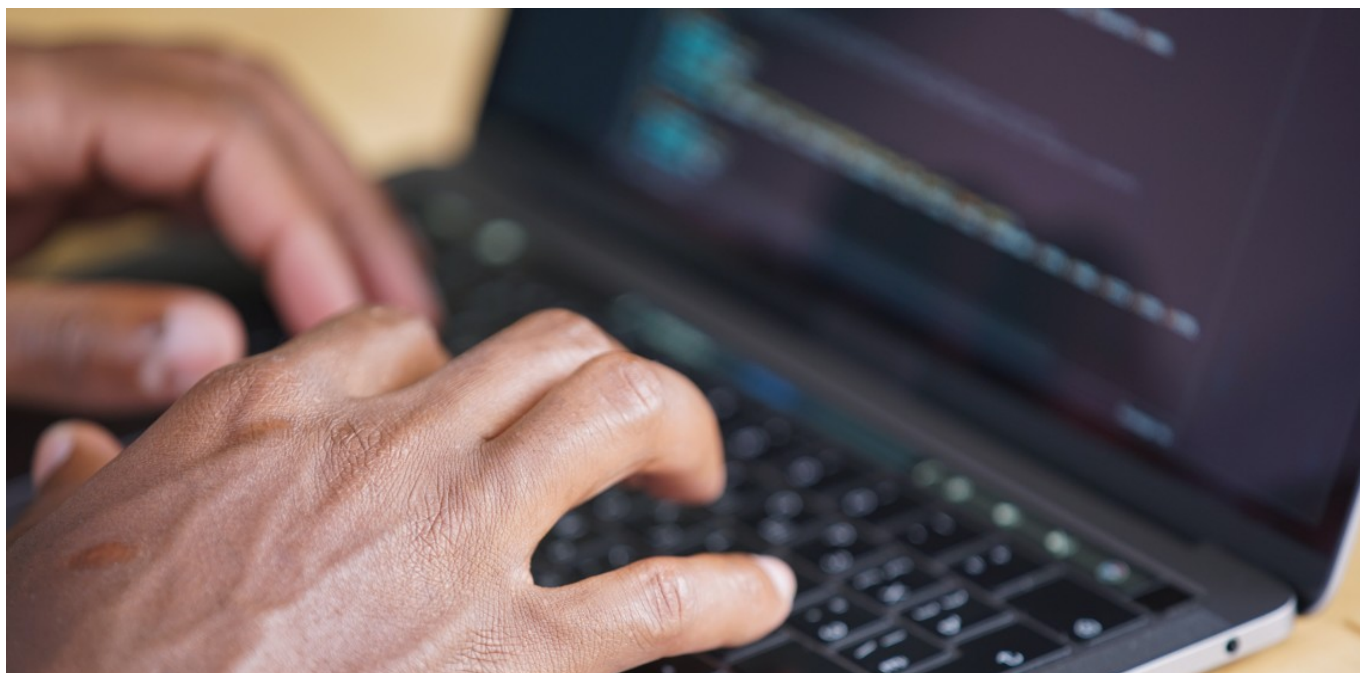


How digital innovation supports development and can aid the Covid-19 recovery

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During the Covid-19 pandemic, many day-to-day activities - meetings, working, shopping- were made possible because they moved online. This highlighted the critical role of digital infrastructure in sustaining economies, and the potential for development impact through increased investment in the sector. Yet commercial investors are still nervous about investing in digital infrastructure and businesses, viewing them as outside of their risk appetite. This makes them perfect candidates for both equity and debt financing from DFIs who can also mobilise private capital into the sector for greater development impact.

For many in the developed world, the move online has long been inevitable, but the rate of change has accelerated due to the Covid- 19 pandemic. Over the past two years, much of our day-to-day activity has moved online. From work meetings to doctors' appointments and grocery shopping, the way we access goods and services has changed dramatically. It is now estimated that global internet traffic this year will exceed all internet traffic up to 2016.

Yet, in developing countries, the digital trajectory is less clear. Over a third of the world's population have never used the internet, and the UN's International Telecommunication Union estimates that 96 per cent of this group are in developing countries. What is more, within countries there are future divides between usage in rural and urban areas and between men and women, with the largest divides being in the least economically developed countries. Yet we know that connectivity has the

potential to make a difference in people's lives. Access to affordable, good-quality internet is central to development, both to strengthen the growth of businesses and local economies and to increase access to education, healthcare, banking and government services.

However, the challenge to provide internet access is significant. An estimated \$100 billion of investment will be required in Africa alone to achieve universal broadband Internet access by 2030. Development finance institutions (DFIs) have a role to play in meeting this challenge. The ability and willingness of DFIs to be first movers on investing in emerging markets have been shown to unlock additional investment. There are three key areas where DFI focus can catalyse investment into the digital sector: digital infrastructure, digitally native and enabled companies, and disruptive digital business.

Digital infrastructure: core to operations - and lives

Digital infrastructure is foundational to the growth of digital economies. A report by Google and the International Finance Corporation (IFC), estimates that Africa's internet economy has the potential to reach 5.2 per cent of the continent's gross domestic product (GDP) by 2025, contributing nearly \$180 billion to its economy. By 2050, the internet economy could contribute as much as \$712 billion to the continent.

Companies such as Liquid Telecom - the largest independent fibre, data-centre and cloud technology provider in Africa - bring broadband to some of the most isolated and unconnected places across the continent. To date, it has laid over 100,000 km of fibre network across the African continent, including through remote areas in countries such as the Democratic Republic of the Congo, which lacks access to affordable and reliable internet. By investing in digital infrastructure companies such as Liquid Telecom, DFIs can catalyse investment from across the private sector and pave the way to economic growth through the Covid-19 pandemic and beyond it. For example, thanks to Liquid Telecom's successful development, it is the leading African partner for global technology firms, including Microsoft, Google and Facebook. A recent bond refinancing and debt issue raised nearly \$800 million for Liquid Telecom at some of the best rates ever seen in emerging markets.

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Digitally native and enabled companies

Over the past two years, the growth of 'digitally native' and 'digitally enabled' companies has been critical to the provision of key goods and services during the Covid-19 pandemic, as well as to ensuring other businesses can continue operating through remote working. The OECD estimates there are over 500 African businesses providing technology-enabled innovation in financial services on the continent.

'Digitally native' businesses such as artificial intelligence company iMerit in India are inherently digital; without the internet the organisation would shut down. iMerit employs 3,000 people in India and Bhutan. Its data labelling services train AI algorithms, which in turn are used in many domains, from medical imaging to flood-risk mitigation. Yet despite the nature of the company's work during the pandemic, the staff were still required to adjust to working online from home, with the support of management.

'Digitally enabled' companies, in contrast, use digital technology to improve the delivery of their services and products, making them more efficient and accessible. We have seen these grow over the past two years, as essential services such as education and healthcare have moved online during the pandemic. For example, in India, Loadshare uses digital technology to bring small- and medium-sized logistics companies together into a nationwide network. That network provides smaller firms with better market access, boosting their growth and creating jobs. By investing in these businesses, DFIs can achieve a measurable impact through increased access to goods and services, often to marginalised communities.

Disruptive digital businesses

Disruptive businesses use digital technology to directly tackle development challenges, such as improving farmers' access to finance and climate resilience tools.

These firms are usually high risk and founded by entrepreneurs who require external capital to scale up. Because government-backed DFIs have a greater capacity than other investors to take on risk and can provide guidance alongside their capital to support these businesses, they are well suited to supporting them. One example of such a business is CropIn, an India-based specialist in software for agribusiness, which takes a pioneering approach to improving smallholder farmers' resilience to climate change. CropIn uses technologies such as satellite images, AI and machine learning to monitor crop health, generate weather analytics, make yield predictions and pass these insights on to farmers. Armed with the right information, farmers can deal better with the effects of climate change. Studies show that climate resilience increases on average for 92 per cent of farmers in the first year of using CropIn's technology. While initially carrying risk, investing in disruptive businesses has the potential to radically transform markets and scale innovative solutions to meet development challenges.

As the world moves increasingly online, digitalisation is rapidly becoming not only a result of, but also a tool for development.

So what is stopping investment in digitalisation?

Investment across the digital sector - from large-scale digital infrastructure to early-stage businesses - can make a difference in people's lives by implementing digital solutions to address intractable development challenges. But the gap in financing the sector is significant. This makes it crucial for a range of actors to play a role, from institutional investors to impact investors, development finance institutions, and multilateral development entities.

The current financing gap exists for several reasons. Commercial investors prefer well-proven models and established firms. However, developing economies often need new business models to address challenges and the lack of infrastructure such as electricity, which means commercial investors are reluctant to back these new models. Impact investors, who invest to generate measurable social and environmental benefits alongside a financial return, could play a role, in particular with the larger equity investments needed in digital technology.

Yet the Global Impact Investing Network (GIIN) estimates that only three per cent of impact investments in emerging markets are in the ICT sector. This is the result of a number of misconceptions. First, despite modern reliance on the internet, there is still a misconception among impact investors and others that digital infrastructure is not as important as traditional sector

infrastructure like energy or financial services for development. This is not the case. Digital infrastructure is a building block of modern economies, proven to drive business and economic growth. As such, it is critical for sustainable development. This was reinforced during the last two years of the Covid-19 pandemic, where it helped sustain livelihoods and economies.

Second, there is a pervasive belief that the funding needs of digital businesses and infrastructure are met by the private sector and do not require impact investment. But disruptive businesses are an important part of the digital economy and need early-stage capital, which in emerging markets often comes from impact investors.

What role can DFIs play?

For DFIs, there are opportunities to make investments across all three areas - digital infrastructure, digitally native and enabled businesses, and disruptive digital businesses. In terms of the approach taken, what sets these groups apart is risk, with digital infrastructure tending to have a less risky profile, while disruptive businesses are riskier (although there are nuances within this framework). This means that infrastructure and most digital businesses are appropriate for both equity and debt financing from DFIs, whereas the experimental nature of disruptive digital businesses makes them typically appropriate only for equity investment. Concessional or grant finance is also important and has a role to play across all three areas to maximise development impact. It can be provided by a range of institutions, including DFIs and philanthropic foundations, to support businesses trialling digital solutions that have the potential for large developmental impact but are beyond the scope of returnable capital.

Covid-19 created an even greater need for this type of financing because of the critical role digitalisation had to play in providing access to goods and services and due to its direct improvement impact on lives. For example, in the healthcare sector, digitalisation played a role in providing self-diagnostic tools and access to telemedicine, both necessary when human contact had been restricted. That entailed using technical assistance in instances such as funding the roll-out of a platform for remote medical appointments and launching an app for accessing Covid-19 symptoms.

The pandemic has shone a harsh light on global inequality but also highlighted routes for development. Digitalisation offers solutions to some of the development challenges that confront us, such as access to healthcare and education. As the world moves increasingly online, digitalisation is rapidly becoming not only a result of, but also a tool for development. By investing across the digital spectrum, DFIs can not only catalyse development impact but also create opportunities for other investors to follow.