Digital and Technology BRIEFING

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Institute of Development Studies

DECENT WORK IN A DIGITAL WORLD

Advances in digital technology and artificial intelligence are transforming the future of work. Self-driving trucks are due to be tested on UK roads in 2018 and are already being piloted in the US where around three million truck drivers and 8.7 million other people are employed in trucking-related jobs. In the Philippines, which has benefited from global outsourcing, the jobs of 89 per cent of salaried call centre staff are now at risk from automation. Women are also likely to be disproportionately and negatively impacted by automation, and also less likely to be shaping decisions in the tech sector where they are under-represented. All of this has significant implications for the UK Government. A coherent policy response is critical to ensuring the UK meets the Global Goal of decent work for all by 2030, and that the efforts and resources it invests in supporting support some of the poorest nations in the world to develop and prosper are effectively targeted.

> **"Alongside great benefits, every technological revolution mercilessly destroys jobs and livelihoods – and therefore identities – well before new ones emerge."**
> *Mark Carney, Governor of the Bank of England, cited in Allen (2016)*

Digital dystopia or 'new dawn'

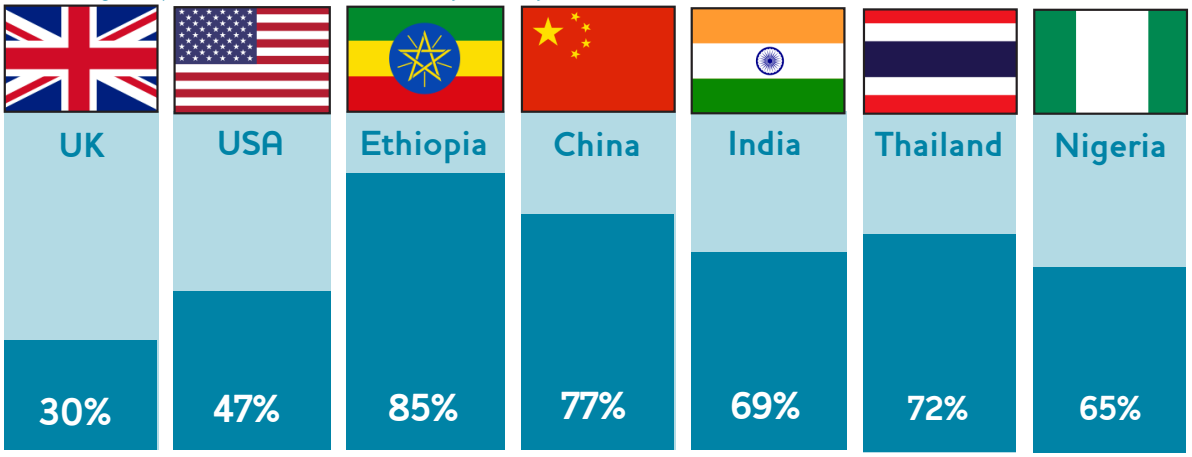
There is much hype around the 'digital revolution' – in the media, across social media and within political circles. As ever, the reality lies somewhere between the apocalyptic pictures painted by the naysayers and the utopian visions of societies dedicated to leisure pursuits and social causes of the relentless optimists. The reality of the future of work continues to be hotly contested, and the evidence is mixed. Analysis from the Organisation for Economic Co-operation and Development (OECD) suggests that only 9 per cent of jobs are at risk of automation, whereas World Bank data points to 47 per cent of jobs in the US being at risk. Interestingly, while there is a degree of overall acceptance that jobs are becoming automated, there is a wider perception amongst workers that it will not affect them because no machine could do their job.

Strengthening the evidence-base around the impact is therefore critical, both to inform policy discourse as well as public debate. What is also clear is that politics and policy must keep pace with technology to drive and shape the trajectory of change, the nature and scale of which is being felt across all sectors and workplaces, and goes beyond that experienced in the first industrial revolution.

What we know about the digital disruption of work

1. Jobs in all countries are potentially at risk of automation

Percentage of jobs at risk of automation by country



Adapted from Frey *et al*, 2016

2. Poorer countries are more vulnerable to automation

- Data from the World Bank analysed by the Oxford Martin School and CitiBank shows that susceptibility to automation is negatively correlated with GDP per capita – the poorer the country, the more vulnerable it is.

3. New technologies could make development driven by foreign direct investment unattainable

- Jobs are particularly at risk of automation in countries that have relied economically on low-cost, export-oriented manufacturing. Globalisation enabled firms to move labour-intensive work to developing countries, driving their economic growth. Automation reduces the contribution of manufacturing to the economy and means that low-income countries will not be able to achieve rapid growth through job creation, with trends towards deindustrialisation taking hold across the developing economies of Latin America, Sub-Saharan Africa and most of Asia.
- The advent of 3D printing and increased robotisation in factories means that it is becoming more economical to produce goods with fewer employees closer to end-markets than in places with low wages and many employees.

4. Women will be disproportionately and negatively impacted by automation

- The International Labour Organization (ILO) found that 56 per cent of the total workforce in Cambodia, the Philippines, Vietnam, Thailand and Indonesia are at risk of being displaced by robots, with workers in the garment manufacturing industry being especially vulnerable – who are mainly women.
- Men stand to gain one job for every three jobs lost to technology advances, while women are expected to gain one job for every five or more jobs lost (Source: World Economic Forum, 2016)

5. Digital opportunities are more likely to be taken up by men

- In developing countries, women are about 50 per cent less likely to have access to the internet than men in the same age group with similar levels of education and household income. (Source: World Wide Web Foundation, 2016)
- Women are also a third less likely than men of similar age, education level and economic status to access the Internet via their phone. (Source: World Wide Web Foundation, 2016)
- A study in the US found that Hispanics, African Americans, and women hold only 8 per cent, 7.4 per cent and 36 per cent of tech sector jobs respectively (US EEOC 2016).
- Those taking up online outsourcing opportunities globally are more likely to be young men, and who are well educated because much of the demand for online outsourcing comes from English-speaking countries (Kuek *et al.* 2015).

> **“Seizing the future in the digital revolution is not chance or fate – it is a matter of skill and foresight”**
> ***UNDP, 2015:9***

Implications for domestic and international policy in the UK

Digital disruption of work requires a coherent policy response from UK local and national government at regional, national and international levels. Especially for the UK to meet the global goal of decent work for all and contribute to the development and prosperity of countries globally. Key considerations include:

- Redressing the digital skills gap and inequalities around access to digital technologies within the UK and in the developing countries that its overseas aid supports.
- Assessing shifts in working practices, such as increased flexible hours and shorter working weeks, which have the potential to not only address automation-related job losses, but also benefit women with caring responsibilities.
- Learning from countries such as the BRICS where more women are employed by the tech sector.
- Reviewing UKAid investments in job creation, through institutions such as the CDC (the UK's Development Finance Institution), in the light of new evidence on digital disruption of the workforce and how it impacts on the formal and informal jobs sector to ensure they are well-targeted and contribute to poverty reduction.
- Putting in place labour market policies and training systems that are prepared for large-scale rapid changes and that are informed by an improved understanding of where the opportunities will be and what the risks are.

Further reading

Faith, B.; Hernandez, K. and Ramalingam, B. (2017) *Background Paper for the Digital Development Summit 2017*

Faith, B. (2017) *Automation, Women, and the Future of Work*, Impact Initiative Rapid Response Briefing

Frey, C., Osborne, M., & Holmes, C. (2016). *Technology at Work v2.0: The Future Is Not What It Used to Be*, Oxford Martin School and Citi.

Friederici, N.; Ojanperä, S. and Graham, M. (2016) *The Impact of Connectivity in Africa: Grand Visions and the Mirage of Inclusive Digital Development*, SSRN Scholarly Paper 2855398, Rochester NY: Social Science Research Network

International Labour Office (2015) *Women and the Future of Work: Beijing + 20 and Beyond*, Geneva: Gender, Equality and Diversity Branch, ILO

Credits

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