

Africa cell phone boom beneficial -- but schools, roads, power, water remain critical needs

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where many people lack the basic human necessities — has made headlines worldwide the past few years. The surprising boom has led to widespread speculation that cell phones could potentially transform the impoverished continent.

But new research by economists Isaac M. Mbiti and Jenny C. Aker has found that cell phones — while a useful and powerful tool for many people in Africa — cannot drive economic development on their own.

Mbiti, at Southern Methodist University in Dallas, and Aker, at Tufts University in Medford, Mass., say that while there is evidence of positive micro-economic impacts, so far there's limited evidence that mobile phones have led to macro-economic improvements in [African countries](#).

No magic bullet

Cell phones only can do so much, say the researchers. Many Africans still struggle in poverty and continue to lack reliable electricity, clean drinking water, education or access to roads.

"It's really great for a farmer to find out the price of beans in the market," says Mbiti, who has seen the impact of the cell phone boom firsthand while conducting research in his native Kenya. "But if a farmer

can't get the beans to market because there is no road, the information doesn't really help. Cell phones can't replace things you need from development, like roads and running water."

Mbiti and Aker will publish their findings in the article "Mobile Phones and Economic Development in Africa" in the *Journal of Economic Perspectives*. The Washington, D.C.-based Center for Global Development, an independent nonprofit policy research organization, has published a working version of the paper online. For links to additional information and the working paper see www.smuresearch.com.

Needed: Infrastructure, policies, research

To really have an impact, say Mbiti and Aker, the cell phone boom requires complementary access to public infrastructure and an adequate regulatory framework.

For example, a fast-growing [mobile phone](#) company in Nigeria struggled to maintain electricity to the 3,600 base stations that communicate its cellular signals, the researchers say. Ultimately the company kept the mobile towers operational by deploying its own generators — which burned 450 liters of diesel a second.

In sub-Saharan Africa, say the researchers, only 29 percent of roads are paved, and barely 25 percent of people have access to electricity. While it's helpful and efficient for a manufacturer to take customer orders via mobile phone, a company's production is limited by the lack of a reliable power source and access to markets.

"Also needed are appropriate policies and regulations that can promote the development of innovative mobile phone-based applications such as mobile banking services that have the potential to positively impact the

economic livelihood of Africans," Mbiti says.

The researchers also cite areas where more research is needed, such as the number of direct and indirect jobs created by the cell phone industry; whether mobile phones actually drive increases in gross domestic product; accurate mobile phone penetration rates; and whether cell phones are driving consumer surpluses due to increased market competition.

While there are some limited assessments of the impact by economists — in Niger, Uganda and rural South Africa, for example — more research by economists is needed, say Mbiti and Aker. They hope their study will spur economists to delve deeper into the long-term impact.

Boom improves daily life

Despite the extreme poverty of many Africans, mobile phone coverage has jumped from 10 percent of the population in 1999 to 60 percent in 2008, say Mbiti and Aker. Mobile phone subscriptions have skyrocketed from 16 million in 2000 to 376 million in 2008, they say.

As a result, cell phones have had some dramatic effects, particularly in rural Africa, say the researchers: farmers can compare market prices for the grain they grow; fisherman are able to sell their catch every day and reduce spoilage and waste by locating customers; health workers remind AIDS patients to take their daily medicine; day laborers find job opportunities; Africans have an affordable way to easily and quickly transfer money; health clinics can collect, measure, monitor and share health data; families share news of natural disasters, conflicts and epidemics; people learn to read and write to send text messages; election campaigns are monitored to prevent cheating; and new jobs are being created, such as small shops that sell, repair and charge cell-phone handsets, as well as sell pre-paid phone credits.

Cell phones too costly for many Africans but extreme poverty means cell phones remain out of reach for many Africans, say the researchers.

In some countries, for example, as few as 2 percent of the population can get access to a cell phone, say Mbiti and Aker.

In Niger the cost of a one-minute call can run 38 cents a minute — 40 percent of a household's daily income. The cheapest mobile phone available costs the equivalent of enough millet to feed a family of five for five days. About 300 million Africans live on less than \$1 a day, and 120 million live on less than 50 cents a day, the researchers say.

Source Southern Methodist University

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