



# HUMAN DEVELOPMENT ON MOBILE MOVE, PLAY, AND LEARN

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The recent acceleration in the development and take-up of digital products and services has widely expanded opportunities to use mobile technologies to provide a means for traditionally excluded populations to accumulate human capital. While the expansion of digital access is not without challenges, the promise of digital platforms and services for solving intractable problems such as education, health, banking, mobile money, and market access—by connecting suppliers and buyers in e-commerce platforms, or drivers and riders in transport services, and so forth—is undeniable.

Mobile phones allow people to access digital banking and make person-to-person transactions, expand their economic activities, and reduce food insecurity. For example, Wieser et al. (2019) find phones increased households' use of mobile money by 4 percentage points, off-farm self-employment by 3 percentage points, and food security by 12 percentage points. In Kenya, a leader in mobile penetration, 95 percent of urban recipients prefer to receive government transfers in the form of mobile money. Educational apps loaded on mobile phones impact learning outcomes by large margins in short time periods (0.25–0.50 standard deviations). Phones can also improve health. For example, in one study in India, a combination of information and incentives increased immunizations by 44 percent.

Several governments have distributed phones as part of their effort to digitize government-to-person (G2P) transactions. Appropriately complemented with

apps and interventions these phones can add large value to households.

In this chapter, we make a case for thinking beyond traditional service delivery systems to using mobile technologies to close the human development gap. We present three cases to demonstrate the power of using technology to advance human development, address gender disparities, and improve the supply and demand for health and education. The examples clarify how technology can change how we do things, for instance, reaching unschooled children and helping them learn to read in their native language through gamified apps. The cases also show how we employ research to explore, experiment, and validate emerging technologies to solve development problems, and how we prototype digital tools to prioritize investments, monitor implementation, and evaluate the effectiveness of public policies. In so doing, we also learn much about the challenges of taking digital solutions to scale and the features and capabilities that digital tools should incorporate to ensure usefulness and sustainability.

The three cases help us draw some general lessons:

- 1. The economic costs of violence against women are high and pervasive.** In the past, it has been impossible to measure the extent of violence against women in public spaces, let alone the effect of that violence on women's mobility, education, and labor market decisions. Our study in Delhi shows how information on travel routes can be combined with crowdsourced safety data from two mobile phone applications (SafetiPin and Safecity) to understand how violence constrains women's physical mobility, lowering their human capital accumulation and potentially their long-term productivity and earnings.
- 2. The movie industry can help shape health prevention and other changes in behavior on a global scale.** Our study on MTV Shuga, a drama series, shows how professionally produced narratives can halve the transmission of sexually transmitted diseases through long-term engagement with audiences. The drama succeeds where information campaigns fail.
- 3. Introducing gamified educational apps in over 100 languages can teach literacy and numeracy quickly and efficiently.** Even among extremely vulnerable populations, the distribution of phones loaded with gamified apps can succeed in teaching literacy and numeracy in native languages and increase children's school preparedness at the modicum cost of a phone and the accompanying solar charger, far below its economic value.

## REFERENCES

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