

Private Sector Development and Digitalisation

Synthesis Note



The uptake of digital applications worldwide has accelerated rapidly in recent years. Digital technology applications have already had a transformative impact in the financial sector. Potential in areas such as agriculture and renewable energy is also likely to be significant. AI may offer new ways to tackle development challenges but could also leave some low-income countries even further behind in the global technology race.



The costs and benefits of digitalisation are not equally shared between regions, countries and communities. Developing countries risk remaining largely passive consumers of digital products and services produced elsewhere. While the net impact on job creation remains unclear, there is real risk of a growing digital divide based on gender, age and geography.



Harnessing the opportunities and addressing the risks associated with digitalisation requires pro-active and sustained measures from governments, the private sector and donors. Priorities include additional investments in digital infrastructure, skills and regulatory frameworks and nurturing tech firms and industries that use local knowledge to respond to local needs.

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Introduction

The precise impacts of new digital technologies such as big data, advanced robotics, artificial intelligence, and the internet of things are very difficult to predict. However, what is known is that the benefits and costs of digitalisation are unlikely to be shared equally between regions, countries and communities. Digital giants in the US, China, East Asia and Europe are in prime position to reap the rewards from technological change because of their dominant market positions and digital ecosystems with access to skills, networks and other ingredients for success.

The private sector in developing economies, and disadvantaged groups in particular, are likely to require sustained support to make the most of digitalisation. Indeed, appropriate support to digital technology applications in some sectors, e.g. finance, renewable energy and agriculture, has already accelerated development even in some of the world's poorest areas.

This synthesis note explores definitions of digitalisation before discussing five areas of evidence and debates related to digitalisation and private sector development (PSD) in more detail; it concludes with different options for donor support.

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Defining digitalisation

There is no commonly agreed definition of digitalisation. At the highest level it describes the integration of new technologies into all aspects of the economy and society ([UN Broadband Commission, 2017](#)). A comprehensive literature review on *Digital Transformation for Development* concluded that this involves both technological advances and parallel changes to institutions, development processes and resource distribution ([Centre for Digital Development, 2023](#)).

Within an increasingly digitalized economy, the core *digital* – or *IT/ICT* – sector encompasses industries such as telecommunications, software development and hardware manufacturing which produce essential digital building blocks ([OFSE, 2018](#)). The *digital economy* also includes digital platforms; other mechanisms that create, store, analyse and share data to facilitate the exchange of goods and services; and the producers and consumers who are utilising digital inputs in their economic activities ([OECD, 2020](#)). *Digital commerce* refers more specifically to the sale of goods and services online ([MCF, 2019](#)).

Measuring the progress that countries and regions are making in this rapidly evolving area is difficult. Most indicators focus on the spread and uptake of technology, e.g. mobile phone access and internet penetration. Efforts to capture broader concepts such as *digital connectivity* and *digital depth* – the extent to which economic activities, transactions, and policies are becoming digital – have been attempted by, e.g., the World Bank's Digital Adoption Index ([World Bank, 2016](#)), the OECD ([2020](#)) and the Global Digitalization Index ([Huawei, 2024](#)). Most developing countries lag considerably behind North America, Europe and large parts of Asia when it comes to access to and utilisation of digital technologies.

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Technology adoption in developing countries

Digital technologies are spreading around the world with unprecedented speed. For example, even though smartphones only reached the mass market around 2010, it is estimated that 51% of the population in Africa owned such a device in 2023. This is set to rise to 81% by 2030 ([GSMA, 2024](#)). More than 85% of African businesses have reported the use of mobile phones as part of their operations ([IFC, 2024](#)). Global internet use has risen from just over 1 billion people in 2005 to over 5 billion in 2022 ([ITU website](#)). The rapid rise of mobile payment systems like M-Pesa in East and Southern Africa and Paga in Nigeria has boosted access to secure financial services for millions of entrepreneurs. E-commerce platforms like Jumia and Kilimall are creating opportunities for millions of traders to sell their products and services into national or even international markets.

Conversely, most of the world's offline population lives in low-income countries where in 2022 only 26% of the population used the internet - compared with more than 90% in high-income countries ([ITU website](#)).

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Economic opportunities and risks

The optimistic case for the transformational impact of digital technology on companies and economies rests on the argument that digitalisation will enable efficiency gains in many sectors; generating new jobs, expanding access to essential services such as electricity and telecommunications, and reducing waste and pollution ([WDR, 2016](#)). Boosting innovation, diversification and access to global markets are also often cited as major opportunities. Producers in least-developed countries have much to gain from digital technologies because low existing employment in manufacturing limits the risk of worker displacement. In addition, a large supply of unskilled human capital offers ample scope for productivity improvements ([World Bank, 2023](#)).

On the other hand, while digital technologies are spreading rapidly around the world, the much-anticipated benefits are slow to follow - especially in poorer countries. While the costs of accessing the internet in developing countries has been falling, entry-level mobile-broadband basket costs were assessed as more than 20 times higher in low-income than in high-income economies ([ITU, 2023](#)). Digital technology's potential to generate significant economies of scale for firms could lead to excessive market concentration in poorly regulated economies. There is very limited evidence that the spread of digital technologies in developing economies is helping to shift underlying structural inequalities to boost employment ([ILO, 2023](#)). Regulators frequently struggle to control and protect data against large global technology businesses that may only have a small in-country presence ([WDR, 2021](#)). Digitalisation without sufficiently robust governance and regulatory frameworks also risk increasing fraud, strengthening economic and political elites and expanding electronic waste ([ADF, 2020](#)).

BOX 1: Making the most of Opportunities from Digitalisation in Africa

IFC ([2024](#)) analysis established a strong correlation between digitalisation and increased growth, productivity, jobs and wages. It found significant opportunities to strengthen business performance through more intensive use of digital technologies for productive purposes. A very significant proportion of firms – especially outside the services sector – do not use sophisticated technology intensively for productive tasks (such as business administration, planning, sales, and payments) even where they have access to necessary digital enablers (such as mobile phones, computers, and the internet). Investments in reducing the barriers to more intensive use of digital enablers, e.g., prices of technology, human capital, digital and complementary infrastructure and access to finance, hold significant potential to boost growth and employment in Africa.



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Job creation impact

Rapid technological change tends to trigger large-scale adjustments to work and employment patterns. The digital revolution is no different, but important questions remain over who the winners and losers will be. Automating manufacturing and service processes could result in large-scale redundancies in industrialised economies even if the trend towards 'reshoring' continues to gather pace. At the same time, micro-entrepreneurs in the informal sector are turning to digital tools to grow sales and find new customers ([UNDP, 2023](#)).

Digital technology may also offer more effective ways to deliver skills development at large-scale than more traditional institutional settings (e.g. web-based resources which can be accessed both on- and offline, coaching through communications platforms such as WhatsApp and Facebook). The global spread of digital technology has already generated new micro-entrepreneurial opportunities, e.g. phone card distribution and mobile money agents. Recent estimates put the contribution of mobile technologies to sub-Saharan Africa's GDP at \$140 billion economic value added, driven by productivity gains from using mobile services across the economy ([GSMA, 2024](#)).

The falling costs of connectivity worldwide are creating new opportunities for connecting producers in the developing world with companies and consumers in wealthier countries. This could boost global economic integration and open up new opportunities for developing country producers to participate in international supply chains by e.g. selling directly to consumers around the world. However, there are also concerns that this could further undermine the bargaining positions of poor workers by replicating the 'gig economy', which is perceived to have eroded incomes, benefits and workers' rights in many developed economies ([ILO, 2022](#)).

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Gender digital divide

There are signs that existing disparities in the labour market are being replicated in the digital economy, especially when it comes to female employment and entrepreneurship. Significant gaps exist between men and women in low- and middle-income countries for, e.g. mobile internet use (15% lower for women) and smartphone ownership (13% lower for women). While these are slowly narrowing overall, they remain most pronounced in South Asia and sub-Saharan Africa ([GSMA, 2024](#)).

Bridging the gender digital divide requires interventions explicitly designed to overcome the constraints women face, e.g., affordability, digital skills and cultural norms ([UN Broadband Commission, 2018](#)). There are many examples of digital development initiatives and guides targeting greater digital inclusion of women and girls to learn from (e.g. [UNDP, 2025](#), [UNICEF](#)). Inequality in the digital economy can also affect other groups such as migrants and refugees, ethnic minority groups and even young people - who might be assumed to be more digitally literate than older generations, but can be excluded for socio-economic reasons ([ILO, 2022](#)).

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Digitalisation pathways

Practical success in transforming entire sectors and business models through digital technology has been limited especially in developing countries where the ‘analogue enablers’ for digitalisation – such as digital skills, reliable electricity access, funding for tech start-ups and appropriate regulatory arrangements – are often missing. At a global level, expertise and capabilities to innovate at scale are largely concentrated in ten ‘frontrunner economies’ which account for over 90% of all global patent families ([UNIDO, 2020](#)).

The market dominance of digital technology developed in the US, China or Europe over home-grown solutions that respond to local needs can impede progress ([ADIS, 2020](#)). Without local applications and content, there is a significant risk that developing countries will continue to be largely passive consumers of products and services created elsewhere. Local technology firms could instead focus on practical solutions that use local knowledge to address local constraints, such as analogue outreach structures to complement digital platforms, e.g. human intermediation between customers and mobile money solutions or training for customers and agents using new technology.

However, local businesses face significant challenges to overcome the dominance of global players, e.g. due to limited local markets, language barriers and pressure to generate cash within a short timeframe ([MIT, 2020](#)). Strategic partnerships with global technology leaders might accelerate access to more advanced technology, expertise and funding, but should include long-term investments in local skills and applications ([TBI, 2025](#)).

BOX 2: Artificial intelligence

There are significant concerns that the rapid rise of AI technology will further expand the digital divide between developed and developing countries ([CGD, 2024](#)). On the other hand, carefully-considered investments that facilitate spillovers from AI into the wider economy can, for example, promote diversification in natural resource-based economies and help authorities detect sophisticated tax fraud ([UNDP, 2025](#)).

In addition to investments in core digital enablers, helping developing countries make the most of the potential AI offers will require specific measures, e.g. AI skills development and creating appropriate AI governance mechanisms. Effective international collaboration will be essential in this context ([ILO, 2024](#)). If implemented appropriately, AI technology may hold significant potential for developing countries to make rapid progress in areas that are essential for broad-based growth, for example rural education, more efficient public administration and productivity across a variety of sectors ([World Bank, 2024](#)).

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The role of donors’ PSD work

Donor efforts to leverage the benefits of digital technology for economic development and poverty reduction are not new, but there is a lack of systematic evidence for which types of interventions are likely to achieve the most impact. Results reporting is frequently limited to inputs and outputs. Some institutional evaluations of digital development programming highlight challenges within funders, e.g. lack of digital skills amongst staff and procurement systems that are not suited to investments in digital technology ([World Bank, 2021](#)).

The [Principles for Digital Development](#) were created in 2017 and updated in 2024 as generic guidance to digital technology practitioners to improve

outcomes from donor support. Many development programmes are adopting more efficient, digital solutions in areas that have previously relied on analogue delivery mechanisms, e.g. training, technical advice and monitoring & evaluation. However, the rush to digitalise may hinder donor coordination and risk widening digital divides in terms of gender, age groups and urban vs rural populations. Donors can take appropriate mitigation measures, e.g. programme design that explicitly tackles bias and exclusion ([World Bank, 2023](#)) and designing initiatives that explicitly tackle the drivers of digital divides ([UN Habitat, 2021](#)).

Beyond the *how* of digital development, many recommendations as to *what* donors can do focus on the ‘analogue complements’ of digital investments, in particular funding for essential infrastructure - such as secure and reliable networks - capacity-building to create a skilled workforce, and strengthening digital strategies, policies and regulatory frameworks ([African Union](#)). Many donors combine reinforcing the basic foundations of the digital economy with promoting the uptake of digital technology in priority sectors, e.g., financial services and commerce, and strengthening digital public [infrastructure](#) capabilities for things like data sharing and digital identification ([World Bank, 2023](#)). Much of the guidance from recent literature also emphasises sound wider policies for private sector development such as a favourable business climate and public accountability.

Specific priority action areas for private sector development in the context of digitalisation include:

- 1. Business environment reforms (BER):** Strengthening the norms, standards and regulatory frameworks for domestic digital firms to thrive is widely regarded as an essential enabling condition. This includes taxation policies to strike an appropriate balance between revenue capture and incentivising an expansion in digital service provision ([World Bank, 2024](#)). Effective competition policies are required to avoid excessive concentration of market power and ensure that digital products and services remain affordable through healthy competition ([World Bank, 2023](#)). Reducing barriers to market entry should facilitate innovation. This is an area where digital technology can also be a practical tool, e.g. through online business registries ([WDR, 2016](#)) and more efficient data management to aid regulatory inspections and enforcement ([DCED, 2020](#)). Digital platforms also hold much potential to make BER interventions such as public-private dialogue processes more effective and inclusive ([DCED BEWG, 2021](#)).
- 2. Transforming agricultural value chains:** The potential for digital technology to transform agriculture in developing countries is significant because of limited technology adoption to-date, and the sector’s strategic importance for economic growth, employment and food security. Access to better data can help farmers to optimise production, access the most appropriate inputs and enter new markets. It can also direct government policy and interventions and strengthen integration into international supply chains. Greater digital technology use promises to make agriculture more profitable and generate employment opportunities for young people. Many donors and private companies are already active in

this area, from data platforms to guide crop planning based on real-time data for weather, soil conditions, pest prevalence etc. to blockchain technology in fresh produce supply chains ([FAO, 2024](#)). A systematic review of World Bank agriculture and irrigation projects highlighted the importance of combining technology provision with appropriate training and collaboration with extension service providers amongst other recommendations ([World Bank, 2024](#)).

3. **Green growth:** Policy makers are increasingly focused on the complex interactions between the green and digital transitions. On the one hand, AI and other digital technologies can support the expansion and uptake of renewable energy solutions, e.g. by using data for more effective planning and derisking investments ([TBI, 2025](#)). On the other hand, growing power demand from digital technologies, e.g., data centres, is increasingly contributing to carbon emissions. Breaking the cycle of growing digitalisation and carbon emissions will require a suite of policy measures, including more energy-efficient equipment and using digital technologies to achieve emission reductions in other sectors ([World Bank, 2023](#)). Greater circularity for a range of devices, e.g. mobile phone handsets, will also be important ([GSMA, 2025](#)).
4. **Skills development:** Digital employment covers a wide spectrum of the labour market, including jobs directly created through the ICT sector (e.g. mobile app development) and those that can't be performed without technology (e.g. call centres). In low-income countries, many students lack basic skills to critically engage with new technologies, limiting the potential for AI to enhance their learning and facilitate access to more productive jobs ([UNDP, 2025](#)). The teaching of STEM subjects, advanced cognitive and socio-behavioural skills, and basic 'digital literacy' skills are frequently highlighted as essential as are targeted measures to encourage innovation and entrepreneurship ([WEF, 2024](#)). Effective measures for lifelong learning and involving industry in designing and delivering appropriate skills development programmes are also important ([ILO, 2021](#)). Evidence for the effectiveness of digital training initiatives remains scarce, however, studies suggest that certain measures such as employee-employer matching through job referral schemes might be more effective than generalised training programmes ([GIGA, 2023](#)).

For links to more resources on this topic see the [DCED's Digitalisation Knowledge Page](#).

This note was written by Holger Grundel of the DCED Secretariat. Please provide feedback to admin@enterprise-development.org

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