

HOW COVID-19 WORK DISRUPTIONS CAN HELP US PREPARE FOR AI

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The sudden reorganisation of work forced on society by Covid-19 has been unsettling and, for many people, painful. But the adaptability displayed by individuals and companies during the crisis bodes well for our capacity to cope with the much more sweeping workplace disruption that the widespread deployment of artificial intelligence (AI) will entail.

Sales executives who can no longer meet potential customers face-to-face now make their pitches by Zoom. Preparing food in dark kitchens and delivering it across town may redefine the roles of chefs and waiters, but the tasks cannot be fully automated. Chatbots can handle many routine queries, freeing humans to deal with trickier questions.

The experience of the pandemic reinforces the conclusion of researchers that it is tasks, not occupations, that can be automated or augmented through new technologies. That means it is up to business to decide how to use those technologies; one size will not fit all.

That said, even sales and customer services jobs, perceived to require the human touch, could become redundant as AI and other digital technologies evolve. Robots and drones may be delivering meals and groceries to our door before long. It's been estimated that between 10% and 40% of jobs in the UK could be affected by automation in the coming decades.

The wide margin of error underlines the uncertainty that accompanies technological change. To try to assess the impact of AI on the future jobs market, in 2018 Frontier carried out [a review](#) of 160 existing studies on behalf of the Royal Society and the British Academy. Our findings are worth revisiting, especially as they have - so far - been validated by the labour market reaction to the Covid crisis.

One of the main conclusions is that the short-term loss of jobs due to automation are generally offset, sooner or later, by a number of countervailing factors.

- As goods and services become cheaper to produce thanks to automation, demand for them rises, thereby increasing demand for labour.
- As new technologies are introduced, new activities emerge. Think of the proliferation of apps to serve the needs of smartphone users. According to one study, the creation of new tasks explains around half of all US jobs growth between 1980 and 2000.
- More radical innovation is not necessarily worse for workers as a whole- the greater productivity gains, the greater the potential for increasing demand to offset displacement from automation.

Not surprisingly, those directly affected by automation could suffer a fall in earnings relative to other workers, even as on average living standards increase.

This clearly generates potential distributional problems, even if everyone is better off than without automation, and feeds into the political debate under way in many countries, including China and the US, over whether there should be stronger Government intervention to influence the direction of technological change.

In short, a techno-pessimist would see the glass half-empty: the widespread adoption of AI, robotics and other digital technologies will cost a lot of people their jobs and will widen inequalities of income and inequality. A techno-optimist would counter that economies have prospered mightily down the ages thanks to the increase in productivity made possible by embracing new technologies.

Prior to the pandemic, evidence to settle this debate was inconclusive. On the one hand, there were no clear signs of substantial displacement or falls in earnings among low-income workers; on the other, productivity growth in advanced economies remained sluggish.

The focus during the Covid crisis has, understandably, been on more immediate issues such as the wellbeing of workers laid off in badly hit sectors such as hospitality, or those forced to work from home.

But the pandemic has underscored what is perhaps the most critical lesson to be learned as we prepare for the AI age: businesses have a choice over how they use technology. They can focus purely on automating existing processes and cutting labour costs, or they can use technology to introduce new products. They can give workers less or more control over their actions. They can also choose between investing in machines or in training their workers.

As with the topical question of whether to allow working from home or mandating a return to the office, a mix of different solutions that might work for different organisations depending on their business models, culture and circumstances. But each model will involve making choices about how digital technology is used.

This, in turn, calls for reorganising production in a way that takes advantage of the new technology to improve productivity. Investing in data infrastructure, robotics, or advanced analytics is not enough. The pandemic has forced many organisations to reorganise, with more or less difficulty. A similar

reorganisation may prove to be part of what is needed for digital technology to help boost productivity growth in the years ahead.

For their part, governments have a role to play in guiding market outcomes. This could involve influencing the choices about investment and use of technology; using regulation to prevent or mitigate the misuse technology; protecting consumers in digital markets ; and using economic policies to reduce the risk that some parts of the country could be left behind.

These are hard questions - but we have the tools to monitor the adoption and use of digital technology, understand its implications, and design evidence-based interventions where useful to pursue clear policy objectives. Prompt action will dictate how many jobs are lost and created, how rewarding and fair the labour of tomorrow will be, and how we can avoid the pitfalls of widening inequality. If we take the right decisions now, we might even learn to live side-by-side with our new machines.

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