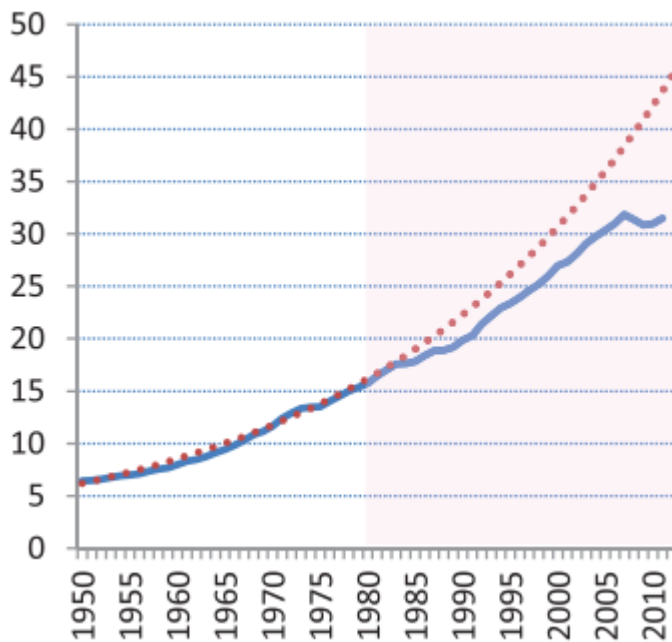


Productivity and Investment: Two sides of the same coin?

Productivity can be defined as the value of what a worker can produce (output) in a given period of time (per hour). The chart shows the growth of output per hour from 1950. ¹ The red dotted line represents productivity growth as it would have been if it had continued to grow at the same rate after 1982 as it had before. The blue line represents what actually happened to productivity growth as it slowed down after 1982, and again more dramatically from 2007.

Labour productivity: Output per hour



Through most of the 1950s, 1960s and 1970s productivity increased at a rate of 3.6% per year. This growth was maintained for a few years into the early 1980s but from then it deteriorated significantly, averaging only 2.1% until 2007. ² Between 2007 and 2022 average output per hour has been even lower at 0.5%.³ The Office for National Statistics has said that if productivity had continued to grow at 2.1% per year in the last decade, it would have meant an extra £5,000 per worker per year on average. The UK has lower labour productivity than the United States, Germany and France and also smaller countries such as Denmark, Sweden and Finland.⁴

In his recent Spring budget, the Chancellor, Jeremy Hunt, agreed with economists that “stimulating investment is the most effective way to raise productivity and therefore wages and living standards.” And since 2010, he added, “we have been doing just that.” The evidence however would suggest that public investment has been poor, not only since 2010 but from as far back as 1980. In a recent study the Centre for Economic Performance at the London School of Economics concluded: “The fundamental UK productivity problem lies in low investment”. And since the early 1980s there has been “a persistent failure to create the environment for long-run investments in capital, infrastructure, skills and innovation.”⁵

Government expenditure on public sector net investment (PSNI) reached its highest ever point of 7.5% in 1968. Its lowest ever point was 0.0% in 1989. The average for the period 1948 to 1979 was 4.7%, compared with 1.7% for the period 1980 to 2022.⁶ A report produced jointly by the Resolution Foundation and the Centre for Economic Performance in 2023 recommended that the UK's public sector net investment should be maintained at 3% a year. Recent announcements by the Chancellor mean that public sector net investment will rise from 1.9% of GDP in 2022–23 to 2.6% in 2023–24 before declining gradually to 1.8% by 2028–29.⁷

Similarly, investment in research and development has also been falling. *“In 1981 the UK was one of the most R&D intensive countries in the world. It was, with the USA and Germany, one of the three world leaders in terms of R&D intensity.”*⁸ From just over 2% in 1981 it fell to a low point of 1.50% in 2004. It continued to fall from 2011 on the back of the government's austerity programme but has been relatively stable since reaching 1.74% in 2019.⁹

In March 2020 when chancellor, Rishi Sunak announced that he would boost public and private sector investment in R&D as a major way to increase the productivity of the British economy. He promised an increase of 15% for the following year with further increases in successive years.¹⁰ The intention was to meet the target which had been originally set by the Industrial Strategy White Paper in 2017 – to boost private and public R&D spending from 1.7% to the OECD average of 2.4% by 2027. The OECD average is now 2.7% and following recent revisions by the UK Office for National Statistics, the OECD calculates UK R&D as 2.9%. This still leaves the UK behind 12 other advanced economies.¹¹

Today around 71% of R&D takes place within the business sector followed by 23% in higher education - the government accounts for only 5%.¹² Before 1980 *“government research laboratories accounted for about 60% of public sector R&D.”*¹³ The huge change after 1980 was associated with the move to a free market with much less government intervention. The view is that public investment holds back or ‘crowds out’ private sector investment. For example the former chancellor, George Osborne, proclaimed that public spending *“crowded-out private endeavour”*.¹⁴ The view that public investment ‘crowds out’ private investment however has turned out to be mistaken because business investment also fell significantly, alongside falls in public investment.¹⁵

In fact there is much evidence to support the opposite view - that public investment encourages or ‘crowds in’ private investment. One study commissioned by the government itself in 2015 has estimated that a £1 increase in public expenditure will lead to a £1.13 to £1.60 increase in private expenditure. A second study in 2020, also commissioned by the government, found that each £1 of public investment stimulates between £0.41 and £0.74 of private R&D within the same year, and in the longer term between £1.96 and £2.34 of private R&D.¹⁶

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Notes

In early October 2022 the ONS updated their methodology for calculating R&D spending. Having noticed a discrepancy between the amount of R&D spending suggested by tax credit returns and as estimated by their usual survey, they revised up their R&D estimates. The revision had a huge impact – increasing estimates of private R&D spend in England by over fifty per cent, and by more in Scotland and Wales. The IPPR commented:

“Official figures will now likely show that the UK has met its gross R&D target of 2.4 per cent of GDP – five years ahead of the deadline set by the Industrial Strategy White Paper.” Science or Stagnation, Institute for Public Policy Research (IPPR) October 2022 page 5.

The latest data from the OECD shows that Israel has the largest percentage of R&D at 5.5% followed by South Korea at 4.9%, the United States, Sweden and Belgium 3.4%, Switzerland 3.3%, Austria and Japan 3.2%, Germany 3.1%, and Finland 3%. As we saw above the UK's percentage is probably around 2.9%.

For more on investment see our previous articles:

Research and Development: Why has it been so low? 31 January 2023

https://www.economiclifeinbritain.co.uk/files/ugd/728b7f_3071925267224048aca04d0d35f68d45.pdf

Public Investment: How has it changed? 12 July 2023

https://www.economiclifeinbritain.co.uk/files/ugd/728b7f_7b236733053d4811b4eba480393171ff.pdf