a provision for state contribution, and secondly, as has been implemented in some European countries, an employer levy collected from gig work platforms. ^{xxx}

The government must include a provision for state contribution, and an employer levy collected from gig work platforms, in its proposed Social Security Fund for informal workers

Curtailing dataveillance at the workplace: In the digital society, new forms of invasive worker monitoring practices are taking root – intrusive video surveillance, haptic wristbands for real-time tracking, and AI tools that profile workers for management decisions on promotions, performance review and disciplinary action. These trends are percolating to India as well. Studies reveal that video surveillance has a deeply gendered element, and often leads to sexual harassment by male supervisors in the guise of 'disciplining'.^{xxxi} Other forms of dataveillance, including social media profiling, are also likely to reinforce deep-rooted gender bias and negative stereotyping. What this calls for is dedicated attention to the issue of women workers' data rights. Policy measures to safeguard women from workplace exploitation and discrimination in relation to AI are necessary.^{xxxii}

3.2. Public goods to promote women's equal participation in the digital economy

Linking digital literacy programmes to a comprehensive strategy for girls' education and enskillment:

Digital literacy programmes such as PM DISHA^{xxxiii} must be transformed from a stand-alone, 'add-and-stir-women' type of intervention to an integrated strategy for strengthening girls' education and enskillment that is also linked to other vocational and open education programmes. In higher education, especially in the area of advanced technology skills, incentives must be introduced to promote young women's participation. For women working in sectors where a high degree of technology-induced job displacement is expected, targeted short term reskilling courses must be instituted through programmes such as Skill India, along with a monthly stipend.

February 2019

Digital public goods must be created to promote opportunities for income generation and entrepreneurship, especially of self-employed women in the informal sector

Investing in digital public goods: Access to affordable connectivity is an important strategy for promoting women's economic empowerment in the context of digitalisation, as acknowledged by the UN Secretary General's High Level Panel on Women's Economic Empowerment.^{xxxiv} But there are other equally important digital public goods that must be created to promote opportunities for income generation and entrepreneurship, especially of self-employed women in the informal sector. For example, national and state governments need to set up publicly funded e-commerce marketplaces that provide preferential terms (low commissions, for example) to local women producers, micro-entrepreneurs and artisans. Such initiatives can support women and women's groups in the local economy by deploying big data to nudge consumers towards goods produced by them. Similarly, a national labour portal set up by the government to connect service workers to clients across different cities can enable women to take advantage of employment opportunities on a nation-wide scale. Such an initiative needs to link women registered on the portal to appropriate social security schemes, and set up grievance redress mechanisms.

Women farmer producer organisations and service worker unions could benefit from a seed fund to set up their own platforms, organised on co-operativist principles (eg. Up and Go^{xxxv} platform operating in New York City). Such alternatives to mainstream platform models that tend to be exploitative can provide viable and sustainable options for the future of women's work in the digital economy.

Women often lack credit history and collateral, which prevents them from accessing formal credit. Fintech solutions have been heralded as a game changer for such under-served segments. However, the private fintech sector has been criticised for its non-transparent and unaccountable algorithms-based, credit-rating practices. The Reserve Bank of India's proposal to set up a digital credit registry for real-time credit history tracking and credit scoring of individual borrowers can potentially democratise access to formal credit systems for informal sector women workers, also allowing public scrutiny.^{xxxvi} It would also be worthwhile to use such a public credit registry as the basis for providing marginalised women with preferential access to institutional credit through positive discrimination.

The success of these initiatives is predicated on structural reforms that account for gender equality in the economy and society – enhanced credit availability, land ownership, support for making agriculture viable and sustainable, availability of public higher education institutions across the country, incentives for social enterprises

that use digital innovation for women's economic empowerment, and shifts in socio-cultural practices. It is also linked to an effective rule of law regime to curb collusion between powerful corporations and state actors and protect the environment and ecological commons from exploitation.

3.3. Public funding for research on gendered patterns of employment in the digital economy

Creating quantitative and qualitative data sets: Appropriate interventions for women's empowerment in the digital economy depend on robust data. In a context when all sectors are being transformed in the fourth industrial revolution, the government must restore the NSSO employment-unemployment surveys,^{xxxvii} a valuable source of data for evaluating long-term trends in employment patterns of women and men.

Appropriate interventions for women's empowerment in the digital economy depend on robust data

Research that brings in a gender-based theoretical understanding of the digital economy is urgently needed. Some potential areas include:

- impacts of digital restructuring on gendered patterns of employment, especially focusing on women workers in the informal economy

- digital automation and its impacts on women workers in labour-intensive industries

- gendered consequences of workplace dataveillance

- compliance of platform companies with legislation on women workers' rights

- platform models in agriculture, retail and services, and their gender based impacts in relation to livelihood security, social protection, and access to redress

- stocktaking of public policies, public financing and programmes concerning women informal workers' participation in the digital economy.

- i Verik, S. (2014). *Women's labour force participation in India: Why is it so low?* New Delhi: International Labor Organization. Available at: <u>https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/genericdocument/wcms_342357.pdf</u>
- ii Bhandare, N. (2017). Why Indian Workplaces Are Losing Women. The Wire Available at: https://thewire.in/labour/indian-workplaces-losing-women-nationwide
- iii National Sample Survey Office (2014). Employment and Unemployment Situation in India, NSS 68th round. [online] New Delhi: Ministry of Statistics and Program Implementation, Government of India. Available at: http://www.icssrdataservice.in/datarepository/index.php/catalog/92
- iv Raveendran, G. (2016). *The Indian Labour Market: A Gender Perspective*. UN Women discussion paper series. [online] UN Women, p.30. Available at: <u>http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2016/indianlabourforcean</u> <u>alysis.pdf?la=en&vs=3510</u>
- V UNCTAD (2017). *The New Digital Economy and Development*. UNCTAD Technical Notes on ICT for Development. [online] Geneva: United Nations. Available at: <u>https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d08_en.pdf</u>
- vi UNCTAD (2017). Information Economy Report 2017, Digitization, Trade and Development. United Nations Conference on Trade and Development. Geneva: United Nations, p.2. Available at: <u>https://unctad.org/en/PublicationsLibrary/ier2017_overview_en.pdf</u>
- vii Singh, S. (2018). India's way to \$1 trillion digital economy. *The Economic Times*. Available at: <u>https://economictimes.indiatimes.com/news/economy/indicators/indias-way-to-1-trillion-digital-economy/articleshow/63561270.cms?from=mdr</u>
- viii Galperin ed., H. and Alarcon ed., A. (n.d.). *The Future of Work in the Global South*. International Development Research Center. Available at: <u>https://fowigs.net/wp-content/uploads/2018/10/FutureOfWorkintheGlobalSouth.pdf</u>
- ix Santos, I. (2016). Labor market polarization in developing countries: challenges ahead. *The World Bank*. Available at: <u>http://blogs.worldbank.org/developmenttalk/labor-market-polarization-developing-countries-challenges-ahead</u>
- x Brussevich, M. et al. (2018). *Gender, Technology, and the Future of Work*, International Monetary Fund . Available at: <u>https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2018/10/09/Gender-Technology-and-the-Future-of-Work-46236</u>.
- xi Albanesi, S. and Sahin, A. (2013). Jobless Recoveries and Gender-Biased Technological Change. Federal Reserve Bank of New York. Available at: <u>https://editorialexpress.com/cgi-bin/conference/download.cgi?</u> <u>db_name=SED2013&paper_id=985</u>
- xii van Doorn, N. (2017). Platform labor: on the gendered and racialized exploitation of low-income service work in the 'on-demand' economy. *Information, Communication & Society*, 20(6), pp.898-914. Available at: <u>https://doi.org/10.1080/1369118X.2017.1294194</u>
- xiii Aneja, U. (2018). Informal Will be the New Normal in the Future World of Work. *The Wire*. Available at: <u>https://thewire.in/labour/informal-will-be-the-new-normal-in-the-future-world-of-work</u>
- xiv Tandem Research (2018). *Emerging Technologies & The Future of Work in India*. New Delhi: International Labour Organization. Available at: <u>https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_631296.pdf</u>
- xv Emont, J. (2018). Rise of the robots: Automation threatens garment workers in poor countries. *Business Standard*. Available at: <u>https://www.business-standard.com/article/international/rise-of-the-robots-automation-threatens-garment-workers-in-poor-countries-118021700112_1.html</u>
- xvi Chopra, A. (2017). How UrbanClap grew one on-demand service at a time. *Livemint*. Available at: <u>https://www.livemint.com/Companies/ck6h9KKDL9Aw1SCgzvMLRM/The-building-of-UrbanClap-one-ondemand-service-at-a-time.html</u>

- xvii J Wood, A., Graham, M. & Lehdonvirta, V. (2018). Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy. SAGE journals . Available at: https://journals.sagepub.com/doi/full/10.1177/0950017018785616.
- xviiiBhattacharya, A. (2018). India's gig-economy apps are fighting the monsters they made. *Quartz*. Available at: <u>https://qz.com/india/1489505/indias-ola-oyo-zomato-swiggy-makemytrip-face-backlash/</u>.
- xix WEF. (2014). *Enabling Trade: From Farm to Fork*, Geneva : World Economic Forum . Available at: <u>http://reports.weforum.org/enabling-trade-from-valuation-to-action/wp-content/blogs.dir/38/mp/files/pages/files/2-</u> <u>enabling-trade-from-farm-to-fork.pdf</u>
- xx GRAIN. (2019). *How RCEP affects food and farmers*. Available at: <u>https://www.grain.org/article/entries/5741-how-rcep-affects-food-and-farmers</u>
- xxi Raveendran, G. (2016). *The Indian Labour Market: A Gender Pespective*. UN Women discussion paper series. UN Women, p.30. Available at: <u>http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2016/indianlabourforcean</u> alysis.pdf?la=en&vs=3510
- xxii The Research Unit for Political Economy (R. U. P. E.) (2017). *Aspects of the Indian Economy*. R.U.P.E. Available at: <u>http://www.rupe-india.org/68/gulffour.html</u>
- xxiii Verik, S. (2014). Women's labour force partici pation in India: Why is it so low? New Delhi: International Labor Organization. Available at: <u>https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/genericdocument/wcms_342357.pdf</u>
- xxiv Tandem Research (2018). *Emerging Technologies & The Future of Work in India*. New Delhi: International Labour Organization. Available at: <u>https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_631296.pdf</u>
- xxv Iversen , V., Krishna , A. & Sen , K. (2017). Rags to Riches? Intergenerational Occupational Mobility in India. *Economic & Political Weekly*, 52(44). Available at: <u>https://www.epw.in/journal/2017/44/special-articles/rags-riches-intergenerational-occupational-mobility-india.html</u>
- xxvi UN Secretary-General's High-Level Panel on Women's Economic Empowerment (2017). Leave No One Behind, Taking Action for Transformational Change on Women's Economic Emplowerment. Available at: <u>http://www2.unwomen.org/-/media/hlp%20wee/attachments/reports-toolkits/hlp-wee-report-2017-03-taking-actionen.pdf?la=en&vs=5226</u>
- xxvii Hunt, A. and Machingura, F. (2016). *A good gig? The rise of on-demand domestic work*. England: Overseas Development Institute. Available at: <u>https://www.odi.org/sites/odi.org.uk/files/resource-documents/11155.pdf</u>

xxviii Hiriyur, S. (2018). Are Service Apps For Domestic Workers Reproducing Old Systems Of Power?. *Feminism in India*. Available at: <u>https://feminisminindia.com/2018/08/06/service-apps-domestic-workers/</u>

- xxix Satpathy, S. (2018). *Social Protection to Mitigate Poverty: Examining the Neglect of India's Informal Workers*. ORF Issue Brief. Observer Research Foundation. Available at: <u>https://www.orfonline.org/wp-content/uploads/2018/09/ORF Issue Brief 256 SocialProtection N.pdf</u>
- xxx Gurumurthy, A, Bharthur, D. & Chami, N. (2018). Policies for the platform economy, Current Trends and Future Directions, IT for Change . Available at: <u>https://itforchange.net/platformpolitics/wpcontent/uploads/2018/09/Mid_Project_Reflections_2018.pdf</u>
- xxxi Ranganathan, N. (2017). *Caution Women at Work: Surveillance in Garment Factories*, Internet Democracy Project. Available at: <u>https://genderingsurveillance.internetdemocracy.in/cctv/</u>.
- xxxii Mateescu, A. & Nguyen, A. (2019). EXPLAINER: Workplace Monitoring & Surveillance. *Data Society*. Available at: <u>https://datasociety.net/wp-content/uploads/2019/02/DS_Workplace_Monitoring_Surveillance_Explainer.pdf</u>.
- xxxiii Pmgdisha.in. (n.d.). Pradhan Mantri Gramin Digital Saksharta Abhiyan. Available at: https://www.pmgdisha.in/

- xxxiv UN Secretary-General's High-Level Panel on Women's Economic Empowerment (2017). *Leave No One Behind*, *Taking Action for Transformational Change on Women's Economic Emplowerment*. Available at: <u>http://www2.unwomen.org/-/media/hlp%20wee/attachments/reports-toolkits/hlp-wee-report-2017-03-taking-action-en.pdf?la=en&vs=5226</u>
- xxxv Anzilotti, E. (2018). Worker-owned co-ops are coming for the digital gig economy. *Fast Company* . Available at: <u>https://www.fastcompany.com/40575728/worker-owned-co-ops-are-coming-for-the-digital-gig-economy</u>

xxxvi Acharya , V. (2019). Some Reflections on Micro Credit and How a Public Credit Registry Can Strengthen It. *Reserve Bank of India*. Available at: <u>https://rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1069</u>.

xxxvii Mitra, S. (2018). Why the NSSO Employment Surveys Shouldn't Have Been Done Away With. *The Wire*. Available at: <u>https://thewire.in/economy/why-the-nsso-employment-surveys-shouldnt-have-been-done-away-with</u>.