

# Unpicking the productivity puzzle



The service sector's heavy dependence on high staffing levels drags down productivity © Getty Images

Last week, the US announced that [worker productivity had decreased](#) for a second straight quarter. This revelation comes on the back of the UK's data release last month which showed its productivity suffered the most severe decline since the global financial crisis of 2007-2008.

Productivity — the measure of unit output per employee — is a key determinant of the pace of economic growth and accounts for as much as 60 per cent of the difference between the economic successes of two countries. The implications of productivity for the prospects of global economic growth are crucial.

Yet, despite productivity's important role in canonical models of economics and in driving economic success, [globally labour productivity growth has trended lower](#) in the aftermath of the financial crisis to approximately 2.1 per cent, from pre-crisis estimates of closer to 3 per cent.

There are two schools of thought around the trends evolving in the data.

On the bearish side, economists and policymakers believe that productivity is falling because modern economies have moved — and continue to move — away from a manufacturing base, which is largely automated, toward an economy more heavily dependent on services that are still weighted towards human workers and have yet to be fully disrupted by automation and technology. As productivity captures output per worker, manufacturing with relatively small numbers of workers will perform better than the service sector where substantially more workers generate a smaller output.

A simple, anecdotal comparison can be drawn between the number of workers in the service sector versus a manufacturing factory floor. For example, in a restaurant (service sector) a customer faces a number of employees for just one meal (the maitre'd, the cloakroom attendant, the waiter, the dishwasher, the chef, the manager and so on). However, in many factories — making automobiles, televisions, or white goods such as refrigerators — automation has drastically cut the use of workers.

These trends translate to an increasing denominator of the productivity ratio and thus a reduction in productivity in the service sector, but a declining denominator and concomitant rise in productivity in the

manufacturing sector.

According to a [recent paper from the Kansas City Fed](#), American manufacturing workers are 10 per cent more productive and miners are more than twice as productive as the country's average worker.

Inasmuch as the [service sector is a significant \(and rising\) proportion](#) of the gross domestic product of many economies, accounting for [nearly 80 per cent of GDP in the US](#) today and compared with less than 50 per cent around 1950, the related productivity dynamics are crucial. While services have risen as a share of the country's GDP, manufacturing has steadily contributed less, declining from nearly 40 per cent to 12 per cent over the same period. Agriculture's share of GDP has also continued to decline in the last century from 8.2 per cent to approximately 3 per cent today.

Another bearish argument around the observed productivity decline stems from demographic shifts and worsening quality of labour. As baby-boomers and older populations with better skills and work ethic retire, they are replaced by a younger labour force that is less skilled and efficient, and thus more workers are required to fulfil the same duties. This view ties in with recent evidence from the Organisation for Economic Co-operation and Development that for the first time in the 240-year history of the US, the next generation will be less educated than the preceding generation. Again, more workers in the denominator translates to a worse productivity estimate.

More bullish views on productivity — that it is not declining and may actually be rising — centre on the view that it is currently mismeasured. In this view, the decline in productivity observed mainly reflects the failure of current measures adequately to capture the value added gains from many areas in the economy — in particular the fast-developing technology sector.

For example, despite a palpable benefit that users gain from the information collated in Wikipedia, the free online encyclopedia's contributors are not paid, and thus the level of output per worker and contribution to GDP does not figure in estimates, thereby downplaying what could be meaningful gains to productivity. In fact, were such gains to be accurately estimated, recorded and included in calculations, productivity ratios could actually increase.

A related point in the bullish outlook is the view that there is a time-lag and that the productivity gains from technology are yet to be fully absorbed into the economy, but could be sizeable. A technology-adoption time-lag would be similar to what an economy would have experienced as a time-lag between the discovery of electricity to its adoption in homes and factories. This hypothesis suggests productivity gains from automation of the service sector, social media and more widespread adoption of technology innovation in finance, healthcare, transportation and across the economy could yet be sizeable and trend upward.

The reality around productivity is likely to lie somewhere in between the mix-shift from manufacturing to service-based economy that is placing downward pressure on productivity, and the mismeasurement and lagging productivity that offers some promise of estimates soon showing an upward trajectory.

Even so, to spur economic growth, public policy will need to navigate technology headwinds, and the vagaries of transition from (and disruption of) the old economy into a modern one.

*Dambisa Moyo is a global economist and the author of 'Dead Aid', 'How the West Was Lost' and 'Winner Take All'. She serves on the boards of Barclays Bank, SABMiller, Seagate Technology and Barrick Gold*