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Technology and development

The real digital divide

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Encouraging the spread of mobile phones is the most sensible and effective response to the digital divide

IT WAS an idea born in those far-off days of the internet bubble: the worry that as people in the rich world embraced new computing and communications technologies, people in the poor world would be left stranded on the wrong side of a "digital divide". Five years after the technology bubble burst, many ideas from the time—that "eyeballs" matter more than profits or that internet traffic was doubling every 100 days—have been sensibly shelved. But the idea of the digital divide persists. On March 14th, after years of debate, the United Nations will launch a "Digital Solidarity Fund" to finance projects that address "the uneven distribution and use of new information and communication technologies" and "enable excluded people and countries to enter the new era of the information society". Yet the debate over the digital divide is founded on a myth—that plugging poor countries into the internet will help them to become rich rapidly.



The lure of magic

This is highly unlikely, because the digital divide is not a problem in itself, but a symptom of deeper, more important divides: of income, development and literacy. Fewer people in poor countries than in rich ones own computers and have access to the internet simply because they are too poor, are illiterate, or have other more pressing concerns, such as food, health care and security. So even if it were possible to wave a magic wand and cause a computer to appear in every household on earth, it would not achieve very much: a computer is not useful if you have no food or electricity and cannot read.

Yet such wand-waving—through the construction of specific local infrastructure projects such as rural telecentres—is just the sort of thing for which the UN's new fund is intended. How the fund will be financed and managed will be discussed at a meeting in September. One popular proposal is that technology firms operating in poor countries be encouraged to donate 1% of their profits to the fund, in return for which they will be able to display a "Digital Solidarity" logo. (Anyone worried about corrupt officials creaming off money will be heartened to hear that a system of

inspections has been proposed.)

This sort of thing is the wrong way to go about addressing the inequality in access to digital technologies: it is treating the symptoms, rather than the underlying causes. The benefits of building rural computing centres, for example, are unclear (see the [article](#) in our *Technology Quarterly* in this issue). Rather than trying to close the divide for the sake of it, the more sensible goal is to determine how best to use technology to promote bottom-up development. And the answer to that question turns out to be remarkably clear: by promoting the spread not of PCs and the internet, but of mobile phones.

Plenty of evidence suggests that the mobile phone is the technology with the greatest impact on development. A new paper finds that mobile phones raise long-term growth rates, that their impact is twice as big in developing nations as in developed ones, and that an extra ten phones per 100 people in a typical developing country increases GDP growth by 0.6 percentage points (see [article](#)).

And when it comes to mobile phones, there is no need for intervention or funding from the UN: even the world's poorest people are already rushing to embrace mobile phones, because their economic benefits are so apparent. Mobile phones do not rely on a permanent electricity supply and can be used by people who cannot read or write.

Phones are widely shared and rented out by the call, for example by the "telephone ladies" found in Bangladeshi villages. Farmers and fishermen use mobile phones to call several markets and work out where they can get the best price for their produce. Small businesses use them to shop around for supplies. Mobile phones are used to make cashless payments in Zambia and several other African countries. Even though the number of phones per 100 people in poor countries is much lower than in the developed world, they can have a dramatic impact: reducing transaction costs, broadening trade networks and reducing the need to travel, which is of particular value for people looking for work. Little wonder that people in poor countries spend a larger proportion of their income on telecommunications than those in rich ones.

The digital divide that really matters, then, is between those with access to a mobile network and those without. The good news is that the gap is closing fast. The UN has set a goal of 50% access by 2015, but a new report from the World Bank notes that 77% of the world's population already lives within range of a mobile network.

And yet more can be done to promote the diffusion of mobile phones. Instead of messing around with telecentres and infrastructure projects of dubious merit, the best thing governments in the developing world can do is to liberalise their telecoms markets, doing away with lumbering state monopolies and encouraging competition. History shows that the earlier competition is introduced, the faster mobile phones start to spread. Consider the Democratic Republic of Congo and Ethiopia, for example. Both have average annual incomes of a mere \$100 per person, but the number of phones per 100 people is two in the former (where there are six mobile networks), and 0.13 in the latter (where there is only one).

Let a thousand networks bloom

According to the World Bank, the private sector invested \$230 billion in telecommunications infrastructure in the developing world between 1993 and 2003—and countries with well-regulated competitive markets have seen the greatest investment. Several firms, such as Orascom Telecom (see [article](#)) and Vodacom, specialise in providing mobile access in developing countries. Handset-makers, meanwhile, are racing to develop cheap handsets for new markets in the developing world. Rather than trying to close the digital divide through top-down IT infrastructure projects,

governments in the developing world should open their telecoms markets. Then firms and customers, on their own and even in the poorest countries, will close the divide themselves.

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