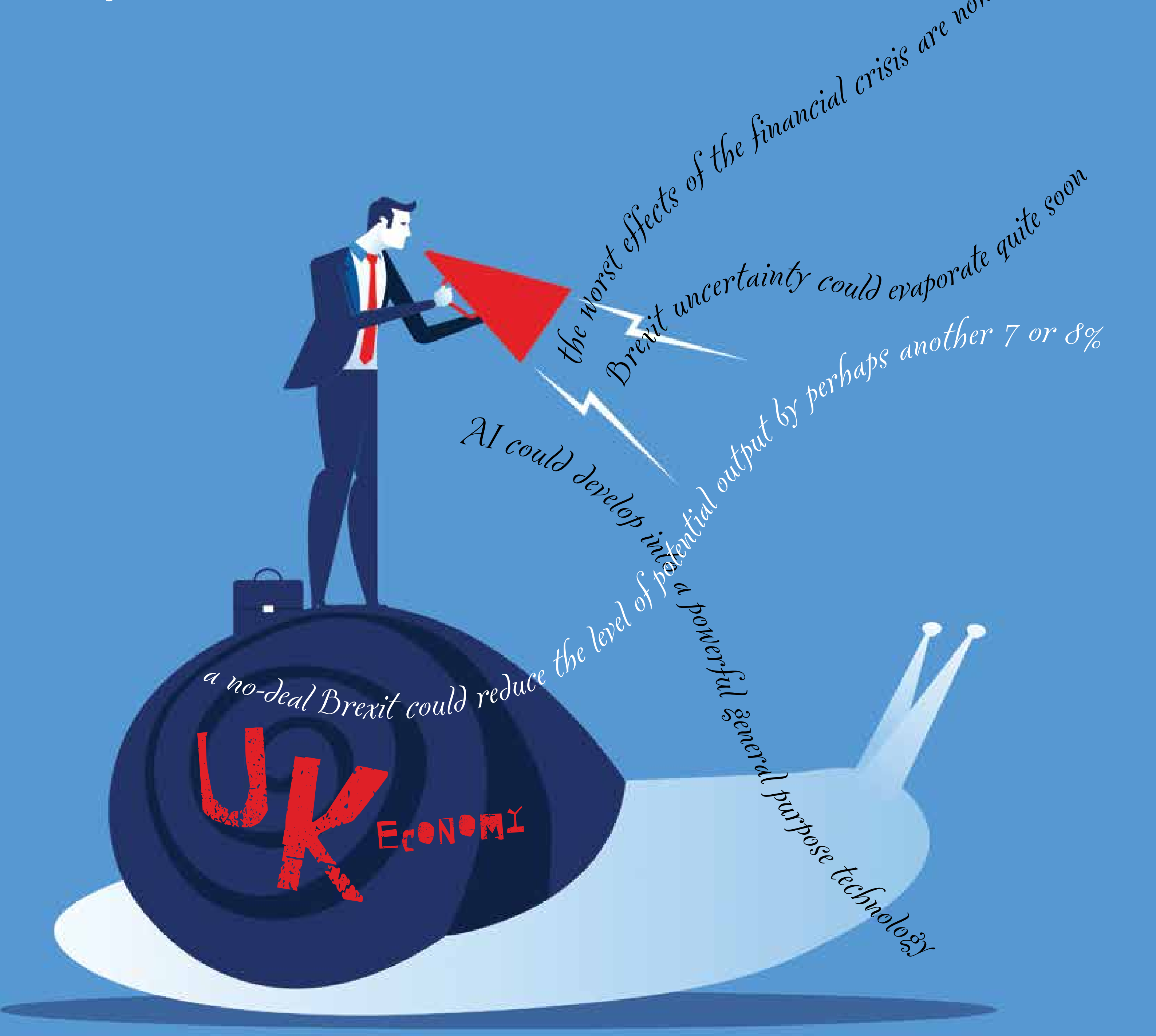
The mother of all slowdowns

By Nicholas Crafts



UK productivity growth has been hugely disappointing since the financial crisis began over ten years ago. As this article shows, the magnitude of the productivity slowdown is unprecedented. A unique combination of adverse circumstances may be largely to blame.

PRODUCTIVITY GROWTH IS central to the well-being of the UK economy. Increasing output per hour worked underpins growth in real wages, increases the tax base from which public services can be financed and has a potential dividend in terms of facilitating more leisure time. So it's bad news that, according to the Office for National Statistics (ONS), real GDP per hour worked in 2018 quarter 4 was only 2.0% above the pre-crisis peak level seen in 2007 quarter 4, and was 18.3% lower than if pre-crisis trend growth had been sustained.

But has a slowdown of this nature happened before? To address this question, we estimated trend labour productivity growth since 1760 (Figure 1). We used a dataset recently produced by the Bank of England which contains a long-run series for annual real GDP per hour worked. We found that trend growth pre-2008 was about 2.3% per year and that ten years on from 2008, labour productivity was 19.7% below the level expected had growth continued on this trend path. So, our findings broadly match those of the ONS.

We then calculated the equivalent statistic relating to earlier trend productivity growth (Figure 2). Clearly, productivity slowdowns where the economy fell significantly below its earlier trend path have happened before. The largest of these episodes, at the end of the so-called 'golden age' of economic growth in the 1970s, saw real GDP per hour worked at 10.9% below its 1971 trend path ten years later. In contrast, the shock of the Great Depression of the 1930s only provoked a shift to 5.3% below the 1929 trend path after ten years. On this criterion, the impact of the current productivity slowdown has been almost twice as bad as anything seen previously. It may fairly be described as unprecedented.

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What might be the explanation for such a dramatic turn of events? The answer to this question has proved elusive. However, it is reasonable to suppose that a combination of adverse circumstances, itself unprecedented, may be responsible for a large part of the evaporation of productivity growth since 2008. This conjuncture comprises the ebbing away of the Information and Communications Technology (ICT) boom, the impact of the financial crisis and, in the recent past, impending Brexit.

ICT is an important general-purpose technology which had a substantial effect on UK productivity growth around the turn of the century. Now, however, its impact is much weaker. Cumulated over the 10 years from 2008, this implies labour productivity in 2018 was about 8.5% lower than if the earlier ICT contribution had been sustained. Although a new General Purpose Technology (GPT) may be on the horizon in the form of Artificial Intelligence (AI), this has yet to have a significant impact on productivity.

The impact of the UK financial crisis on potential output through lower investment of various kinds has been estimated to be between 3.8% and 7.5%. In addition, productivity growth in the financial sector itself has been markedly reduced with the implication that its contribution to overall labour productivity growth has fallen by around 0.6% per year. Thus, the financial crisis may have reduced the level of labour productivity relative to the counterfactual of staying on the pre-2008 trend by 10% or more. ▶

The role of Brexit in the productivity slowdown is, of course, its short-run impact since mid-2016, such as its effect on investment through uncertainty. An estimate of the Brexit effect can be obtained using a statistical methodology which creates a 'doppelganger' economy which is not subjected to the Brexit shock. The result is that GDP (and presumably labour productivity) was about 2% lower in 2018 than in the counterfactual business-as-usual case.

The unprecedented combination of these negative effects account for the UK's productivity being so far below its expected growth in 2018. But, if our diagnosis is approximately correct, there is a silver lining to this dark cloud. It suggests that the context for productivity growth may improve. The worst effects of the financial crisis are now behind us, and AI could well develop into a powerful general purpose technology to pick up the baton from ICT. It is even possible that Brexit uncertainty could evaporate quite soon. That said, it seems only too likely that politicians will exacerbate the productivity slowdown with a no-deal Brexit that would reduce the level of potential output by perhaps another 7 or 8%. ◀

Vae miseris nobis!

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Further reading
Crafts, N., and Mills, T. (2019), 'Is the UK Productivity Slowdown Unprecedented?', CAGE working paper no. 429.

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Figure 1: Labour productivity growth, 1857 – 2018, with trend growth superimposed

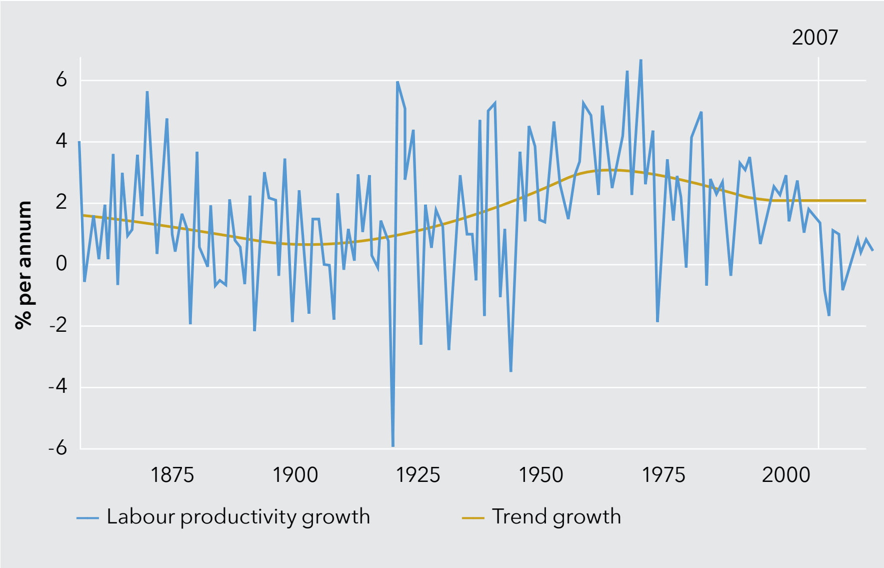

Figure 2: Cumulative 10-year ahead difference from trend growth, 1857 – 2008