Where has all the growth gone?

Sluggish productivity may be less cause for alarm than we believe

Why does the developed world seem to be stuck in a low-growth gear despite ongoing rapid technological progress? The rate of productivity growth – the major determinant of long-run economic growth – has slowed sharply since the start of the century. Are fast rates of economic growth, the hallmark of the 20th century, a thing of the past?

The so-called 'productivity puzzle' is probably the most pertinent macroeconomic question of our time. The most common opposing arguments are: (1) yes, ageing populations, a lack of investment and too much debt mean we are heading for economic sclerosis, a sort of Japanification; and (2) no, economic growth has not really slowed all that much. We simply are not measuring it properly. Our traditional methods, such as national accounting, do not capture the rapid rise in free goods and services available – predominantly digital technologies.

But what if both of these explanations are wrong? What if, instead, we simply have to wait and let economic nature take its course? After all, we are not in unfamiliar territory. In 1930, British economist John Maynard Keynes wrote: "It is common to hear people say that the epoch of enormous economic progress which characterised the 19th century is over; that the rapid improvement in the standard of life is now going to slow down."

While Keynes rightly predicted the major rise in the standard of living during the 20th century, with the Western world on the eve of World War II and still reeling from the disaster of the great depression of the 1930s, his quote sums up well the sentiment at the time.

Just as the predictions of long-term decline made a century ago turned out to be wrong, predictions made nowadays of a gloomy future will probably turn out to be excessively pessimistic, too.

Long-term economic data for the UK shows two distinct 'super-cycles' in productivity growth beginning at the time of the first Industrial Revolution. The first cycle brought about acceleration in productivity growth over an approximate 70-year period that peaked in around 1870 before a 30-year deceleration thereafter. It ended at the turn of the 20th century during the middle of the second Industrial Revolution. The cycle of the 20th century followed a similar pattern to the 19th, but with much bigger gains in productivity and wellbeing.

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The most plausible explanation for our current period of productivity weakness, consistent with economic historians' descriptions of history and long-term growth theory, is that we are currently in between what might be described as productivity super-cycles.

The three-stage productivity super-cycle can be described as follows: (1) Discovery: the cycle starts with major breakthroughs in knowledge and technology. But entrepreneurs struggle to utilise it effectively en masse. Although the potential gains from such technologies seem enormous, the risks and costs are initially too high. Productivity growth remains weak. (2) Dispersion: eventually, people figure out how to utilise the new technologies cheaply and implement them widely. As old technologies are replaced at a rapid pace, progress improves. (3) Decline: the primary new technologies are now implemented widely. Entrepreneurs are simply finding new ways to slightly alter or build on the technology. Rates of economic improvement begin to slow again as late-stage developments yield smaller gains than before.

Are we back at stage one again? Comparing the Western world's current struggle for productivity gains against the ongoing fast rates of discovery in energy, artificial intelligence and robotics, to name but a few, suggests that we may be back at stage one and could be heading for stage two with rapid productivity advances in a while.

Between 1700 and 1800, UK real GDP per capita increased by 30%. From 1800 to 1900, it rose by 120%. During the past century, real GDP per capita grew by a staggering 410%. What will the next century bring? History certainly tells us to be very, very optimistic. Looking back in 100 years' time, we have every reason to believe that the history books will summarise our current period of frustration to a mere sentence on a page.

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