



Policy Brief

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Does distributing phones close gender gaps in digital financial services?



Executive summary

In rural India, digital financial services have the potential to drive financial inclusion, particularly in the wake of the government's push to achieve near-universal account ownership and expand rural financial service points. Despite this progress, there are large gender gaps in the use of digital financial services (DFS). Researchers affiliated with Inclusion Economics worked with a state government to evaluate whether

distributing smartphones to rural women could reduce digital gender gaps in phone and DFS access. Approximately four years later, women in communities receiving phones were no more likely to own or use a smartphone than women living in areas that did not benefit from phones, and these women were no more likely to use or know about DFS. The gap in DFS use persists even when focusing only on recent smartphone users. Together, these results suggest that addressing device affordability alone is not enough to close the gender digital divide. In contrast, other research in the same location points to the potential of digital literacy training to help close digital gender gaps.

Introduction

Mobile phone access can improve market functioning^{1,2} and increase access to poverty-reducing financial services.³ Smartphones could be particularly important to expand low-income populations' access to digital financial services (DFS), since they are often the primary means individuals access the Internet. India, the focus country of this study, is a global leader in its efforts to rapidly expand infrastructure to enable inclusive access to DFS, including through expanding access to bank accounts, new financial service points, and access to unique digital IDs. Yet mobile access is not equal: similar to many other settings in South Asia and Sub-Saharan Africa, Indian women trail men in smartphone ownership and usage, leaving them excluded from the potential benefits of Internet-enabled smartphones.

This team's research has shown that economic factors interact with gender norms governing phone use, safety, mobility, and more to constrain women's digital engagement.⁴ Though cost is often reported as the most important barrier to women's phone engagement,⁵ limited evidence exists on how addressing this economic barrier alone will impact women's access to DFS. (In Malawi, phone distribution increased mobile money use, but evidence suggests that DFS using basic phones was easier for women to navigate than smartphone-based DFS apps).⁶ Fortunately, in 2018, the state of Chhattisgarh implemented Sanchaar Kranti Yojana (SKY), a program distributing free smartphones to female household heads and providing 1 GB of free data monthly for 6 months after distribution. Through studying SKY, it is possible to ascertain whether distributing devices in an environment of expanding DFS is enough to close respective gender gaps.

Research approach

To understand the impact of SKY, researchers leverage the program's design, which targeted village clusters based on a population threshold. Comparing outcomes in communities just above and below the program

¹ Aker, J. C. and M. Fafchamps (2015, 10). *Mobile Phone Coverage and Producer Markets: Evidence from West Africa*. The World Bank Economic Review 29 (2), 262–292. <https://doi.org/10.1093/wber/lhu006>

² Jensen, R. (2007). The digital provide: The Digital Provide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector. *Quarterly Journal of Economics* 122, 879–924. <https://doi.org/10.1162/qjec.122.3.879>

³ Suri, T. and W. Jack (2016). The long-run poverty and gender impacts of mobile money. *Science* 354 (6317), 1288–1292. <https://doi.org/10.1126/science.aah5309>

⁴ Barboni, G., E. Field, R. Pande, N. Rigol, S. Schaner, and C. Troyer Moore (2018). A Tough Call: Understanding Barriers to and Impacts of Women's Mobile Phone Adoption in India. Available [here](#).

⁵ Jefferie, N., Bahia, K., Carboni, I., Lindsey, D., Sibthorpe, C., and J. Zagdanski (2023, 5). The Mobile Gender Gap Report 2023. GSMA. Available [here](#).

⁶ Roessler, P., Carroll, P., Myamba, F., Jahari, C., Kilama, B., and Nielson, D. (2021, April). *The Economic Impact of Mobile Phone Ownership: Results from a Randomized Controlled Trial in Tanzania* (CSAE Working Paper WPS/2021-05). Available [here](#).

cutoff allows estimation of the impact of phone distribution on women’s awareness of, and access to, DFS.⁷ Four years after phone distribution, the research team collaborated with their in-country partner, Inclusion Economics India Centre, with data collection support from IDInsight to survey over 20,000 men and women living in 687 village clusters around the cutoff, spanning 13 districts throughout Chhattisgarh. To understand community-wide effects, including whether SKY spurred the arrival of new financial service points, the research team also conducted nearly 3,000 interviews with local leaders in each of these village clusters.

Findings

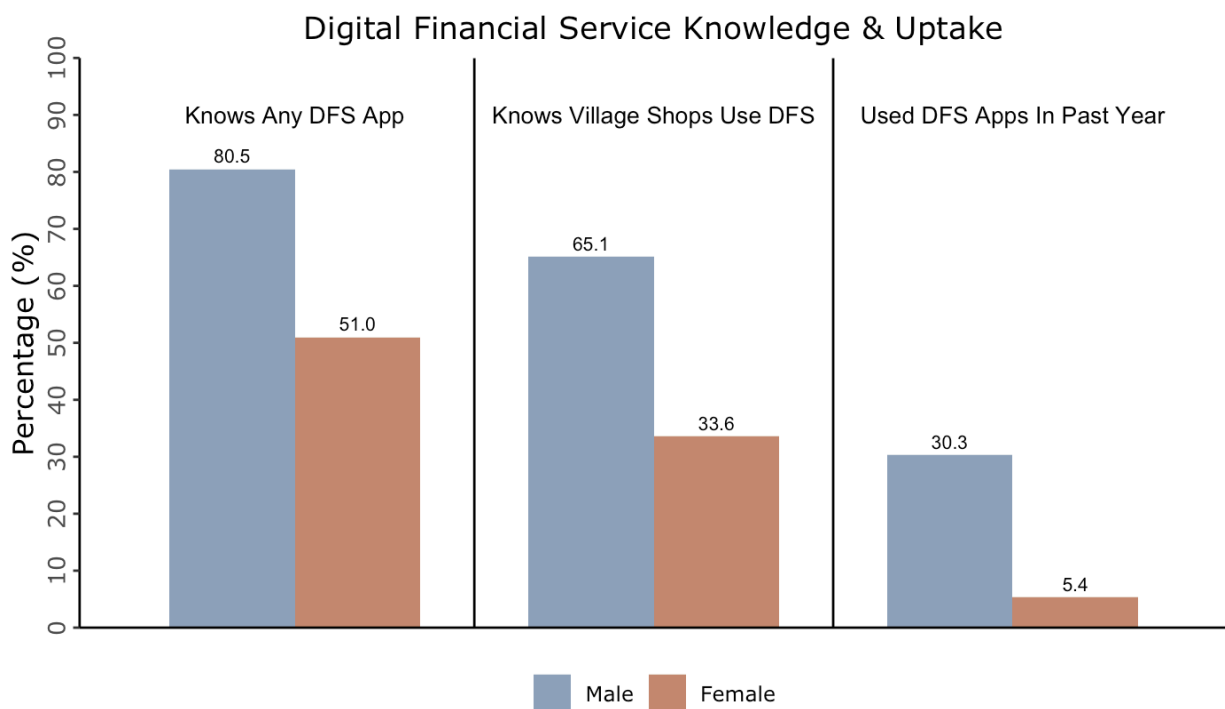
SKY was well-implemented, but short-term reductions in the smartphone ownership gender gap (documented by the research team in 2018) had dissipated four years after distribution.⁸ By 2023, smartphone adoption was widespread, with 84% of households owning at least one device. Yet women in communities covered under SKY were no more likely to have access to, or use, smartphones than women located in non-SKY communities. On average, just over 1 in every 3 women had engaged in what the research team considers an advanced task (smartphone-specific tasks like taking a picture, watching a video, or surfing the web). Similarly, SKY had no impact on women’s DFS awareness or use.

The gender gap in DFS use persists even when focusing only on active smartphone users. It is possible that some of the gap in DFS use simply reflects women’s lower access to smartphones, but Figure 1 below highlights how DFS-related gender gaps remain large even when researchers focus on individuals who report recent smartphone use. Among recent smartphone users, women are still nearly 30 percentage points less likely to know about any DFS-related app, and only 5 percent of women, compared to over 30 percent of men, had used an app in the past year.⁹

⁷ See pre-analysis plan registered [here](#).

⁸ Troyer Moore, C., Barboni, G., Field, E., Pande, R., Rigol, N., Schaner, S., Jorgensen, E., and H. Balarama (2024, 2). What Works to Close Digital Gender Gaps? *Inclusion Economics*, policy brief. Available [here](#).

⁹ Approval for women’s phone use is likely associated with other characteristics - further analyses will seek to identify and isolate the role that restrictive norms within the household may play.



Note: From primary survey data restricted to the 9,369 men and 8,644 women who had reported using any phone in the past 3 months.

What factors correlate with better awareness and use of DFS among women? In related work, the researchers show how women’s participation in self-help groups is associated with higher DFS awareness (but not usage);¹⁰ household-related factors, such as having a husband who approves of women’s smartphone use, is also associated with women’s higher DFS use.

Conclusion and recommendations

The team’s earlier research has identified interlinked social and economic factors that constrain women’s phone use in India.¹¹ This study suggests that addressing device affordability constraints for women may not be sufficient to close gender gaps in phone ownership, access, and use. Distributing phones may address short-term economic constraints, but it likely does not address the skills barriers and restrictive gender norms that limit rural women’s smartphone use, and it does not necessarily increase the perceived relevance of phones for rural women. The research team also sees that addressing smartphone access alone may not increase women’s awareness and use of DFS: they find large gender gaps in both, even among women who report recently using a smartphone.

Designing programs that address multiple barriers concurrently, however, may be able to encourage women’s phone ownership and use. In a separate study in Chhattisgarh’s Raipur district, the researchers found that

¹⁰ Bhattacharya, A., Jorgensen, E., Naik, U., Shukla, A., and C. Troyer Moore (2023, 12). “Digital Financial Inclusion and SHGs in Rural India.” Available [here](#).

¹¹ Barboni, G., E. Field, R. Pande, N. Rigol, S. Schaner, and C. Troyer Moore (2018). A Tough Call: Understanding Barriers to and Impacts of Women’s Mobile Phone Adoption in India. Available [here](#).

inviting women who had recently received SKY phones to a short, interactive, and group-based digital literacy training not only increased their phone ownership and use but also strengthened their social networks and resulted in improved mental health outcomes. These benefits were apparent several years after phones were distributed, suggesting pairing phones with training had long-lasting and far-reaching consequences.¹²

¹² Troyer Moore, C., Barboni, G., Field, E., Pande, R., Rigol, N., Schaner, S., Jorgensen, E., and H. Balarama (2024, 2). What Works to Close Digital Gender Gaps? *Inclusion Economics*, policy brief. Available [here](#).