

# Technology, jobs and inequality

Technology is affecting jobs in various sectors. This has led to growing income inequalities within economies, even as they have reduced between economies



## THE OTHER SIDE

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In recent articles, I have criticised US President Donald Trump's anti-globalisation, protectionist policies, and the need for India to have a competitive exchange rate to protect/create jobs. There is a third, if longer-term, threat to job creation: rapid technological change, a point T N Ninan had discussed in his Weekend Ruminations last November ("Job-less manufacturing", November 26, 2016) citing the case of Adidas, the well-known German shoe manufacturer. Adidas has shifted

production from China to Germany as it finds factories using robots and, presumably, 3-D technology more competitive. He had also quoted an International Labour Organization report warning that more than half the factory jobs in ASEAN countries could disappear because of advanced technologies in the next few decades. Perhaps recognising this (and following the good-old adage that if you can't beat them, join them?), China has announced ambitious plans to become a global leader in robotics.

Technology is affecting jobs not only in manufacturing but also in services. The first was financial services with the introduction of automated teller machines (the only useful financial innovation according to Paul Volcker, the former head of the US Federal Reserve) in the 1980s, reducing the need to employ tellers/cashiers. Today, of course, most of accounting, payment, clearing and settlement services are done electronically. In the last few years,

even stock picking is increasingly being done by computers, reducing the need for analysts. Algorithmic, high-frequency trading is dominating the markets. P2P lending could disintermediate banks in many standard personal loans. Blockchain technology, invented for the artificial currency Bitcoin, seems to be getting popular in financial services. (Expressions such as blockchain and 3-D manufacturing tossed about in the media make one realise how dated one has become!) Whatever the sophistication of the technology, it can be hacked as several banks have discovered — but were there no frauds when ledgers were manually posted?

Automation could affect other services as well. One sign of the times: The market capitalisation of Tesla, the driverless car manufacturer is now larger than that of Ford or General Motors, although Tesla is still making losses. In Europe, pizzas would be home delivered by drones! Robots are manning call centres. Gadgets to monitor health

are increasingly being used to give early warnings which, if used promptly, could reduce the need for medical services. In Japan, as population ages, maid services are being increasingly done by robots. Even in India, we are seeing how quickly e-tailing services like Amazon are replacing retail shops. (On a personal note, my major regret is that most of my favourite bookshops in Mumbai have closed down; they cannot compete with mail order retailers.) Hotel booking services are reducing the information asymmetry between the traveller and the hotel industry. And, commuters in metropolitan cities are finding the use of taxi services like Ola and Uber helpful — and cheaper than using their own cars, which are often used not more than a couple of hours a day, and there is an increasing shortage of parking places.

There seems little doubt that this process will continue — if not accelerate. Luddite reactions are unlikely to be any more effective than they were in the 19th century. (The adjective comes from the bands of British workers who destroyed machinery, especially in cotton and woollen mills, which they believed were threatening their jobs.) One result will surely be a rapid increase in productivity, and lower need for human labour. Will the benefits go to

labour either through shorter working hours, higher wages and/or through distributive policies of governments — or will they be absorbed by capital, further increasing income inequalities? Keynes had foreseen this in his 1930 essay "Economic Possibilities for our Grandchildren", and speculated whether "three-hour shifts or a fifteen-hour week may put off the problem..." Will the "love of money as a possession — as distinguished from the love of money as a means to the enjoyments and realities of life — ... be recognised for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease". Although the time for his grandchildren, if there are any, has come, so far, there are no signs of either possibility. In fact, income inequalities have continued to grow within economies, even as they have reduced between economies, thanks to globalisation. And, his hope in the essay that if "economists could manage to get themselves thought of as humble, competent people, on a level with dentists, that would be splendid!" also remains unfulfilled.

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