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The world economy

Wealth without workers, workers without wealth

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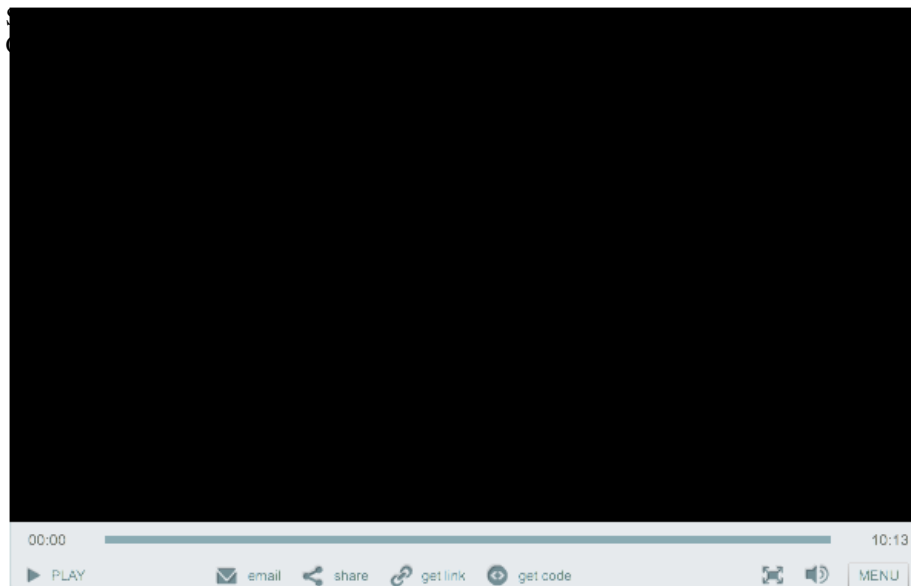
The digital revolution is bringing sweeping change to labour markets in both rich and poor worlds

Oct 4th 2014 | From the print edition



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TECHNOLOGICAL revolutions are best appreciated from a distance. The great inventions of the 19th century, from electric power to the internal-combustion engine, transformed the human condition. Yet for workers who lived through the upheaval, the experience of industrialisation was harsh: full of hard toil in crowded, disease-ridden cities.

The modern digital revolution—with its hallmarks of computer power, connectivity and data ubiquity—has brought iPhones and the internet, not crowded tenements and cholera. But, as our [special report explains](#), it is disrupting and dividing the world of work on a scale not seen for more than a century. Vast wealth is being created without many workers; and for all but an elite few, work no longer guarantees a rising income.

Computers that can do your job and eat your lunch

So far, the upheaval has been felt most by low- and mid-skilled workers in rich countries. The incomes of the highly educated—those with the skills to complement computers—have soared, while pay for others lower down the skill ladder has been squeezed. In half of all OECD countries real

In this section

[The Party v the people](#)

[Wealth without workers, workers without wealth](#)

[Don't let history repeat itself](#)

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median wages have stagnated since 2000. Countries where employment is growing at a decent clip, such as Germany or Britain, are among those where wages have been squeezed most.

In the coming years the disruption will be felt by more people in more places, for three reasons. First, the rise of machine intelligence means more workers will see their jobs threatened. The effects will be felt further up the skill ladder, as auditors, radiologists and researchers of all sorts begin competing with machines. Technology will enable some doctors or professors to be much more productive, leaving others redundant.

Second, wealth creation in the digital era has so far generated little employment. Entrepreneurs can turn their ideas into firms with huge valuations and hardly any staff. Oculus VR, a maker of virtual-reality headsets with 75 employees, was bought by Facebook earlier this year for \$2 billion. With fewer than 50,000 workers each, the giants of the modern tech economy such as Google and Facebook are a small fraction of the size of the 20th century's industrial behemoths.

Third, these shifts are now evident in emerging economies. Foxconn, long the symbol of China's manufacturing economy, at one point employed 1.5m workers to assemble electronics for Western markets. Now, as the costs of labour rise and those of automated manufacturing fall, Foxconn is swapping workers for robots. China's future is more Alibaba than assembly line: the e-commerce company that recently made a spectacular debut on the New York Stock Exchange employs only 20,000 people.

The digital transformation seems to be undermining poor countries' traditional route to catch-up growth. Moving the barely literate masses from fields to factories has become harder. If India, for instance, were to follow China's development path, it would need skilled engineers and managers to build factories to employ millions of manufacturing workers. But, thanks to technological change, its educated elite is now earning high salaries selling IT services to foreigners. The digital revolution has made an industrial one uneconomic.

Bridging the gap

None of this means that the digital revolution is bad for humanity. Far from it. This newspaper believes firmly that technology is, by and large, an engine of progress. IT has transformed the lives of billions for the better, often in ways that standard income measures do not capture. Communication, knowledge and entertainment have become all but free. Few workers would want to go back to a world without the internet, the smartphone or Facebook, even for a pay increase. Technology also offers new ways to earn a living. Etsy, an online marketplace for arts and crafts, enables hobbyists to sell their wares around the world. Uber, the company that is disrupting the taxi business, allows tens of thousands of drivers to work as and when they want.

Nonetheless, the growing wedge between a skilled elite and ordinary workers is worrying. Angry voters whose wages are stagnant will seek scapegoats: witness the rise of xenophobia and protectionism in the rich world. In poor countries dashed expectations and armies of underemployed people are a recipe for extremism and unrest. Governments across the globe therefore have a huge interest in helping remove the obstacles that keep workers from wealth.

The answer is not regulation or a larger state. High minimum wages will simply accelerate the replacement of workers by machines. Punitive tax rates will deter entrepreneurship and scare off the skilled on whom prosperity in the digital era depends. The best thing governments can do is to raise the productivity and employability of less-skilled workers. That means getting rid of daft rules that discourage hiring, like protections which make it

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difficult to sack poor performers. It means better housing policy and more investment in transport, to help people work in productive cities such as London and Mumbai. It means revamping education. Not every worker can or should complete an advanced degree, but too many people in poor countries still cannot read and too many in rich ones fail to complete secondary school. In future, education should not be just for the young: adults will need lifetime learning if they are to keep up with technological change.

Yet although governments can mitigate the problem, they cannot solve it. As technology progresses and disrupts more jobs, more workers will be employable only at lower wages. The modest earnings of the generation that technology leaves behind will need to be topped up with tax credits or wage subsidies. That need not mean imposing higher tax rates on the affluent, but it does mean closing the loopholes and cutting the giveaways from which they benefit.

In the 19th century, it took the best part of 100 years for governments to make the investment in education that enabled workers to benefit from the industrial revolution. The digital revolution demands a similarly bold, but swifter, response.

From the print edition: Leaders

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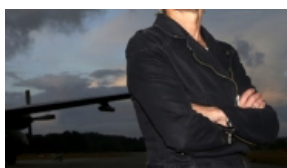
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