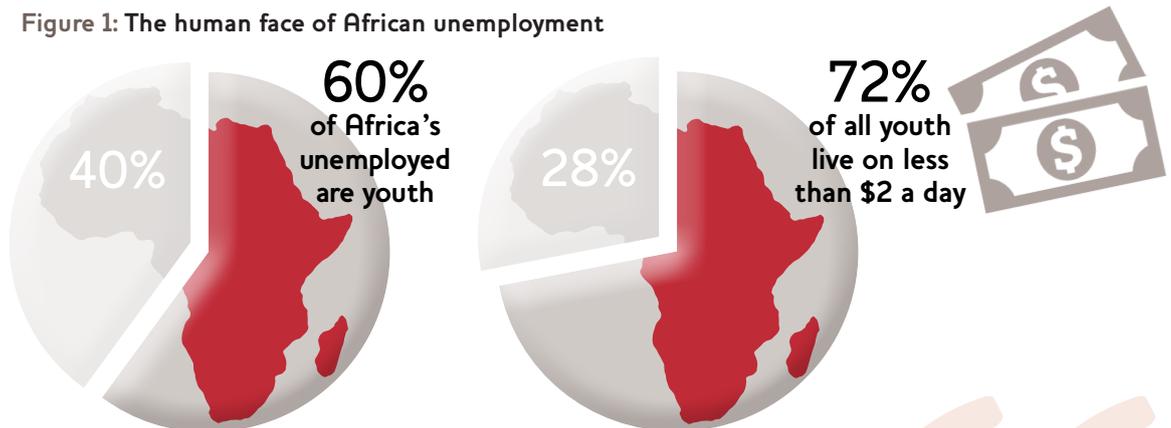


## CAN DIGITAL JOBS SOLVE AFRICA'S UNEMPLOYMENT CRISIS?

Africa has the youngest population in the world, with 200 million people aged between 15 and 24, a figure projected to double by 2045. As young people look to enter the workforce in Africa many are likely to face unemployment or underemployment, suffering from unsafe, insecure, part-time, poorly paid work. Industry analysts, government ministers and donors alike see information technology as contributing to African growth and as a major opportunity for employment for young people in the future. For this to become a reality and not a mirage, there are many challenges that must be overcome, including developing skills to create African digital jobs that design and engineer solutions rather than simply servicing the lower-skilled delivery end of the global digital market. Countries will also need to build on their existing capabilities to respond to and create digital demand, and find other ways of dealing with the discrepancy between record high numbers of job market entrants versus likely rates of new job creation.

Figure 1: The human face of African unemployment



Today, 60 per cent of Africa's unemployed are youth, and 72 per cent of all youth live on less than US\$2 a day.

The International Labour Organization (ILO) Global Employment Trends 2014 found that sub-Saharan Africa has the highest rate of vulnerable employment in the world, exceeding 77 percent in 2013. Young people are disproportionately affected, with employment opportunities, such as they are, neither reliable nor sustainable. According to the African Economic Outlook, 'working poverty, vulnerable employment and underemployment abound among Africa's youth, across all occupations'.

As a Brookings Institute study recently found: 'Young people [in Africa] find work, but not in places that pay good wages, develop skills or provide a measure of job security... more than 70% of youth in Republic of the Congo, the Democratic Republic of the Congo, Ethiopia, Ghana, Malawi, Mali, Rwanda, Senegal and Uganda are either self-employed or contributing to family work'. Those in self-employment or in family jobs are more vulnerable, prone to poverty, poor working conditions and less likely to enjoy the benefits of social protection or social safety nets. Those underemployed face different kinds of exclusion from labour markets, and are unable to use their full labour capacity productively and therefore have lower earnings than those in full-time employment.

The real long-term benefits of digital jobs are not in delivery of digital products or services but in digital design, creation and engineering.

The lack of employment history can become a self-fulfilling prophecy. And the problem is getting bigger each year: each year between 2015 and 2045, there will be 500,000 more 15-year-olds than the year before. The year 2045 may seem like the far-off future, but with the Millennium Development Goals ending in 2015 and the Sustainable Development Goals ending in 2030, we are just another round of global goals away from the endpoint of what Zambian Minister of Finance, Alexander Chikwanda referred to as ‘a ticking time bomb’.

### The ‘Great Decoupling’

The employment picture across Africa is brought into sharp relief when set alongside the continent’s rapid economic growth. Six of the ten fastest-growing economies in the world are in sub-Saharan Africa and over the past ten years, the region as a whole grew by 5 per cent per year. If this continues, the continent could double the size of its economy by 2030.

However, this rapid growth has not benefited the largest share of the population. The United Nations Economic Commission for Africa’s 2015 *Economic Report on Africa* (ERA) found that while employment did grow in Africa between 1991 and 2012, this did not keep pace with population expansion rates. To put it another way, economic growth on the continent has not generated enough employment opportunities to absorb the large number of school leavers entering the workforce each year. The ILO’s Africa bureau found that ‘much of the economic growth in Africa has been jobless growth’.

The exclusive and jobless growth of Africa is not unique. It was also observed in America in the 1990s and 2000s, when the economy expanded alongside slowing job growth. Since then, the same phenomenon has been seen in numerous, diverse, developed countries, including Sweden, Finland and Germany. This is what some have referred to as the ‘Great Decoupling’ between economic productivity and job prospects. Since the great recession of 2007–08, this decoupling has become more marked, with corporate profits increasing as a percentage of GDP, while the share of wages has plummeted. While Figure 2 illustrates these shifts in the United States context, a recent study by Loukas Karabarounis and Brent Neiman found the same decline in labour’s share of GDP in 42 out of 59 studied countries, including China, Mexico and India.

Researchers have identified numerous drivers behind the so-called ‘great decoupling’, but the most common are globalisation, changes in the social contract and welfare systems, and the growth of digital technology. Karabarounis and Neiman conclude that as advances in information technology have caused the price of plants, machinery, and equipment to drop, companies have shifted investment away from labour and toward capital.

Other studies have also identified digitisation and computerisation as a primary force reshaping jobs and wages. One of the leading scholars of the economic impact of information technologies, Erik Brynjolfsson of Stanford University, has argued that the digital revolution is very different to the industrial revolution, and that this difference precisely explains the decoupling of growth and jobs. Specifically, digital technologies enable products to be replicated at almost zero cost, and for those products to be shared instantly around the world, the major value-added of labour has shifted from production to design. This has led to what Brynjolfsson calls ‘winner-take-most markets’, whereby technologies have led to skills-biased technical change, decreasing the demand for low-skilled information workers and increasing demand for highly skilled ones. As Brynjolfsson’s colleague Andrew McAfee puts it: ‘There’s no economic law ensuring that as technological progress makes the pie bigger, it benefits everyone equally. Digital technologies can replicate valuable ideas, processes, and innovations at very low cost. This creates abundance for society and wealth for innovators, but it diminishes the demand for some kinds of labo[u].’ This also is a key message from the *World Development Report 2016* on Digital Dividends, a landmark report on the contribution of the internet to development.

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### Digital jobs: mirage or opportunity?

Given the above, it is interesting that a number of international organisations and African governments are positioning digital technologies as a key plank in their strategies for tackling youth unemployment across the continent. To quote the ILO Africa office, ‘we should create conditions for young people to start companies or self-employment by taking advantage of information technology and the digital economy. The use of ICTs in the private and public sectors is growing fast across Africa, creating job opportunities for the youth’.

**Figure 2: The changing GDP share of corporate profits and wages**

Corporate profits as a percentage of GDP



Wages as a percentage of GDP



Source: Federal Reserve Bank of St Louis; Erik Brynjolfsson and Andrew McAfee

Industry analysts argue that information technology is contributing to African growth, especially in the form of digital payments, mobile banking, investments in ICT infrastructure and literacy.

These opportunities are being taken seriously at the most senior levels of African countries. As the South African Deputy President noted recently, ‘the biggest commodity in the world today is knowledge, and the ability to generate, access, and distribute knowledge have become key determinants for a higher developmental trajectory for any nation... [moving to a knowledge-based economy] would allow us to adapt to changing conditions and design solutions that will enhance the competitiveness of our emerging nations.’ In Rwanda, the recognition of the potential of ICTs is such that the youth and ICT ministries were merged in 2012–13. According to the Minister of Youth and ICT, recent digital contributions to Rwandan GDP exceeded 2 per cent, ahead of agriculture and mining.

Research undertaken by Dalberg in support of the US\$100m Rockefeller Foundation programme on Digital Jobs Africa suggests that the digital economy holds significant potential for creating formal jobs that are accessible to marginalised youth. The first benefit of digital jobs is that they are in the formal sector, so they provide higher wages and long-term job stability, which are two key mechanisms that enable people to work their way out of poverty. Moreover, within the formal sector, digital jobs are seen as providing higher than average wages, in some African countries more than five times higher than official minimum wages.

The research has also found that access to digital opportunities is most transformative for disadvantaged youth, for whom accessing formal employment could be pivotal in changing generations of systemic marginalisation. The challenge, however, is that these youth are least well-positioned to compete for these opportunities as their talent and potential is often overlooked. The Digital Jobs Africa programme work is based on a number of key principles: to create an enabling environment for digital jobs, to ensure the right training is available for young people, and to use ‘impact sourcing’ to intentionally employ youths from disadvantaged backgrounds.

However, follow-up research by the World Bank and Dalberg came to more sobering conclusions: that while digital outsourcing could bring benefits to some population segments in some developing countries, the contribution to strengthening job markets overall is likely to be limited, and that much broader strategies would be needed. Moreover, it also identified major barriers for disadvantaged young people to benefit from such initiatives, and a need for realism about the kinds of positive impacts that should be expected.

Based on the issues identified above, it seems clear that digital jobs will make a meaningful contribution to defuse the ticking bomb of youth unemployment only if some critical challenges are tackled.

First, there is the issue of numbers. Dalberg research estimates the number of jobs created by digital technologies as 40,000 in the six major African countries that are the focus of Digital Jobs Africa, while the number of potential youth entering the workplace in those same countries has been estimated at 2 million. At best, that means a digital job for one in 50 young people. Given this, it is hard to argue that the African digital economy does not face the same critical gap between supply and demand that defines the broader labour market. There are simply far more youth entering the workforce each year than there are new digital jobs being created. A focus on digital jobs could serve to create a sense of potential where there is none.

Second is the challenge of winner-take-most job markets. The kinds of jobs that seem to be identified by the African digital jobs movement seem to be exactly those that were considered to be low-skilled information workers – the ‘entry level jobs’. There is no guarantee that these jobs will stand the test of time. The kinds of skills-based technical changes that we have seen in developed countries have favoured those with significantly higher levels of education, training and experience.

The definition of digital jobs used by Dalberg is worth highlighting in this regard: ‘digital jobs are defined as any short-term or permanent positions that use information technology to deliver a product or service’ (emphasis added). This is problematic because those are precisely the jobs that are being replaced by digital automation in developed economies. The real long-term benefits of digital jobs are not in *delivery* of digital products or services but in digital *design, creation and engineering*. As such, positioning digital technologies as the answer for disadvantaged African young people risks lining them up in a race where the odds are stacked against them, by positioning them in the lower end of winner-take-most markets.

Third is the line between formal and informal, and not to see these as being in opposition to each other, or for formal jobs to be a panacea for all the ills of un- and underemployment. Although it may well be that formal work can enhance pay and security, the development of exploitative mechanisms in developed countries such as zero hours contracts illustrates the challenges that entry-level formal jobs still face. At the same time, there might be all kinds of economic and social reasons why informal sector work might be preferred. Economic reasons include evading taxes, maintaining benefits, and working outside regulations and other restrictions, while social reasons might include independence, choice over working hours and proximity to family and friends.

Fourth is the structural challenge. For jobs to grow in a given sector or industry, that sector itself needs to grow in response to growing domestic or foreign demand, and for there to be capabilities that are developed and deployed to respond to that demand. Work done by Harvard's Centre for International Development has shown that such growth is successful when countries build on existing capabilities and change what they produce by moving towards activities that are novel and more productive than the previous sets of activities. The diversification of economies is a story of growing sophistication but importantly this does not happen in one fell swoop. Malaysia did not go from exporting palm oil to being a world leader in biotechnology in one single step: it gradually built capabilities and know-how to move into an expanding set of products. Digital jobs can be created in different African countries, but unless this happens in the contexts of gradually diversifying sets of national capabilities, the new efforts will precisely replicate the mistakes of the last 60 years of attempts to develop fledgling industries in Africa.

It may well be that digital jobs have part of the answer. But regardless of the sector, the basic principles of labour markets and economics do not change. A truly inclusive approach to digital development will be one that is not Pollyanna-ish in its pronouncements, but knows that inclusivity is, has always been, and will always be a struggle against countervailing and vested interests. The key is to take a hard-headed look at the potential developmental costs and benefits of different sectors, and to seek to harness the good while mitigating the bad. The youth of tomorrow deserve nothing less from those who seek to help them.

## Recommendations

In the face of these challenges, ongoing efforts will need to make sure they look at the opportunities and the risks of digital technologies in a clear and systematic fashion.

**Broadening education to develop African digital creators and makers, not digital deliverers:** Primary and secondary education systems should be teaching relevant and valuable skills, which means things computers are not good at, as well as those that they are good at.

**Build digital on existing capabilities:** Africa's digital revolution will need to take account of the continent's existing capabilities and resources, specifically in agriculture and minerals.

**Strengthen digital entrepreneurship:** Young businesses, especially fast-growing ones, are a prime source of new jobs. There should be a greater emphasis on learning exchanges and mentoring, to complement training, with more two-way exchanges with technology firms, both domestic and international.

**The role of government:** Suggesting that digital is the winning strategy is clearly a very risky approach – not just because it may not work, but because it has the potential to make African growth even more unequal than it is at the present time. Most of today's technology marvels, from the internet to the smartphone, have a government programme somewhere in their history. African government need to lead the way in the basic research and science investments that will provide the platform for the digital developments of the future.

## Further reading

Dalberg (2013) *Digital Jobs in Africa: Catalyzing Inclusive Opportunities for Youth*, Dalberg research for the Rockefeller Foundation, [www.dalberg.com/documents/Digital\\_Jobs\\_in\\_Africa.pdf](http://www.dalberg.com/documents/Digital_Jobs_in_Africa.pdf)

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