



The gendered employment effects of mobile internet access in low- and middle-income countries

What are the impacts of mobile internet connectivity on economic development in low- and middle-income countries (LMICs)? How might access to mobile internet affect employment outcomes for women in LMICs – who have lower levels on almost all indicators of empowerment and wellbeing compared to men? Pinelopi Goldberg and Gaurav Chiplunkar find important patterns related to how mobile internet is changing the future of work, particularly for women.

Economists have demonstrated the potential of fixed broadband internet to ‘jump-start’ development. In recent years, researchers have also assessed the impact of mobile internet – on political mobilization as well as economic outcomes in specific countries. Few studies, however, have analyzed the effects on employment and gender across countries and over time.

In a working paper, Goldberg and Chiplunkar (2022) analyze data from 14 LMIC countries across Asia, Africa, and South America from 2000 to 2015 to evaluate the effects of mobile connectivity on two dimensions: structural transformation (i.e., reallocation of labor from agriculture to manufacturing and services) and employment outcomes. They use detailed 2G and 3G network coverage maps, along with nationally representative surveys and census data across these countries.

Drawing causal relationships in this context presents the challenge that 3G networks are endogenously correlated with economic development. Economists typically address

such 'reverse causality' by using instrumental variables to isolate certain effects. Following the existing literature, Goldberg and Chiplunkar use lightning strikes as one of their instruments – since, conditional on availability of 2G networks as well as geographic factors such as precipitation and elevation, the intensity of lightning strikes affects employment outcomes only through the slower rollout of 3G networks.

The authors find that 3G coverage does indeed have beneficial effects on employment outcomes for both men and women. Specifically, it increases female labor force participation. While mobile internet connectivity also affects the nature of employment, they do not find evidence that it drives structural transformation; if anything, it creates jobs in both agriculture and services. Most notably, when 3G coverage arrives in regions, they find that men often leave subsistence farming to pursue new job opportunities in small-scale agricultural entrepreneurship and wage jobs in services. Some women also make these transitions – but most take up the unpaid agricultural jobs vacated by men, perpetuating or exacerbating gender inequalities in the labor market.

These results indicate that mobile internet impacts employment outcomes differently for men and women in LMICs. While it might enable some women to enter the labor force or operate small businesses, many simply take the unpaid jobs vacated by men. These findings raise important questions about LMIC labor market transitions and their gendered dimensions, pointing to an important research agenda ahead.

Citation: Chiplunkar, Gaurav and Pinelopi Goldberg (2022). "The Employment Effects of Mobile Internet in Developing Countries." EGC Discussion Paper 1098. <https://elischolar.library.yale.edu/egcenter-discussion-paper-series/1098> . Photo by Miaron Billy, Shutterstock. Summary adapted from an Ideas for India blog post by the study authors (<https://www.ideasforindia.in/topics/productivity-innovation/the-gendered-employment-effects-of-mobile-internet-access-in-developing-countries.html>) by Greg Larson for the Yale Economic Growth Center (EGC). Gaurav Chiplunkar is an Assistant Professor at the Darden Business School, University of Virginia. Pinelopi (Penny) Koujianou Goldberg is the Elihu Professor of Economics and Global Affairs at Yale and an EGC affiliate.