

WORLD BANK POLICY BRIEF

Economic Transformation through Digital Technologies

Will Africa Make the Right Decisions?

Who is this policy brief for?

Ministers and parliamentarians responsible for policies on ICT and innovation, the development of the informal sector, and broader economic growth and equality issues, education, finance, and labor and social protection.

Why was it prepared?

To inform deliberations on policies and programs for job creation and economic growth through digital technologies by presenting the best available evidence and policy implications based on this evidence.

Full report

The evidence summarized in this Policy Brief is described in detail in the report *The Future of Work in Africa: Harnessing the Potential of Digital Technologies for All*. This report is available on the World Bank Open Knowledge Repository.

FOUNDATIONS OF ECONOMIC TRANSFORMATION THROUGH DIGITAL TECHNOLOGIES

The three Cs – What needs to be done



Promote **Competition** to spur and enable rival businesses to adopt new technologies and expand production at affordable prices, generating demand for jobs of most skill types.



Invest in **Capital** to build skills that strengthen entrepreneurial and worker human capital and to build physical infrastructure capital, including digital infrastructure, and reliable electricity and transport.



Increase **Capacity** of government to make the necessary public investments in social protection to allow for greater risk-taking by entrepreneurs and to support workers in transition between jobs.

The three Es – How to do it



Enable entrepreneurship so that African innovators build apps and other solutions that are then scaled to enable workers to build their skills as they work.



Enhance productivity of informal workers and businesses by leveraging low-skill-biased digital technologies.



Extend social protection coverage by improving revenue collection, rebalancing government spending and better coordinating development assistance.



THE AFRICAN EXCEPTION

The World Development Report 2019: *The Changing Nature of Work* highlights that, globally, the nature of work will be characterized by tension between losses in “old” manufacturing sectors that are susceptible to automation, and job gains driven by product innovation in “new” sectors.

Is this the future of work in Africa? The short answer is no, due primarily to underlying conditions in the region, including persistently low levels of human capital, an exceptionally large informal sector, and insufficient and inefficient social protection systems.

Most African countries also face different development challenges such as lower levels of technology adoption, a smaller manufacturing base, and more under-employed people than in other regions.

Fortuitously, these conditions also represent opportunities for African governments to forge a different path from the rest of the world. If widely adopted, digital technologies hold the promise of helping firms grow and, most importantly, create more jobs for everyone, not just a privileged few.

Why lower-skilled workers in Africa may benefit more from digital technology than the rest of the world

About 60 percent of the Sub-Saharan Africa labor force comprises adults who are ill-equipped for jobs, a cloud that hangs over the region. The silver lining is that lower-skilled workers in Sub-Saharan Africa may benefit more from digital technology than workers in other regions. There are at least three possible reasons for this:

- Digital technologies that automate tasks in the manufacturing sector are not likely to displace many workers over the coming years. In Africa, the manufacturing sector is small, accounting for 8 percent of employment on average, and there has been little automation to date. Most workers are engaged in the informal sector, in agriculture and services.
- Greater responsiveness of consumers to price reductions from technology adoption should translate into jobs. The opportunity comes from cost and price reductions from new technology adoption by farms and firms. In an environment of pent-up demand for higher-quality products, price reductions are expected to make these products affordable for mass consumption. This, in turn, should allow for sufficiently large increases in production to create more jobs, provided the products can be competitively produced in Africa.
- Low levels of human capital and high levels of informality provide ample scope for worker-enhancing digital technologies in both formal and informal sectors. For instance,

mobile payments for the unbanked, voice and video-based e-extension services for farms and firms, and Uber-like platforms that do not require reading and numeracy skills create economic opportunities for lower-educated, lower-skilled workers.

Making the informal sector work better for Africa

The informal sector in Sub-Saharan Africa is large, accounting for almost 90 percent of total employment, most of it in agriculture, comprising not only small but also large firms. Farms, firms, and workers in the informal sector typically have poor access to information on input, knowledge, and output markets, suffer from lower productivity, and have limited revenues.

Policies that focus solely on formalization have not worked for Africa and an approach that seeks to increase productivity is needed.

Digital technologies can be utilized more intensively by informal firms and workers, especially women. They help access information and credit markets, increase financial inclusion, and boost productivity. They also make formalization easier over time.

How social protection can encourage innovation and entrepreneurship and why it is important

The limited coverage of social protection systems in African countries increases vulnerability and inequality, especially among the poorest, and stifles innovation and entrepreneurship. Increasing risks from climate change, conflict and trade integration will only increase the need for social protection. Digital technology can help. About 8 in 10 Africans are not covered by any safety net. Digital technology can be used to establish early warning systems and digital identification systems and help reduce remittances transfer costs to effectively mitigate risks. Social protection schemes can foster entrepreneurship and risk-taking, especially for workers in the informal sector and in transition.



About

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SPOTLIGHT ON POLICY – WHAT YOU NEED TO KNOW NOW

In Africa, faster internet helps create jobs across education levels. Urgent investment in digital infrastructure is necessary to reach the African Union’s goal of universal and affordable internet for all. At the same time, there is a critical need to equip workers with digital skills and to address universal basic digital literacy for all. Moreover, governments need to invest in complementary assets, such as reliable electricity and transport, and improve the overall business environment.

Informality is not limited to individuals and small businesses. Large firms are also partially or fully informal and should be better utilized for job creation.

Social protection schemes are not just about mitigating risks for workers in the formal sector. They are needed to also provide safety nets for workers in the informal sector and in transition. This is key to creating a supportive business environment for innovators and entrepreneurs.

Governments and their development partners will need to rebalance public investments to expand the coverage of social protection systems. This means moving away from some distortionary fiscal incentives that harm productivity growth and investing in social protection for workers, the urban poor, young people and individuals in transition.

What are the right decisions for Africa?

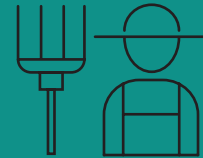
From our research, we recommend that policy makers focus on four objectives:

Improve the availability of digital technologies

- Close the current gap in digital infrastructure and enhance affordable broadband access with improved regulatory frameworks. Further regional harmonization, supported by increased regulatory capacity through regional hubs, should allow (i) more effective subsidization to support universal access and thereby boost poverty reduction, combined with (ii) more effective pro-competition regulation of digital infrastructure to create bigger markets. The positive interactions between subsidies (to boost demand) and lower costs (spurred by asset sharing and trading and greater economies of scale and scope) should allow larger markets to sustain more operators—with competition spurring innovation and access for all.
- Support the accumulation of digital skills. Public-private partnership support could include education and worker training programs focused on digital literacy (for all us-

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Moving forward, short- to medium-term policies should focus more on pro-productivity and skills upgrading interventions for informal, small-scale firms and unskilled workers.

ers) and digital skills (for more specialized careers).

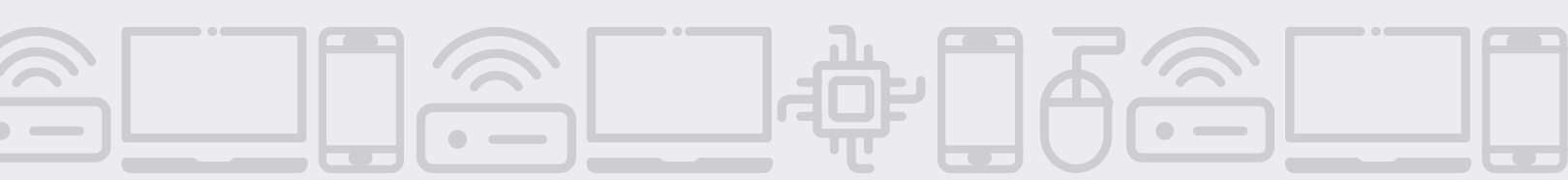
- Invest in “analog” complementary assets. Public-private investments are required in electricity and transport and logistics infrastructure. Favorable trade policies and broader business environment reforms remain crucial to enhance Sub-Saharan African firms’ participation in global value chains and foreign direct investment attraction.

Build human capital

- Use targeted measures to train a critical mass of inventors and entrepreneurs to develop and scale digital technologies to boost the productivity of all workers, especially low-skilled workers in current and new occupations, and to strengthen the delivery of education and health services.
- Enable inventors and entrepreneurs by fostering these ecosystems and mitigating appropriate risks that the private sector faces in funding them.
- Promote universal basic digital literacy to enable broader participation of all segments of the population in the digital economy.

Address informality differently

- Focus on pro-productivity and skills-upgrading interventions for small, informal farms and firms and unskilled workers. Leverage low-skill-biased digital technologies to boost productivity, job creation, access to credit, and financial inclusion.
- Target traditional formalization policies on larger informal firms that aggressively compete with formal firms.



Extend social protection coverage

- Create the enabling environment to establish effective early warning systems, including insurance markets, to identify risks in time for effective mitigation.
- Increase public investments in social protection and labor systems by improving revenue collection, using public expenditure reviews to justify the need for rebalancing government spending, and coordinating development assistance.
- Integrate social protection and labor policies into longer-term national and regional strategies for economic transformation, employment, and poverty reduction.
- Coordinate regional organizations, financial regulators, and development partners toward common objectives on tax policy, reducing remittances costs, and providing development assistance to enhance social protection coverage.

WHY IS IT URGENT TO ACT NOW?

As Africa sits on the precipice of digital transformation, governments will need to make some bold choices. Global risks emanating from climate shocks, fragility, economic integration, and population transitions are transforming the work landscape. The growing youth population makes it more urgent for Africa to invest in technologies that will create more and better jobs. The continuing high levels of poverty make it imperative to invest in ways that reduce rather than exacerbate the digital divide. The African exception means that there is still time for governments to make the right decisions now and pave the way for the next generation of African workers, inventors and entrepreneurs to innovate and thrive. Importantly, the commitment of the African Union to promote digital technologies provides a window of opportunity to broaden the policy debate. Acting now should be a stimulus to facilitate all types of technology adoption to generate the jobs and economic transformation that Africa needs.

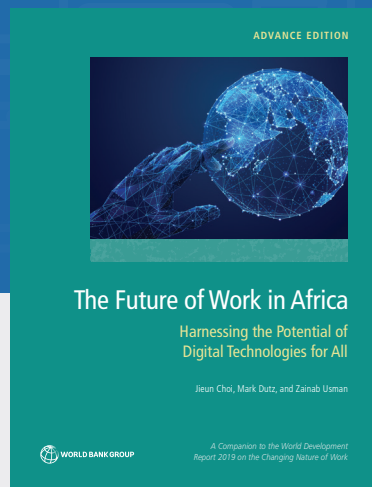


Zipline uses drone technology to save lives

Launched in October 2016, the drone delivery project made Rwanda the first country in the world to use the drone technology at the service of saving lives. The drone delivery project is a partnership between the Government of Rwanda and the California based robotics company, Zipline, Inc. With the help of these drones, patients no longer have to wait for blood for hours to get to remote clinics and hospitals. They can now receive blood transfusions in minutes.

Photo: Sarah Farhat / World Bank





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