Improving Female Labor Force Participation through Flexible, Internet-mediated Gig Work in India

Researchers:

Lisa Ho

Anahita Karandikar

Sector(s): Gender, Labor Markets

Location: Kolkata, West Bengal, India

Sample: 1,670 households

Initiative(s): Jobs and Opportunity Initiative (JOI)

Target group: Women and girls

Outcome of interest: Employment Gender attitudes and norms

Intervention type: Alternative work arrangements Employment Technology

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Partner organization(s): Calcutta Foundation, Microsoft Research Bangalore

Hundreds of millions of women around the world who want a job are out of the labor force, often because existing opportunities are incompatible with traditional norms of household roles. In India, researchers conducted a randomized evaluation to test the impact of a flexible, digital gig work opportunities on women's labor supply, uptake of employment opportunities, implications for worker productivity, and women's interest in future outside-the-home work opportunities. Women offered flexible working arrangements were three times more likely to take up work than those offered an office job, and were more likely to accept outside-the-home work several months later.

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Millions of women around the world would like to work or work while caring for their families, yet less than half of all adult women have paid work. There exists a discrepancy between the types of jobs available and people's preferences for women's work, as 70 percent of women and 66 percent of men globally say they prefer women to have paid jobs in 2016.[1], This missed opportunity not only has financial consequences but also impacts women's agency, as independent income can increase empowerment. In many low- and middle-income countries where women's participation in the labor force is low, evidence points to social norms as a key barrier, though interventions aimed to change gender norms have had limited success.[2]

An alternative approach may be adapting jobs to be more accessible and compatible with the existing norms of women's domestic responsibilities. As internet-based "gigs" proliferate in low- and middle-income countries, leveraging technology to promote accessible employment could provide women an opportunity to earn income while balancing household responsibilities. Can internet-mediated, flexible work arrangements that allow women to work from home, choose their hours, and multitask with childcare—increase women's labor force participation, change traditional gender attitudes, and act as a stepping stone for women to work outside the home?

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Despite growth in India's gig economy over the past ten years, the women's labor force participation rate has largely stagnated. In 2022, 28 percent of women in India participated in the labor force compared to three quarters of men.[3], Over this time period, opportunities in India's gig economy have grown, but most gig workers are young, urban men.[4]

This evaluation took place in rural, peri-urban, and urban areas of Kolkata, West Bengal where the female labor force participation rate in 2012 was among the lowest among all states in India.[5] On average, women who participated in the study were 30 years old, 93 percent were married, and 48 percent had childcare responsibilities for a young child. Male figures played a large role in whether women work, with only 36 percent of women reporting they had the final say over having a paid job. Prior to the study, 69 percent of women reported having never worked for pay.



A woman sits with her family, showing them something on her smartphone as they gather around her.

Photo credit: Shutterstock.com

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Researchers partnered with Project Karya at Microsoft Research, a smartphone-based job task platform, to conduct a randomized evaluation to test the impact of a flexible, part-time, and digital gig work opportunity on women's take up of employment opportunities, as well as on gender attitudes of women and their children. Researchers randomly assigned 1,670 women to one of the following work arrangements:

1. *Flexible + childcare (208 women):* Women were offered a gig job that could be done from home, at the hours the participant wished to work, and allowed multitasking with childcare.
2. *Flexible + no childcare (209 women):* Women were offered a gig job that could be done from home and at the hours the participant wished to work, but without multitasking with childcare.
3. *Fixed timeslot + childcare (208 women):* Women were offered a gig job that could be done from home while multitasking with childcare but at a fixed timeslot each day.
4. *Fixed timeslot + no childcare (210 women):* Women were offered a gig job that could be done from home, but at a fixed timeslot each day and without multitasking with childcare.
5. *Office work (415 women):* Women were offered a gig job which required them to go to a central neighborhood location with fixed hours.
6. *Comparison group (420 women):* participants were not offered a job.

The gig work included recording oneself speaking specific sentences in Bengali or Hindi and verifying that the recordings were labelled correctly. Women were paid approximately INR 1 (US$0.013 in 2021) per completed task with the ability to earn up to INR 4,000 ($52 USD) over the course of the intervention.

Before women began the work, researchers randomly offered half of the women in the less-flexible groups (groups 2-5) the possibility of switching, or "upgrading," to the most flexible arrangement (group 1). The change in job offer allowed the research team to both understand how job performance changed if women were given greater flexibility, and to understand what types of women select into flexible working arrangements. Researchers implemented the intervention in two rounds of four weeks each, several months apart, o measure the effect of having a previous job on the take-up of future jobs.

Before the study, researchers collected information on women's job preferences, technology use, time use, and gender attitudes. Researchers then measured women's participation and productivity under the various work arrangements, as well as women's and their children's attitudes toward gender norms.

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Women who were offered flexible working arrangements were more likely to start working compared to those offered traditional office positions. Additionally, women who were initially offered flexible jobs were more inclined to take office jobs several months later and held less traditional attitudes.

Starting work: Women who received the most flexible work offers—allowing them to work from home, choose their hours, and continue providing childcare—were 33 percentage points (228%) more likely to start work compared to those offered traditional office jobs. Only 14.6 percent of women who were offered an office job started work. This increase was primarily due to the ability to work from home and multitask with childcare, rather than work flexible hours.

Women's gender attitudes also played a role in their decision to start work. Women who had less traditional gender attitudes at baseline were more likely to take up any job offer than women with more traditional views.

Job performance: Women who started with an office job and were given the upgrade to work flexibly and accepted produced 19 percent less per minute compared to women who were not selected for the upgrade. Women who upgraded to working from home had, on average, 10-minute shorter work sessions compared to those who were not offered the upgrade due to possible interruptions at home like childcare duties. These breaks were costly to productivity because of flow effects.

Future work experience: When women were offered a job ten weeks later those who were originally assigned to a more flexible job were 6 percentage points more likely to take it up than women who did not previously hold a more flexible job. In contrast, being

offered an equally flexible or less flexible job in the first round had no effect on job take up ten weeks later. Researchers explain that work experience shifted women's attitudes to become more supportive of women at work. Women assigned to any type of job became 0.05 standard deviations less traditional on average, with effects driven by women whose views were more traditional before the intervention.

Children's gender norms and father's behavior: Children over 12 years old whose mothers were assigned any job became 0.1 standard deviations less traditional whereas the attitudes of younger children did not change. Children whose mothers were assigned to any job were also 9 percentage points more likely to report that their fathers ever helped with cooking, cleaning, and childcare, compared to 58 percent of fathers in the comparison group (a 16 percent increase).

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