Digital finance doesn't reduce inequality; it perpetuates it

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A new paper in *Oxford Open Economics,* published by Oxford University Press, indicates that, while digital financial services are often proposed as a vehicle to lower inequality, the cost and infrastructure barriers to accessing mobile phones may amplify economic disparities among women in developing countries.

Previous research has suggested that digital financial services have the potential to improve access to money and thereby reduce income inequalities. During the COVID-19 pandemic, many governments have moved to mobile money or digital payments. The government of Rwanda has increased the use of digital cash transfers. Senegal has expanded the use of mobile money and lowered fees for these services. Ghana now offers cash transfers through mobile money platforms.

But who participates in these programs and whether they have the potential to reach the most vulnerable depends on the distribution of digital financial services. This paper addresses this topic by studying how physical infrastructure and mobile phone network quality, as well as individual characteristics like education, affect the ability to access and use such services.

Using the Demographic and Health Surveys and several geocoded databases in Nepal, the Philippines, Senegal, and Tanzania, this paper explored the distribution of digital finance use among women and its enabling infrastructure, including mobile phone towers, compared to traditional finance. The Demographic and Health Surveys Program, administered by United States Agency for International Development, is a set of cross-sectional surveys designed to represent country populations. Although primarily a survey on women's health, the 2016 version of the program contains questions that asked respondents if they had bank account and if they used their mobile phones for financial transactions.

The results indicate that the same inequalities behind traditional finance may have serious consequences for access to digital financial services. Living in urban centers is positively associated with both traditional finance and digital use, and is significant in the Philippines, Senegal, and Tanzania. These results suggest that women living in urban areas are 3.4-15.7% more likely to use traditional finance and 0.4-13% more likely to use digital financial services.

In all countries studied, inequalities in wealth and education are also carried through in mobile banking use even more strongly than in traditional finance. In all countries, higher wealth is strongly associated with a higher likelihood of mobile phone use. Those in the richest wealth quintile are 9.3-27.2% more likely to own a mobile phone. For example, in Tanzania, even the cheapest available mobile phones will cost 5% of annual income for those at the bottom quintile of the wealth distribution, even before paying for a mobile phone plan. Costs for broadband access are even higher: in the Nepal, the Philippines, Senegal, and Tanzania, one gigabyte of mobile broadband costs 9.1%, 3.8%, 10.2%, and 8.7% of average monthly income, respectively. Moreover, the average marginal effect associated with one year of education is also significant, with each year of education being associated with 1.2-2% higher likelihood of using mobile banking, compared with 0.9-3.1% higher likelihood of using traditional finance.

This analysis finds that mobile banking use is still highly unequal and that relevant physical infrastructure like mobile phone towers follows the same patterns as traditional financial institutions. It thus seems that mobile banking may still leave large inequalities in access to financial services among women in developing countries.

"Digital technologies hold so much promise for improving the way we access financial services," said the paper's author, Laura Caron. "However, we must make sure there is the proper infrastructure in place for this to function. We also must support digital literacy and work to make digital technologies affordable if we hope to reach those who have been excluded from traditional finance. New technologies alone won't solve the problem of inequality if we don't make sure people have access to them."

More information: "Empty Digital Wallets: New Technologies and Old Inequalities in Digital Financial Services Among Women," *Oxford Open Economics*, academic.oup.com/ooec/article- … 10.1093/ooec/odac001

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