

What Works to Close Digital Gender Gaps?

Photo by Ishan Tankha



BACKGROUND

In emerging economies like India, the rapid spread of mobile phones has connected low-income households to vital information, markets, and services. In 2016, India became the second-largest smartphone market in the world (GSMA, 2016) and in 2017, the year before the two policy levers we evaluated were implemented, 45 percent of Indian citizens already had smartphone access (GSMA, 2018b). However, this smartphone expansion remains gendered. Despite cheap handsets and data, India's gender gap in mobile ownership in 2017 was 23 percent, and the gap in mobile internet usage was 68 percent (GSMA, 2018a). A combination of factors linked to household income, digital literacy and education, and gender norms limits Indian women's access to, and use of, mobile technologies.

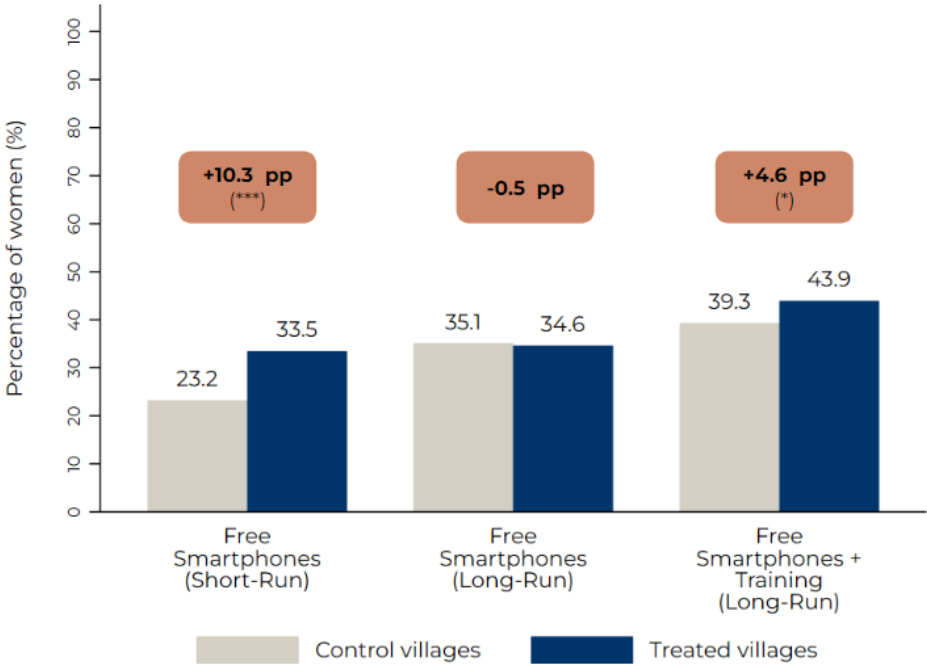
KEY FINDINGS

- Phones provide crucial access to information, networks, and resources, but women in India lag men in ownership and usage.
- Researchers in the Inclusion Economics network evaluated a large, state-run phone distribution program in India and a complementary digital literacy training to assess their potential to close digital gender gaps.
- Despite initially reversing the gender gap in smartphone ownership, the smartphone distribution program had no long-term impact on digital gender gaps.
- In contrast, low-cost digital literacy training had lasting impacts, increasing women's smartphone use and their use of advanced phone tasks.
- Digital literacy training also improved women's mental health and connections with others, highlighting how phones can improve women's well-being in settings where their mobility and networks are limited.

In rural Chhattisgarh, a relatively remote, low-income state in central India, we studied two policy tools designed to close digital gender gaps. In 2018, Chhattisgarh implemented a program called Sanchar Kranti Yojana, or SKY. SKY distributed over 2 million free smartphones to female household heads, along with 1 GB of free mobile data. The government also constructed LTE (4G) towers to cover eligible communities that lacked high-speed data coverage. Community-level program eligibility was determined based on a population threshold, allowing us to assess the causal impact of SKY approximately 4 years after occurred. To do this, we leveraged the program targeting criteria, working with IDInsight to conduct surveys with over 20,000 respondents living in communities just above and below the program population threshold across 13 districts in Chhattisgarh.

In this same setting, our research team assessed barriers to women’s phone use, identifying the importance of gendered skill gaps (Barboni et al., 2018). In a second study, we tested the relevance of addressing skills barriers through digital literacy training, using a randomized controlled trial (RCT) across 212 villages in rural areas of a single district. Importantly, all these villages were eligible for SKY, so we evaluated the impact of training in a setting where women also received free smartphones. In these 45-minute trainings, we taught women key phone-related skills, including how to “wake up” the phone, dial a call, save a number, answer a call, and conduct a voice-based Internet search. Women received take-home handouts with simple visual instructions for common mobile phone tasks. These small-group trainings were interactive, allowing women to try out new skills as they were being taught. As part of the study design, we also randomized the timing of a baseline survey, with half the respondents interviewed in the weeks preceding phone distribution and half in the weeks following, allowing us to estimate the immediate effects of SKY.

Effect of potential policy levers on women’s advanced phone use



In the short run, free smartphones increase women’s use of phones for advanced tasks. However, in the long run, this effect disappears. When supplemented with training, advanced usage increased by 4.6 pp.

IMPACTS ON WOMEN'S PHONE OWNERSHIP AND USAGE

The distribution program immediately affected women's smartphone ownership and use, increasing women's reported smartphone ownership by 56 percentage points — reversing the gender gap. It had a smaller, but significant, impact on women's advanced phone usage (which we define as engaging in smartphone-specific tasks like taking a picture, watching a video, or surfing the web) — which increased by 10.3 percentage points.

Approximately four years later, across the sample of 13 districts where we examined the impact of free phone distribution on phone ownership, less than a quarter of women reported that the phone they used was their own. In comparable non-treated areas, a similar percentage of women reported owning a phone, meaning SKY did not significantly improve women's phone ownership over the long term. In terms of usage, 56 percent of the women surveyed in the multi-district survey reported having used a smartphone in the past 30 days; again, there was no difference between women in treated and non-treated villages. The gender gap is similar: women are 13 percentage points less likely to use smartphones than men in both SKY and non-SKY villages. This early evidence suggests that - on average - the phone distribution program impacted women's phone engagement in the short-, but not the long-, run.

The impacts of digital literacy training are more encouraging. Three years after training, women invited to the training were more than 4 percentage points more likely to have used a smartphone in the past month. These women were also more likely to use phones for advanced uses. Alongside phone-related impacts, training had important downstream consequences for women — expanding their social networks, increasing their interactions with family members, and improving their mental health.

POLICY LESSONS

As digital activities become more essential to economic and social engagement, reducing gender gaps in mobile phone ownership and usage is a policy priority. Our research, which leverages a large-scale mobile phone distribution program for women in India, shows that simply giving women free smartphones is insufficient in helping them overcome the varied restrictions that contribute to the gender gap. In contrast, combining phone distribution initiatives with training programs that enable women to utilize phones can help close gender gaps while also improving important indicators of well-being, including women's mental health.

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Inclusion Economics' network of researchers ask how policy can promote inclusive and accountable states, markets, and societies; and how citizens — especially the marginalized — can gain influence to make political and economic systems more responsive to their needs. Inclusion Economics at Yale University (YIE) is a collaboration between the Economic Growth Center and the MacMillan Center. The Inclusion Economics network spans YIE, Inclusion Economics India Centre at the Institute for Financial Management and Research (IFMR), Inclusion Economics Nepal at Governance Lab, and exploratory engagements in Sub-Saharan Africa.



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