Productivity and exports – how SMART planning can resolve the UK's two most serious economic crises

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'Productivity isn't everything, but, in the long run, it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker' – Paul Krugman, distinguished professor of economics at the Graduate Center of the City University of New York

'Productivity growth is a gift for rising living standards, perhaps the greatest gift… [T]ackling the... productivity puzzle is among the most pressing public policy issues today'…. 'Productivity is what pays for pay rises. And productivity is what puts the life into living standards' – Andy Haldane, former Bank of England chief economist

'Export or die' – Ministry of Information public information film, 1946

'The biggest room in the world is the room for improvement' – Helmut Schmidt

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Author’s biography

Professor David Blake is Professor of Finance at Bayes Business School, part of City, University of London. In 2014, he was appointed Chair of the Independent Review of Retirement Income. Its report ‘We Need a National Narrative: Building a Consensus around Retirement Income’ was published in March 2016 (pensions-institute.org/IRRIReport.pdf). He has previously consulted with the Office for National Statistics, the National Audit Office, the Financial Conduct Authority, the Department for Work & Pensions, HM Revenue & Customs, HM Treasury, the Bank of England, the OECD, the International Monetary Fund and the World Bank. He has a PhD from LSE.

Author’s note

This study was prompted by the question put to me by a senior parliamentarian : ‘what exactly is productivity?’. I thought it was a question worth answering, since I was vaguely aware that the UK was not particularly good at productivity. Ditto with exports. I do not claim to have any particular expertise in either subject – they are not my main focus of research. However, it soon became clear that a lot of people, including civil servants, academics, and think tanks, did have a lot of expertise and had spent a lot of time and effort investigating these issues. But it also became clear that much of this effort appears to be very recent and that very little of it has been successful in turning around the UK’s productivity and export record to date. So I make no apology for adding to the contribution. I provide a broad summary of the issues that other studies have covered extensively – so there is nothing novel here. I soon came to the conclusion that the UK is facing both a productivity crisis and an export crisis. I then discuss how – building on the lessons of behavioural psychology and behavioural economics – we can begin to overcome the huge barriers and hurdles that this country faces in improving productivity and exports – which are the only ways of preventing long-term economic decline and providing for real living standard improvements in the future. If – as some might say – this in unlikely to work, then we need to conclude that we are in very deep economic trouble as a country.

Abstract

The UK faces both a productivity crisis and an export crisis which will permanently lower real living standards unless they are fixed soon. Skills (especially vocational) training is inadequate and significant numbers of working age people are on welfare benefits for health reasons. Companies have not spent sufficiently on research and development and have not invested sufficiently in productivity-enhancing capital. There is a long tail of inefficient firms that are poorly managed. The UK has failed to capitalise on its comparative advantage when it comes to exporting, namely in high tech manufacturing and services, especially digital, financial and business services and life sciences. Government policy has been characterised by over-centralisation, weak and ineffective institutions and policy churn, institutional and policy silos, as well as short-termism and poor policy coordination.

The solution is SMART planning which builds on the lessons of behavioural psychology and behavioural economics. SMART plans are manifestos that act as both commitment and support devices. The government must introduce a national strategy for productivity and exports. The strategy should be implemented using SMART plans for workers, companies, exporters and government – designed to overcome the barriers and hurdles that each group faces in increasing productivity and exports.

JEL: O40

Key words: productivity, exports, behavioural psychology, behavioural economics, SMART plans

Highlights and recommendations

Highlights

1. The UK faces both a productivity crisis and an export crisis which will permanently lower real living standards unless they are fixed soon. Productivity measured as average output per worker has not increased since the Global Financial Crisis in 2007-09 – and neither have real incomes. The UK's share of global exports has been on a downward trend for more than a century.

2. Real GDP growth is equal to the growth in how much workers produce per hour (i.e., productivity) + the growth in hours worked + the growth in the number of workers in the labour force. So for a given working population and hours worked, the real growth rate in GDP is equal to (and hence cannot exceed) the growth rate in labour productivity (i.e., output per hour). This means that there can be no real GDP growth without productivity improvements.

3. The skills training of workers is generally inadequate and educational resources are misallocated towards university degrees, many of which contribute little to productivity, and away from vocational courses in subjects like engineering and IT that significantly add to productivity.

4. A significant proportion of the working age population are on welfare benefits, unable or unwilling to work for health reasons.

5. Companies have not spent sufficiently on research and development and have not invested sufficiently in productivity-enhancing capital. Instead, too many of them have come to rely on low-cost immigrant labour.

6. There is a long tail of inefficient firms that are poorly managed.

7. The UK has failed to capitalise on its comparative advantage when it comes to exporting, namely in high tech manufacturing and services, especially digital, financial and business services and life sciences.

8. Government policy has been characterised by over-centralisation, weak and ineffective institutions and policy churn, institutional and policy silos, as well as short-termism and poor policy coordination. The implementation of government policy has been poor and under resourced. Government policy has also tended to be reactive rather than proactive and anticipatory. As a result of this, the national infrastructure is in a high state of degradation.

9. While the government understands the above problems and has proposed sensible solutions for them, the solutions have failed to be implemented effectively because of poor

resourcing and because the solutions are 'top down' and have failed to engage or motivate those who were supposed to benefit from them.

10. There is a solution that can work which builds on the lessons of behavioural psychology and behavioural economics. It is called a SMART plan:

- First, people – workers and company managers – need to be informed that their current working practices are not as efficient as they could be (measured against best practice in other countries) – and that this will have an adverse effect on their future real living standards. It is necessary to understand that a problem exists before it can be solved – and very few people in this country understand how serious our productivity and export problem is. Most people who do work believe that they are already working very hard.
- Second, they need to become engaged and motivated – so they become willing to change their behaviour.
- Third, they need to be guided, supported, and encouraged into changing and improving working practices that increase both worker and company productivity, as well as exports: in short many will need hand holding. This will involve setting goals, providing incentives and reducing barriers or hurdles.
- This will lead to a journey with three elements: (1) where people start from, (2) where they need to end up (the goals), and (3) the steps they need to take to reach these goals, with each step being short and manageable. All journeys begin with the first short step and end, if they are successful, when the destination is reached.

11. SMART plans are manifestos that act as both commitment and support devices.

12. SMART plans have been used successfully in the UK. They were used to generate a big increase in pension savings in 2012 when auto-enrolment was introduced.

13. A SMART plan for workers will involve: skilling up the workforce; improving health and wellbeing; encouraging and supporting people on benefits to find jobs; and providing the right type of incentives to retain and promote workers.

14. A SMART plan for companies will involve effective productivity management using modern human resource practices such as talent management and improving the working environment; and encouraging research and development spending, investment in productivity-improving capital and automation.

14. A SMART plan for start-up companies will involve support from venture capital in the form of business incubators, accelerators and seed funds, combined with capability training.

16. A SMART plan for exporters will involve: increasing goods exports to the most rapidly growing emerging markets in areas where the UK has a comparative advantage (e.g., high-tech manufacturing, such as aerospace); increasing service exports, especially digital, financial and business services and life sciences; learning by exporting; and closer collaboration

between the government and UK trade associations to help UK companies (especially, SMEs) increase their exports of goods and services.

17. A SMART plan for government will pre-commit the government to maintain its investment in the national infrastructure, encourage greater automation, and introduce a system of regulations, taxes and subsidies whose aim is to maximise productivity improvements and increase exports.

Recommendations

1. In order to improve living standards, we need to increase productivity and exports. To achieve this, the government must introduce a national strategy for productivity and exports that covers:

- A comprehensive workforce strategy
- A comprehensive strategy for corporate investment and productivity improvement
- A comprehensive strategy for exports
- A comprehensive strategy for long-term government policy
- A national resilience strategy.

2. The strategy should be implemented using SMART plans for workers, companies, exporters and government – designed to overcome the barriers and hurdles that each group faces in increasing productivity and exports.

Executive summary

Productivity and exports are the only routes to long term prosperity. Yet the UK faces both a productivity crisis and an export crisis. Productivity measured as average output per worker has not increased since the Global Financial Crisis in 2007-09 – and neither have real incomes. The UK's share of global exports has been on a downward trend for more than a century.

The first thing we have to do is recognise that these two crises. Workers, companies and the government have all contributed to the UK's poor records on productivity and exports.

In terms of the UK's poor productivity record:

- Workers have contributed to it as a result of: skill shortages; increasing inactivity due to early retirement and ill-health following the Covid-19 pandemic; a reluctance of many to move off welfare benefits into work; low levels of job mobility; difficulties of measuring productivity in the service sector in the new world of hybrid working; 200,000 surplus public sector workers taken on during the pandemic; low productivity amongst the self-employed and part-time workers; and the demographic consequences of an ageing population and declining fertility.
- Companies have contributed to it because: there is a long tail of inefficient firms that are poorly managed and underinvest in both research and development and in productivity-enhancing capital; and companies have instead preferred to rely on low-cost migrant labour.
- Governments have contributed to it because: it has failed to invest in the national infrastructure; it has failed to set regulations, taxes and subsidies to support the necessary increases in human capital, R&D, and in productivity-enhancing capital in companies; in addition there has been over-centralisation, weak and ineffective institutions and policy churn, institutional and policy silos, as well as short-termism and poor policy coordination – in other words, there is no policy certainty to give companies confidence to invest.

In terms of the UK's poor export record, the government and trade associations have traditionally failed to provide the appropriate support for companies to increase their exports or to recognise that exporters tend to be the drivers of productivity growth as a result of their greater ability to generate and absorb new innovations.

The government is aware of all this, understands the issues and has repeatedly tried to introduce strategies to address the UK's poor productivity and export records. But these strategies have largely been unsuccessful. The reason for this is that they were 'top down' strategies which did not engage or motivate those who were supposed to benefit from them.

Instead, we need to learn from behavioural psychology and behavioural economics and introduce SMART planning which is a 'bottom up' approach to achieving the desired goals:

- First, people – workers and company managers – need to be informed that their current working practices are not as efficient as they could be (measured against best practice in other countries) – and that this will have an adverse effect on their future real living standards and that of their families. It is necessary to understand that a problem exists before it can be solved – and very few people in this country understand how serious our productivity or export problem is. Most people who do work believe that they are already working very hard.
- Second, they need to become engaged and motivated – so they become willing to change their behaviour.
- Third, they need to be guided, supported, and encouraged into changing and improving working practices that increase both worker and company productivity – and exports.
- This involves a journey with three components: (1) where we start, (2) where we want to end up (the goals), and (3) the steps we need to take to reach our goals, with each step being short and manageable.

SMART planning has been successful in increasing pensions savings in the UK using auto-enrolment beginning in 2012. Also a version of a SMART plan has been used to increase the number of students preparing for science, technology, engineering, and maths (STEM) subjects. It can be used to increase productivity and exports.

In terms of improving the UK's productivity record:

- Workers should be: supported to skill up; improve their health and wellbeing; encouraged and supported to get jobs if they are on benefits; provided with the right type of incentives to remain with their employer and get promoted; provided with the right type of support if they have family commitments (such as reduced childcare costs); supported to remain in the workforce when they get older; supported to improve their productivity if they work in the service sector.
- Companies should be encouraged to: introduce effective productivity management; improve the working environment for employees, through effective talent management; increase their R&D spend on innovation (making maximum use of government support in the form of, e.g., R&D tax credits, Catapults) and productivity-enhancing capital for their employees; welcome foreign direct investment which provides a powerful stimulus that encourages domestic companies to raise their game; increasing the use of automation (Germany has ten times the number of robots as the UK); and make better use of trade associations, business consultants, their institutional investors and academic institutions. Start-up company should begin by estimating funding and capability needs and then arrange discussions with appropriate business incubators, accelerators and seed funds.
- The government can make its contribution by: implementing in full the National Infrastructure Strategy; learning from past failures which include '"stop-start" public

investment, insufficient funding for regions outside of London, slow adoption of new technology, policy uncertainty that undermines private investment, and project delivery plagued by delays and cost overruns'; adopting as much automation for the national infrastructure as possible; introducing outcome-based, smart and adaptive regulation and a smart tax and subsidy regime that supports private-sector companies to take risks (e.g., lower taxes can have an indirect effect on increasing productivity by encouraging foreign direct investment).

This will require the introduction of a national strategy for productivity and exports that covers:

- A comprehensive workforce strategy that deals with skills training, the health crisis, support for unemployed people to return to work, the cost of childcare, and the role of migration in addressing major workforce gaps.
- A comprehensive strategy for corporate investment and productivity improvement
- A comprehensive strategy for exports
- A comprehensive strategy for long-term government policy, covering the national infrastructure, automation, regulation, and taxes and subsidies
- A national resilience strategy.

This strategy needs to be sustained until its aims are achieved. The government must learn how similar strategies in the past have failed, in particular, because of poor implementation and resourcing. Government policy also needs to change from being reactive to being proactive and anticipatory.

In terms of the UK's poor export record, the UK has a comparative advantage in service exports and certain high-tech goods. The UK should focus on fast-growing services and digital trades, especially in the most rapidly growing emerging markets.

To achieve this, the government needs to adopt a SMART plan for exporters. Key to this will be to set suitable goals:

- An increase in goods exports to the most rapidly growing emerging markets in areas where the UK has a comparative advantage (with a target growth rate equal to Germany)
- An increase in service exports, especially digital, financial and professional services, and life sciences
- An increase in learning by exporting.

There are signs that the Department for International Trade is implementing aspects of a SMART plan. For example, the DIT is offering tailor-made, expert advice on all aspects of selling overseas, free online lessons and tutorials on pricing, market research and how to assess the competition. The DIT also offers financial and insurance support. A key objective of the SMART plan is upskilling through training and the Institute of Export & International

Trade provides such training. This bottom-up, step-by-step approach has shown early signs of success. Exports increased by nearly 22% in 2022 and this increases the chances of winning the ‘Race to a Trillion’ – the DIT’s goal of reaching UK exports of £1 trillion per year before 2035.

Despite this early success, more needs to be done. Trade associations can certainly support exporters with help and advice. However, UK trade associations have been criticised for being far less effective than their counterparts (especially in Germany) in helping UK companies create links with potential overseas customers. Germany has ten times more Authorised Economic Operators (AEOs) than the UK. Trade associations need to become research-intensive organisations whose primary goal is to know everything there is to know about the potential global markets for their own members’ products or services. Closer collaboration between the DIT and UK trade associations to help UK companies, especially, SMEs, increase their exports of goods and services.

We have enough examples to show that SMART plans work – and the early success in increasing exports is very encouraging. The key task now is to apply it to increasing productivity in the UK.

1. Introduction

The UK invented the concept of productivity in the Industrial Revolution. It also led the world in exporting goods and services during the period of global free trade in the second half of the Nineteenth Century. The long-term economic performance of countries is linked to two key factors: (1) productivity-enhancing technological innovation and (2) international trade and capital movements.[1]

But we are now well behind in both productivity and export growth compared with competitors, such as Germany. Germany has ten times the number of robots as the UK and ten times the number of Authorised Economic Operators (AEOs) engaged in international trade.

As a result, Germans have a much higher standard of living on average than those living in the UK. At the lower end of the income distribution in the UK, the situation is particularly challenging: the Institute for Fiscal Studies (IFS) estimates that 22% of the UK population are living in relative poverty; the Resolution Foundation estimates that nearly half of families with three or more children were in relative poverty in 2021-22, up from a third in 2012-13 and that 700,000 families have no savings at all; and the Claimant Count[2] in July 2022 was 1.53 million – 300,000 more than in March 2020 when the Covid-19 pandemic lockdown started.[3] Over half (51%) of British families received some form of state support in the 3 years to March 2021 (e.g. income-related benefits, child benefits and state pension).[4] [5] The only way to improve living standards in the UK in the long run – especially for the lower paid – is to increase both productivity and exports. Indeed, they are the only way to avoid long-term economic decline and the social unrest that this will induce.

In this report, we explain the problems and offer solutions. We find that the problems are well understood at government level and that the current solutions being proposed by

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[1] Angus Madison (2006) The World Economy, OECD, Paris.

[2] The Claimant Count is a measure of the number of people claiming benefits principally for the reason of being unemployed, based on administrative data from the benefits system; https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/claimantcountqmi

[3] Data from Public Policy Exchange Conference on Universal Credit & the Welfare State: Supporting the Most Vulnerable & Helping People Back into Work, 21 October 2022, and Daily Telegraph Money, 21 January 2023.

[4] https://www.ethnicity-facts-figures.service.gov.uk/work-pay-and-benefits/benefits/state-support/latest

[5] Analysis published in January 2023 by Civitas of Office for National Statistics data from 2020-21 showed that 54.2% of people (36 million) lived in households which received more in benefits than they contributed in taxes (including non-cash benefits such as NHS and education services) – up from 24 million in 2000. The analysis also showed that 83% of all income tax is paid by just 40% of adults; https://news.sky.com/story/record-number-of-britons-receiving-benefits-that-amount-to-more-than-they-pay-in-tax-study-finds-12793349

government are very sensible – even if many of them are being proposed very late in the day. But these solutions have so far been ineffective in increasing productivity, although they have been more successful in increasing exports. So the problem lies in the implementation of the solutions. The current implementation is 'top-down' and there is very little engagement or even understanding of the issues at lower levels.

To overcome this, we need to appeal to the insights from behavioural psychology and behavioural economics – and develop 'bottom-up' solutions that have a greater chance of being effective because they are more likely to engage with and motivate the people and organisations that need to change their behaviour and, hence, make their own valuable contribution to increasing their productivity and/or exports. We do know these solutions work if they are designed correctly. One important example is the success of auto-enrolment in increasing retirement savings. We will use the name SMART plans for these 'bottom-up' solutions that utilise behavioural psychology and behavioural economics SMART plans.[6]

Part of the good design of a SMART plan is national recognition of the problems. We should begin with a national campaign that explains why productivity and exports are so important and discusses solutions that will be effective in improving both. It could be called 'We Need a National Narrative: Building a Consensus around Raising Real Living Standards' and it would focus on improving productivity and exports. Indeed, improving productivity and exports needs to be at the heart of all future government economic policy. Everything else is secondary.

The outline of report is as follows. Section 2 examines what has been happening to UK productivity and explains the role of workers, companies and government in contributing to our poor productivity performance. It then considers what workers, companies and government can each do to improve productivity. Section 3 examines reasons for the UK's poor export performance and explains how exports can be increased and the important role of government and trade associations in contributing to this. Section 4 concludes.

[6] The reason will become clear later.

2. Productivity

2.1 What has been happening to UK productivity?

Productivity can be defined as follows:

- Productivity is a measure of economic performance that compares the amount of goods and services produced (output) with the amount of inputs used to produce those goods and services.[7]
- Productivity is commonly defined as a ratio between the output volume and the volume of inputs. In other words, it measures how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output.[8]

Figure 1 shows that real average disposable income in the UK has not grown since the Global Financial Crisis (GFC) of 2007-09. This is because productivity has barely increased since then. Before that it grew at an average annual rate of 2.5%.

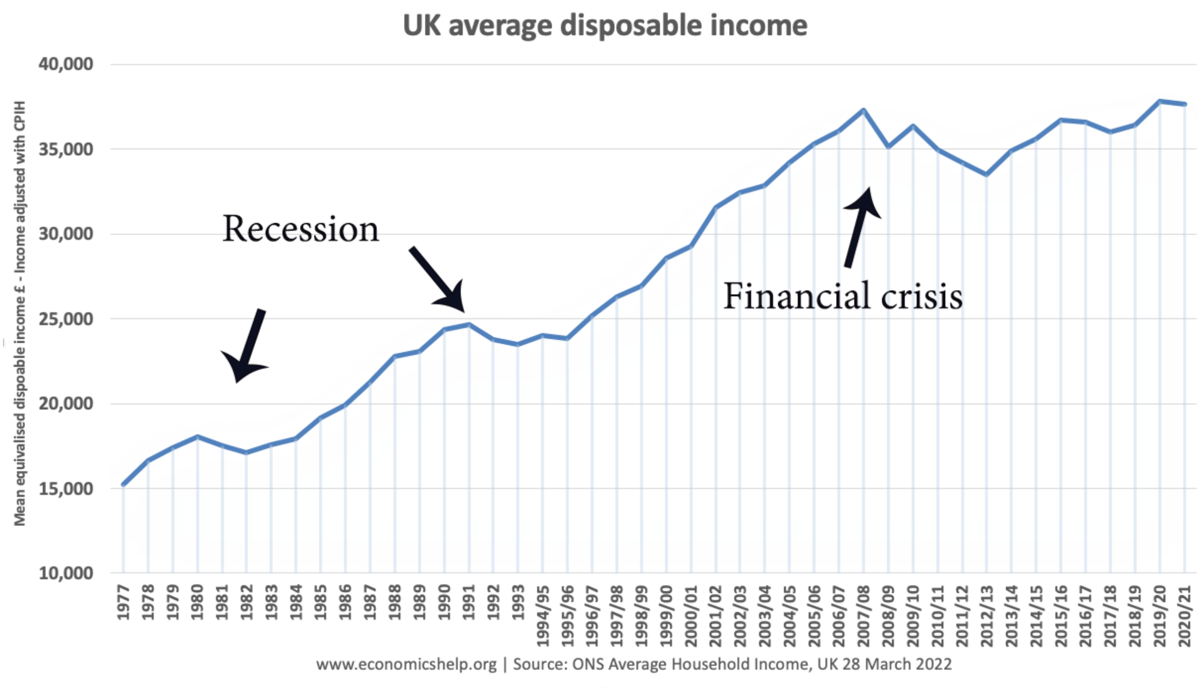

Figure 1 : UK average disposable income, 1997-2021

Source : https://www.economicshelp.org/blog/6994/economics/uk-wage-growth/

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[7] https://www.bls.gov/k12/productivity-101/content/what-is-productivity

[8] https://www.oecd.org/sdd/productivity-stats/40526851.pdf

Figure 2 shows by how much the GFC lowered the trend growth in real per capita GDP. The 2.5% p.a. growth rate prior to the GFC has been replaced by a 0.25% p.a. increase. By 2021, real per capita GDP (and hence productivity) was 25% below the pre-crisis trend.

Figure 3 is a slight variation on Figure 2 and shows that UK real GDP per hour has grown five times more slowly than it did in the previous 30 years.

Bootle (2022)[9] argues that 'Since the 2008 crisis, the rate of productivity growth has been extremely low. The extent of the problem was disguised, for a time, by two offsetting factors – substantial net immigration and a rise in labour market participation rates which boosted the labour force and ultimately contributed to faster GDP growth. Post-Covid, however, participation rates have fallen'.

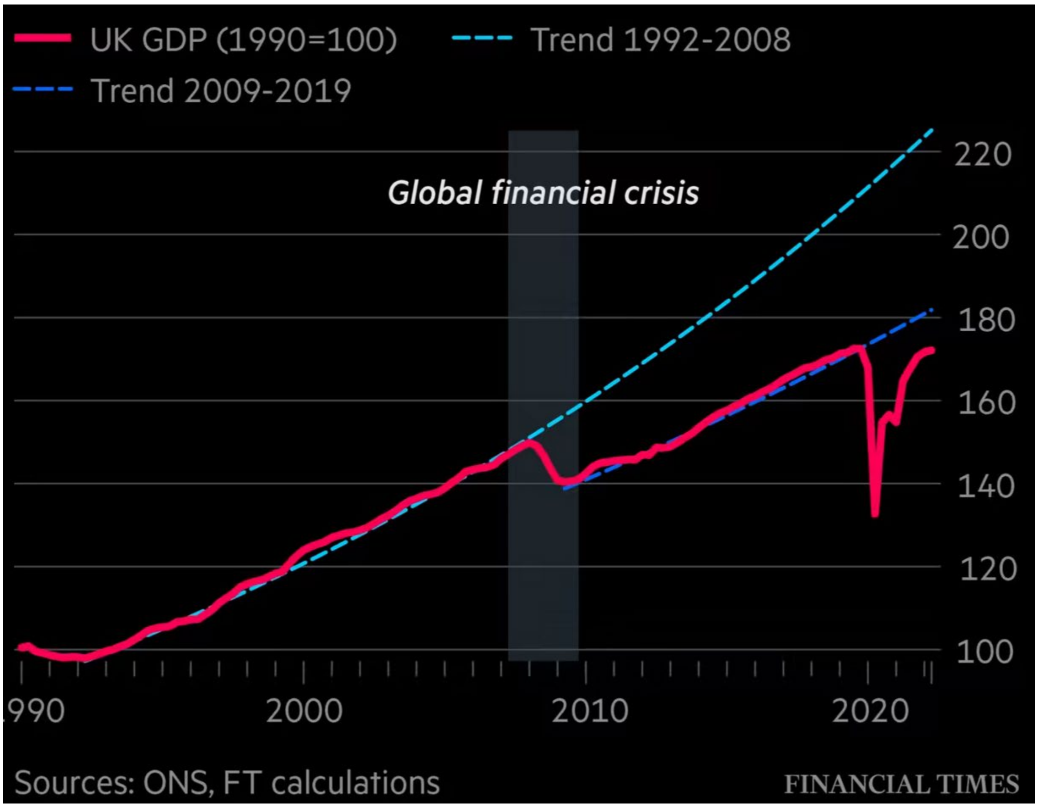

Figure 2: The reduction in UK real per capita GDP growth since the Global Financial Crisis
Source : https://www.ft.com/content/156682c1-1fb9-42d1-aac3-de531e266d68

[9] Roger Bootle (2022) This Government is too weak to fix Britain's chronic growth problem, Daily Telegraph, 20 November; https://www.telegraph.co.uk/business/2022/11/20/government-weak-fix-britains-chronic-growth-problem

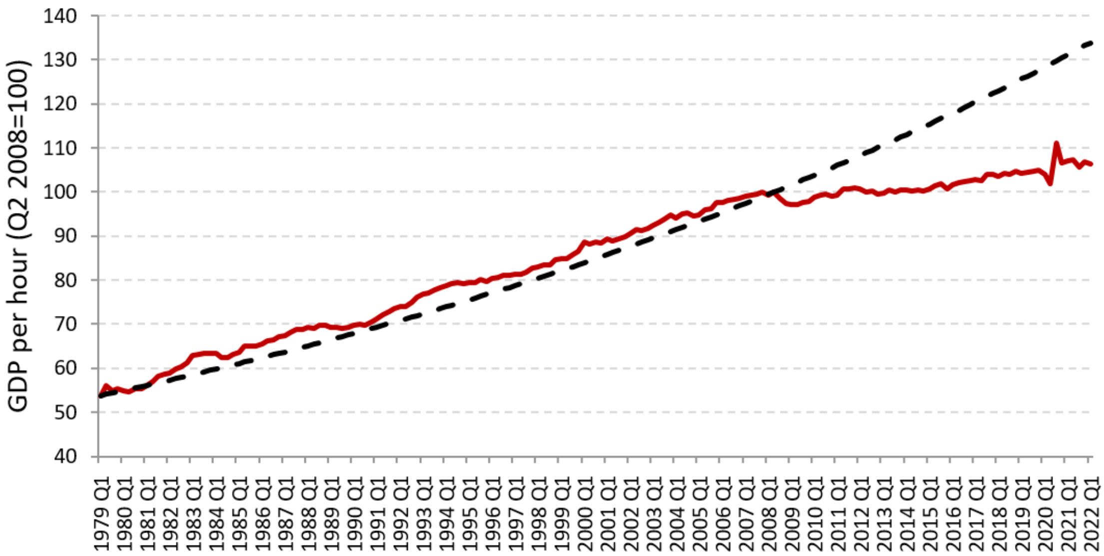

Figure 3: The reduction in UK real per hour GDP growth since the Global Financial Crisis
Source: Table 32; https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/datasets/outputperhourworkeduk. Note: ONS, Quarterly output per hour worked whole economy chained volume measure (CVM) index (2008 Q2= 100). The dashed line is predicted value after 2008Q2 assuming historical average rate of 2.1%.

Sam Mitha (2019)[10] points out:

> *Detailed analysis of the sector by sector industry contributions to labour productivity growth indicates that the finance and manufacturing sectors accounted for three-quarters of the fall in Britain's aggregate productivity growth (see Figure 4). (Ironically, the same sectors contributed about half of the UK's productivity growth in the seven years leading up to the financial crisis.) The rest of the shortfall in productivity growth was accounted for by the information and communications technologies and professional, scientific and technical services sectors.*
>
> *There has been no shortage of explanations for the stagnation of British productivity since the financial crisis. They include the suggestion that the financial crisis has somehow permanently 'scarred' the productive capacity of the economy. It has been claimed that the productivity puzzle is simply a 'statistical mirage'. It has also been suggested that official statistics underestimate the level of economic activity and productivity gains in Britain's services dominated economy, and particularly the impact of the pervasive diffusion of digital technologies across all sectors of the economy. In fact, the main reason for the weakness in labour productivity is the industry-wide fall in investment during the crisis and its slow growth afterwards.*

[10] Sam Mitha (2019) Taxation, productivity and growth, Tax Journal, 19 September; https://www.taxjournal.com/articles/taxation-productivity-and-growth

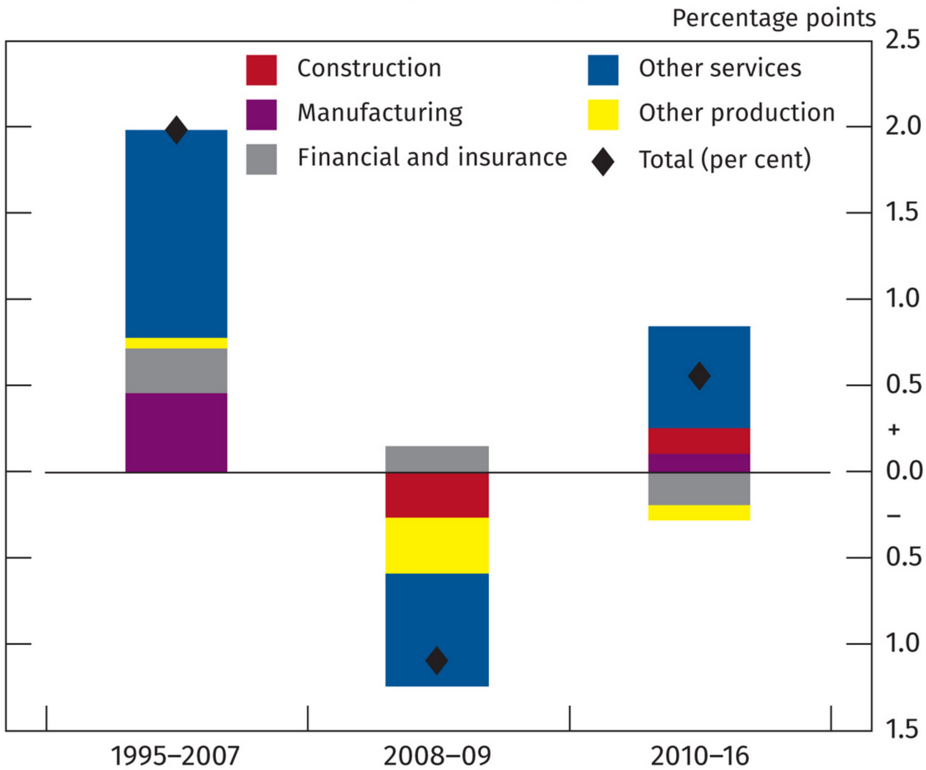

Figure 4: Sectoral contributions to productivity growth

Sources: OECD and Bank of England calculations. Notes: Productivity growth is the rate of increase in output per hour worked

Turning to our nearest competitors, Mitha (2019) explains that:

> *Britain was the most productive nation in Europe until the 1960s. It had a higher level of productivity than France and West Germany. Britain continued to grow, but it fell behind. It suffered the ignominy of being described as the 'sick man of Europe' until the market reforms introduced by Margaret Thatcher's government revived British productivity. Britain's annual growth rate was a relatively sprightly 2.3% before the financial crisis. It has been estimated that if Britain had continued growing even at the level of 2% a year, productivity would have been more than a quarter higher today.*
>
> *Instead, we have again fallen behind the other advanced economies (see Figure 5). The Office for National Statistics has estimated that labour productivity is, on average, 16% higher in the six other members of the G7 than in Britain. (US productivity is nearly 30% higher, and Germany is 35%.)*
>
> 'If British workers were able to catch-up to the G7 average, what currently takes us five days' work to produce could be done in little over four. If we were able to catch up with Germany, we might all be able to go home from work on Thursday afternoon each week without any fall in GDP' (Silvana Tenreyro, professor of economics, London School of Economics, 2018).

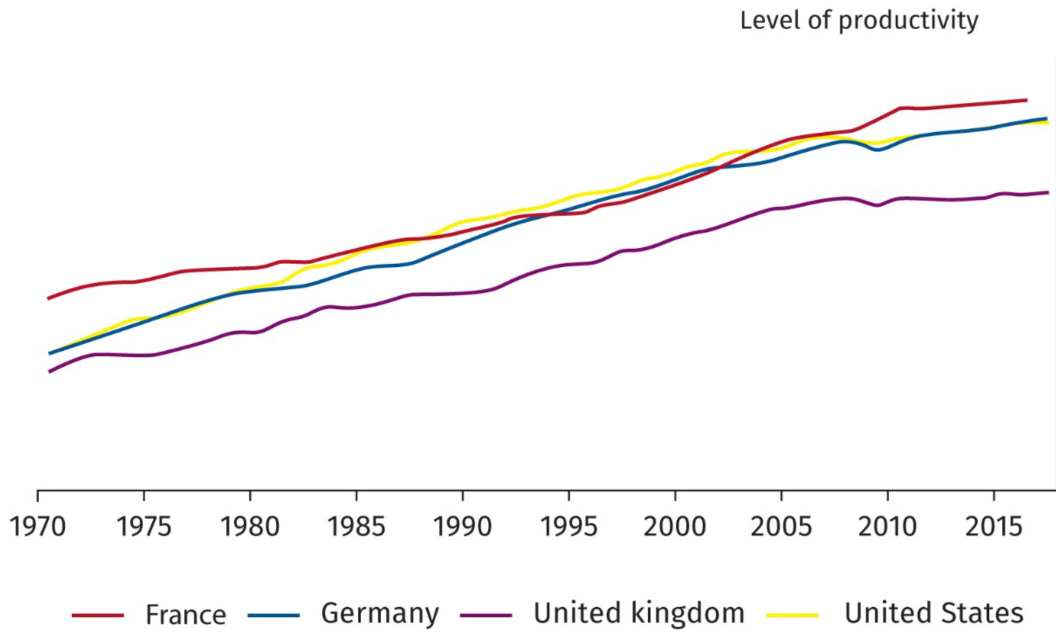

Figure 5: Productivity in UK, US, Germany and France

Sources: OECD and Bank of England calculations. Notes: Productivity is output per hour worked in US$ at constant prices, using 2010 purchasing power parities

Figure 6 – using a different data set – shows that UK productivity has lagged behind that of the US, Germany and France since 1979. The UK has not been a productivity leader since the end of the 19th Century.

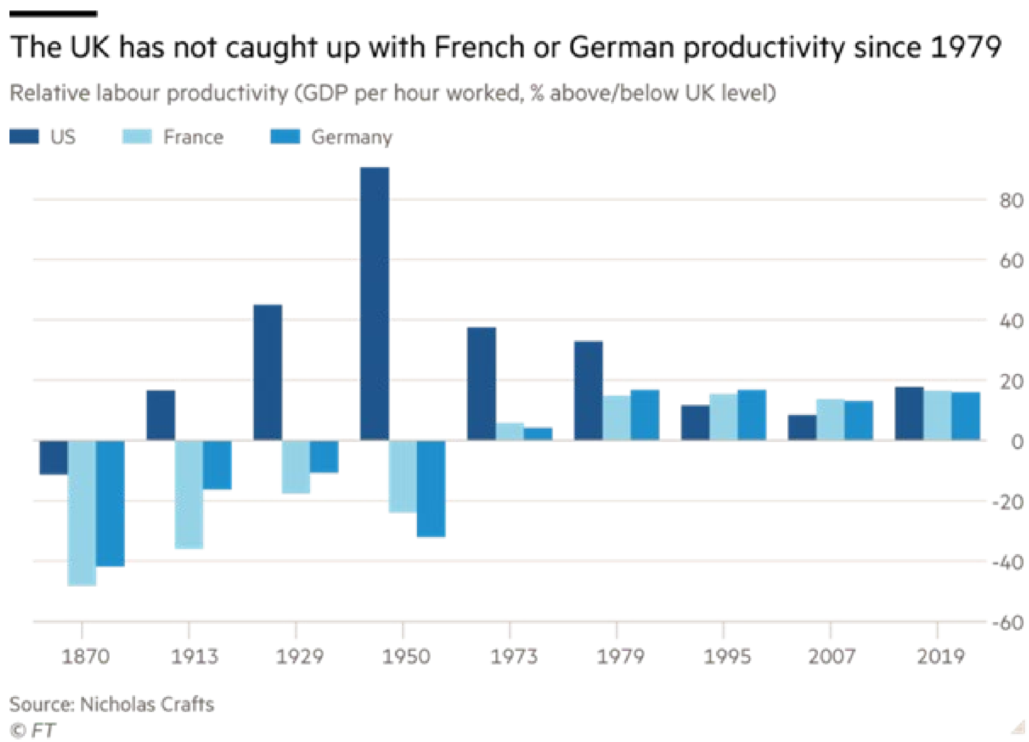

Figure 6: UK productivity relative to productivity in the US, France and Germany, 1870-2019

Source: Financial Times

Figure 7 shows that the UK is way down the list of productivity growth since 2010 (down with Italy and Greece – red bars). Even more striking is that UK real wages (blue bar) have fallen behind productivity improvements during the period. Normally, real wages grow in line with productivity growth – but no longer in the UK.

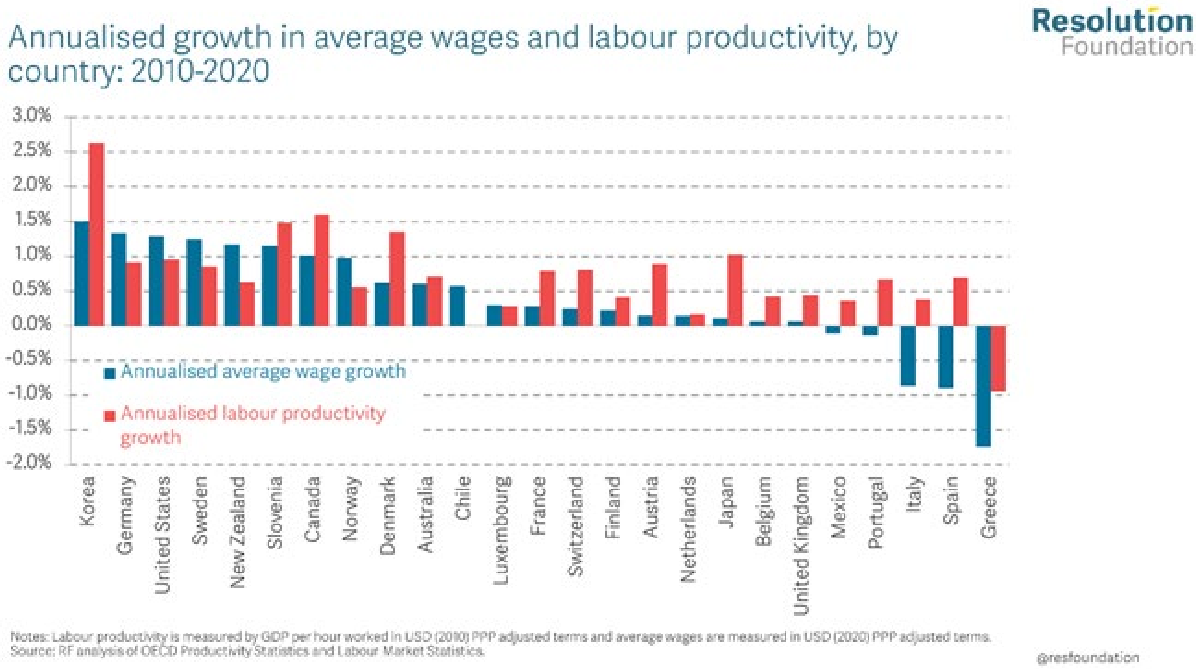

Figure 7: Real wage and labour productivity growth in selected countries, 2010-2020
Source: Resolution Foundation

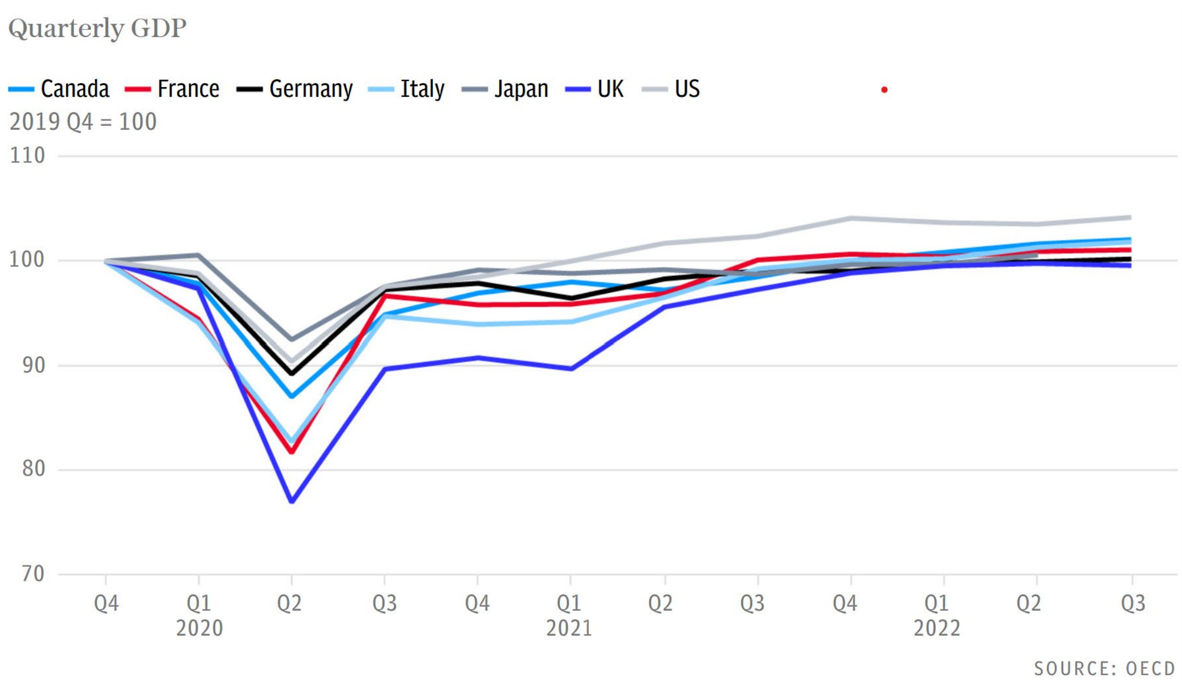

Figure 8: Quarterly GDP in selected countries, 2019Q4-2022Q3
Source: https://www.telegraph.co.uk/business/2022/11/11/britains-weak-economic-recovery-means-faces-longer-recession/

The results of the UK's poor relative productivity record (as well as increases in inactivity due to sickness – discussed later) are reflected in the UK's poor relative recovery from the Covid pandemic. Figure 8 shows that the UK economy had not recovered from the pandemic by the end of 2022, unlike other leading economies.

Equation (1) provides an accounting decomposition of real GDP growth. Real GDP growth depends on the growth in labour productivity (LFPG), the growth in labour force utilisation (LFUG) (which is linked to the participation rate[11]), and the growth in the number of workers in the labour force (WAPG):[12]

(1) Real GDP growth ≡ Labour force productivity growth (LFPG) + Labour force utilisation growth (LFUG) + Working age population growth (WAPG)

In other words, real GDP growth is equal to the growth in how much workers produce per hour (i.e., productivity) + the growth in hours worked + the growth in the number of workers in the labour force. So for a given working population and for a constant utilisation rate, the real growth rate in GDP is equal to (and hence cannot exceed) the growth rate in labour productivity (i.e., output per hour).

Table 1 shows the UK real GDP growth decomposition in the seven decades since 1951. The UK real GDP growth rate is dominated by growth rate in labour productivity – and the fall in the real GDP growth rate since the 1980s is dominated by the fall in the growth rate in labour productivity over this period.

Table 1: UK real GDP growth decomposition, 1951-2019, annual percentages

	1951-60	1961-70	1971-80	1981-90	1991-2000	2001-10	2011-19
LFPG	2.69	3.79	2.50	2.47	2.52	1.29	0.44
LFUG	-0.02	-1.21	-0.60	0.01	-0.32	-0.53	1.01
WAPG	0.01	0.29	0.31	0.44	0.30	0.90	0.39
Total	2.68	2.87	2.21	2.92	2.50	1.66	1.84

Source: Amlan Roy (2022) Demographics Unravelled, John Wiley & Sons

[11] The participation rate equals the percentage of the working age population who are in work.

[12] Musso, Alberto andWestermann, Thomas (2005) : Assessing potential output growth in the euro area - a growth accounting perspective, ECB Occasional Paper, No. 22, European Central Bank (ECB), Frankfurt a. M.

Roy, A. and Punhani, S (2000) A demographic perspective on GDP growth, Credit Suise Demographics Research

2.2 Reasons why productivity growth is so low in the UK

The first report of the new UK Productivity Commission sums up the dire state of UK productivity:[13]

> *The UK's productivity performance has deteriorated relative to other G7 economies throughout much of the post-war period, which seems to indicate a deep structural problem.*
>
> *In the three decades since the Second World War, the average annual productivity growth rate (output per hour worked) was around 3.6 per cent. The following three decades saw this fall to around 2.1 per cent. From the start of the financial crisis in 2007 to 2019, this declined even further to 0.2 per cent. Demonstrating the importance of productivity for the economy and living standards, the Office for National Statistics (ONS) told us that if productivity had continued to grow at two per cent per year in the last decade, it would have meant an extra £5,000 per worker per year on average. This huge number, which is around 20% of average annual earnings.*
>
> *The UK's productivity performance has been uneven across the country. There is a persistent gap between London and the South-East and the rest of the UK regions and cities. Human capital is highly concentrated in London and broader South-East. A view presented to The Commission is that productivity growth has been held back by 'productivity laggards' in the long tail. The alternative view also presented is that the gap between the high- and low-productivity firms did not increase substantially since the financial crisis. Rather, it is frontier firms, which often export, that have struggled to bounce back and boost productivity growth.*
>
> *Numerous policies were suggested to improve the UK's poor productivity performance by tackling structural problems, which include over-centralisation, weak and ineffective institutions and policy churn, institutional and policy silos, as well as short-termism and poor policy coordination.*

In the next three sub-sections, we examine some key explanations for why UK productivity is so low in the UK, looking in turn at workers, companies, and government.[14]

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[13] Productivity in the UK: An Evidence Review, 24 June 2022; https://www.productivity.ac.uk/news/first-productivity-commission-report-launched/

[14] For additional explanations, see, e.g., Richard Heys (2020) Productivity measurement – how to understand the data around the UK's biggest economic issue, Office for National Statistics, 13 March; https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/articles/productivitymeasurementhowtounderstandthedataaroundtheuksbiggesteconomicissue/2020-03-13

2.3 Workers – their contribution to the UK's poor productivity record

2.3.1 Skills shortages

It is widely recognised that human capital – the skills, health and experience of the workforce – is too low and that there are serious skills shortages amongst UK adults.

2.3.1.1 Education in schools and universities

To understand skill shortages amongst UK adults, we need to begin with education in UK schools and universities.

Every three years, the Programme for International Student Assessment (PISA) tests a sample of 15-year-olds in OECD (Organisation for Economic Cooperation and Development) countries in science, reading and mathematics. In 2018, 600,000 students were tested from 79 countries. Claudia Civinini (2019)[15] reports that 'Scores in science continue a downward trend: 505 on average, down from 509 in 2015. However, the country ranked 14th, one place higher than in 2015. …In maths, a score of 502 signals a slight improvement from 2015: the UK is ranked 18th, up nine places from the previous PISA cycle. Reading, the focus of PISA 2018, saw the UK achieve a score of 504. The country ranked 14th, eight places higher than in 2015'. So despite some small recent improvements in the rankings, the overall performance of the UK remains very disappointing.

In addition, a study by Professor John Jerrim at the UCL Social Research Institute found problems with the way the UK government measures educational performance.[16] The author said: 'PISA is meant to be a representative study of 15-year-olds across the UK. But there are serious flaws with some children being excluded from the study, schools being unwilling to participate, and some pupils not showing up for the test. In England and Wales, there is clear evidence that some lower-achieving pupils have been systematically excluded. While what has happened in Scotland is, frankly, a bit of a mess. In the UK, around 40% of students are not included in the PISA data. This is amongst the highest anywhere in the world'. So the UK's reported PISA scores could well be biased upwards and the true rankings much lower.

Further, too many of our schools are not preparing their students for a world of work. In 2020, a UNICEF survey of 40,000 school students in over 150 countries found that 31% of them reported that the skills and training programmes offered to them did not match their career

[15] Claudia Civinini (2019) Pisa Education Rankings: How Has the UK Performed In Recent Years?, Times Educational Supplement, 3 December; https://www.tes.com/magazine/archive/pisa-education-rankings-how-did-uk-perform

[16] Government's education statistics "seriously flawed", 22 April 2021; https://www.ucl.ac.uk/news/2021/apr/governments-education-statistics-seriously-flawed

aspirations. They wanted digital and transferable skills in order to succeed in the workplace of the future. In particular, they wanted leadership skills (22%), analytical thinking and innovation skills (19%), and information and data processing skills (16%).[17]

In terms of universities, there are too many graduates with significant student debt who cannot find useful jobs, whereas what is needed is much better vocational training in areas like engineering and informational technology (IT). This will greatly enhance the human capital of the individuals who complete this training, whereas the unemployed graduates have actually done little to enhance their productive human capital.

In a speech at Exeter College in 2020, Prime Minister Boris Johnson said that there are too many university graduates with degrees that do not get them the jobs they want: 'we … need to recognise that a significant and growing minority of young people leave university and work in a non-graduate job and end up wondering whether they did the right thing. Was it sensible to rack up that debt on that degree? Were they ever given a choice to look at the more practical options, the courses just as stimulating that lead more directly to well-paid jobs?'. He said he wanted to end the 'pointless, nonsensical gulf' between the 'so-called academic and so-called practical varieties' of education and promised to give every adult without an A-level free college courses as well as expanding the ability to get student loans.[18]

Euan Blair has even criticised his father Tony Blair's target for 50% of school leavers entering higher education. Euan Blair, who runs a company called Multiverse that helps young people into apprenticeships, said that the target – which the Conservative government abandoned in 2020 – 'has not worked out' in getting more people to transition from full time education to full time employment. He added: 'There is an incredible route through an apprenticeship to some of the world's best companies and some of the world's best tech start-ups'.[19]

2.3.1.2 Inadequate training of workers

Any inadequacies in the formal education system could potentially be compensated by good training by companies. This used to happen in the UK, but no longer.

[17] International schools in Asia that prepare students for the future world of work, Study International, 23 July 2020; https://www.studyinternational.com/news/international-schools-in-asia-that-prepare-students-for-the-future-world-of-work/

[18] Sophia Sleigh (2020) Johnson: Too many university graduates end up with degrees that don't get them the jobs, Evening Standard, 29 September; https://www.standard.co.uk/news/politics/boris-johnson-university-graduates-degrees-speech-exeter-a4558841.html

[19] Matthew Field (2021) Tony Blair's university pledge has failed, says his son – Euan Blair criticises 'artificial target' of higher education for 50pc of school leavers and says former Prime Minister agrees, Daily Telegraph, 11 August ; https://www.telegraph.co.uk/technology/2021/08/11/tony-blairs-university-pledge-has-failed-says-son/

As Mitha (2019) points out:

> *Britain spends more money than most countries on education, but its spending on training per employee is little over half the EU average. Britain tends to lag behind the EU and its other trading rivals on literacy, numeracy, digital skills and workplace training.*
>
> *The apprentice levy is a 0.5% payroll tax on businesses with an annual pay bill of £3m or more. Employers receive vouchers in return for the tax they pay. The vouchers must be used within two years on approved training courses. The government introduced the apprenticeship levy in 2017 in an effort to reverse the long-term trend of employer under-investment in training. It was supposed to improve productivity by increasing the quality and quantity of apprenticeships. But, in fact, the number of good quality new apprenticeships has declined since the introduction of the levy.*
>
> *The scheme is highly inflexible. For example, a million workers on temporary contracts are not eligible to join the scheme, even though the recruitment agencies that provide their services contribute about 5% of the yield from the levy. Agency workers play a key role in filling in during peak periods of demand. They help to transfer new skills as they move between assignments. They don't qualify for support because of the rule that an apprenticeship should last at least a year. The apprentice levy is intended to fund training for workers with low skills, but some employers are using the levy to fund degree level courses, including MBAs. It does not provide funding for shorter training courses, e.g., on digital skills, even for staff who are low skilled.*
>
> *The [Chartered Institute of Personnel and Development] has pointed out that the levy will only boost overall investment in training if it doesn't lead to the government subsidising training that is currently being funded by employers, the displacement of other training, or the rebadging of existing training activity. The CIPD has criticised the quality and narrowness of the off-the-job training provided. It has made a case for a broader training levy. The apprentice levy covers only around 2% of employers. It goes only a small way towards increasing spending on workforce training to the level in other advanced economies.*
>
> *There is a dissonance between the skills that the government says it wants workers to acquire to serve the economy, and its policy on higher education and skills training. The government has over-expanded the higher education sector at the expense of skills and vocational training provided by further education colleges. Less academic students now increasingly choose to attend marginal universities to read for 'Mickey Mouse' degrees, in preference to acquiring workplace skills that would equip them for employment. They often leave university with practically worthless degrees that aren't valued by potential employers, and saddled with lifelong debts.*

At the same time as it has increased the number of students in higher education, the government has reduced funding for further education colleges and cut their student numbers. Even though further educational colleges specialise in providing training in trades, applied science, technology, engineering and mathematics: the very skills that boost labour productivity.

Finally, Mitha (2019) notes: 'There has been a substantial and long-term decline in the volume of employer training and investment in training because of the trend towards high employment and low skill service business models' – in other words, the availability of low-cost labour from Eastern Europe over the last 20 years has reduced the need to train unskilled British workers.

A report for The Economy 2030 Inquiry found that 'Despite rising tertiary education attainment, there are gaps in basic and technical skills that hold back productivity of workers and firms in the UK. Moreover, research has shown that skilled workers and managers are more likely to successfully adopt productivity-enhancing technologies and management practices. There are also troubling patterns of attainment across generations: literacy and numeracy skills of the young in the UK have slipped relative to previous cohorts. The UK needs to address these challenges to improve the productivity of workers and firms, and to ensure that the labour force is adequately equipped for the technological change and transitions ahead'.[20]

The Employer Skills Survey 2019 found that a wide range of skills were lacking among applicants: 'Over four-fifths (84%) of skill-shortage vacancies were at least partially caused by a lack of technical or practical skills…; often a lack of specialist skills or knowledge needed to perform the role (63%). Two-thirds (66%) of skill-shortage vacancies were at least partially caused by a lack of people and personal skills…. The most common skill of this type lacking was the ability to manage one's own time and prioritise tasks (45%). Just under a third (30%) of skill-shortage vacancies involved a lack of digital skills'.

The survey also found that skills lacking among the existing workforce tended to match those discussed as lacking among recruits: 'In terms of technical and practical skills, specialist skills or knowledge required to perform the job role was the most prevalent specific skill lacking among staff (a factor in 53% of all skills gaps). The same proportion of skills gaps were partly due to a lack of operational skills (53%), while a lack of proficiency in complex analytical skills contributed to just under half of all skills gaps (47%). All three of these were most likely to be cited as skills deficiencies within the financial services sector. The most common people and soft skills lacking were related to self-management skills (72% of all skills gaps), including the inability among staff to manage their own time or prioritise tasks (60% of all skills gaps) or to

[20] Juliana Oliveira-Cunha, Jesse Kozler, Pablo Shah, Gregory Thwaites and Anna Valero (2021) Business time: How ready are UK firms for the decisive decade?, The Economy 2030 Inquiry, Resolution Foundation, November; https://economy2030.resolutionfoundation.org/wp-content/uploads/2021/11/Business-time.pdf

manage their feelings and the feelings of others (49%). A lack of management and leadership skills were also a factor for approaching three-fifths (57%) of skills gaps. A lack of digital skills was a factor in around two-fifths of skills gaps (38%)'.[21]

So the very skills that the school students in the 2020 UNICEF survey were crying out for are still not being provided when these students become adults – at least in the UK. This is pulling down UK productivity.

2.3.2 An increase in economic inactivity due to early retirement and long-term ill health following the Covid-19 pandemic

There has been a significant increase in economic inactivity — people who are not working or looking for work — since the pandemic. It has been dubbed the Great Resignation.[22] A study from the IFS found that this was due to a combination of early retirement and increasing levels of ill health amongst those who have been out of work for more than 5 years – see Figure 9. This was confirmed by a report from the House of Lords Economic Affairs Committee called 'Where have all the workers gone?'.[23] Lord Bridges of Headley, Chair of the Committee, said: 'Earlier retirement seems to be the biggest reason [why so many workers have left the workforce]. …Those who are already economically inactive are becoming sicker, meaning they're less likely to return to work. So, while other factors were previously masking the impact of an ageing population on the size of the workforce, they are now reinforcing it'.[24] Explanations the committee examined included: (1) the impact of lifestyle changes during the Covid-19 pandemic, including the furlough scheme, could have prompted some people to consider earlier retirement, and (2) increased savings during the pandemic and the UK's pensions flexibilities, could also have enabled earlier retirement. The majority of those over 50 who have left the workforce since the pandemic neither want nor expect to return to work;

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[21] Mark Winterbotham, Genna Kik, Sam Selner, Rebecca Menys, Sam Stroud and Sam Whittaker (2020) Employer Skills Survey 2019: Skills Needs, Department for Education, November; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936488/ESS_2019_Summary_Report_Nov2020.pdf

[22] The Great Resignation is a term coined in May 2021 and refers to the large number of people quitting their jobs since the beginning of the pandemic. After an extended period of working from home with no commute, many people have decided their work-life balance has become more important to them. PwC's Global Workforce Hopes and Fears Survey found that pay was the main reason for wanting to change jobs. However, job fulfilment and the ability to be one's true self at work were ranked second and third among employees considering a job change (Stefan Ellerbeck (2022) The Great Resignation is not over: A fifth of workers plan to quit in 2022, Work and Employment Forum, 24 June; https://www.weforum.org/agenda/2022/06/the-great-resignation-is-not-over/).

[23] 20 December 2022; https://committees.parliament.uk/publications/33305/documents/180390/default/

[24] https://www.pensionpolicyinternational.com/uk-early-retirement-and-our-ageing-population-are-causing-labour-shortages-says-lords-report

most appear reasonably well-off with good pension schemes.[25] The rise in inactivity has serious implications for the UK, since it exacerbates the current inflationary challenge, damages growth in the near term, and reduces the revenues available to finance public services while demand for those services will grow.

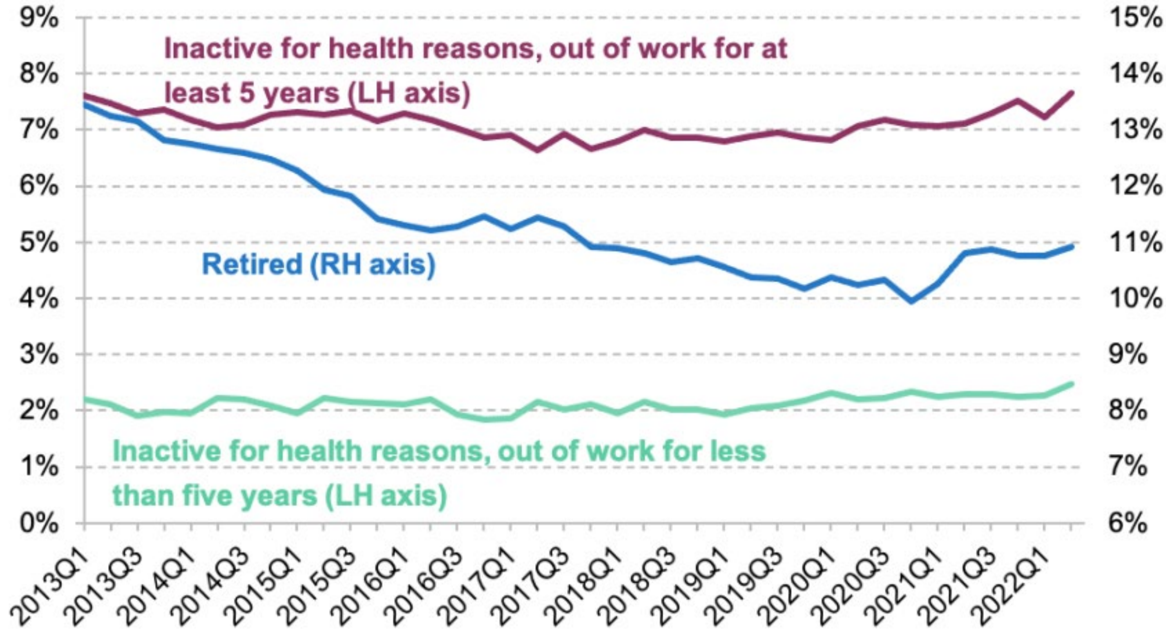

Figure 9: Proportion of 50-64 year olds who are retired, or are inactive due to long-term sickness or disability, split by whether they have been in paid work within the last five years

Source: IFS calculations using the Labour Force Survey; https://ifs.org.uk/articles/worsening-health-leading-more-older-workers-quitting-work-driving-rates-economic

Andrew Bailey, the Governor of the Bank of England, added that 'A surge in early retirement and long-term sickness has left Britain facing a unique "labour force shock" among rich nations. The UK is the only industrialised economy to have suffered a sharp fall in the size of its workforce since the pandemic. The shrinking labour force is one of three drivers behind surging inflation [the others being global supply chain bottlenecks and Russia's war in Ukraine]'.[26] Employment in the UK was 34.4m at the start of 2020, but fell to 34m by the summer of 2022. Around 9m people of working age are economically inactive, an increase of

[25] The Daily Telegraph comments: 'A perverse tax system that encourages better-off older workers with reasonable pensions to retire early rather than be dragged into paying higher taxes by frozen thresholds is also to blame. We have seen in the NHS an exodus of senior doctors who face a limit on pension benefits', 15 November 2022; https://www.telegraph.co.uk/opinion/2022/11/15/britains-work-shy-crisis-must-addressed

[26] Britain suffering unique 'labour market shock' from wave of early retirement and long-term sickness, says Andrew Bailey, Daily Telegraph, 16 November 2022; https://www.telegraph.co.uk/business/2022/11/16/inflation-latest-news-ftse-100-crypto-prices-markets-budget/

more than 600,000 since the start of the pandemic. In comparison, the employment rate rose in France, Germany, Italy, Canada and Japan over the same period.[27]

Figure 10 shows that it is older workers who have driven the rise in UK inactivity by 630,000 since the pandemic.[28]

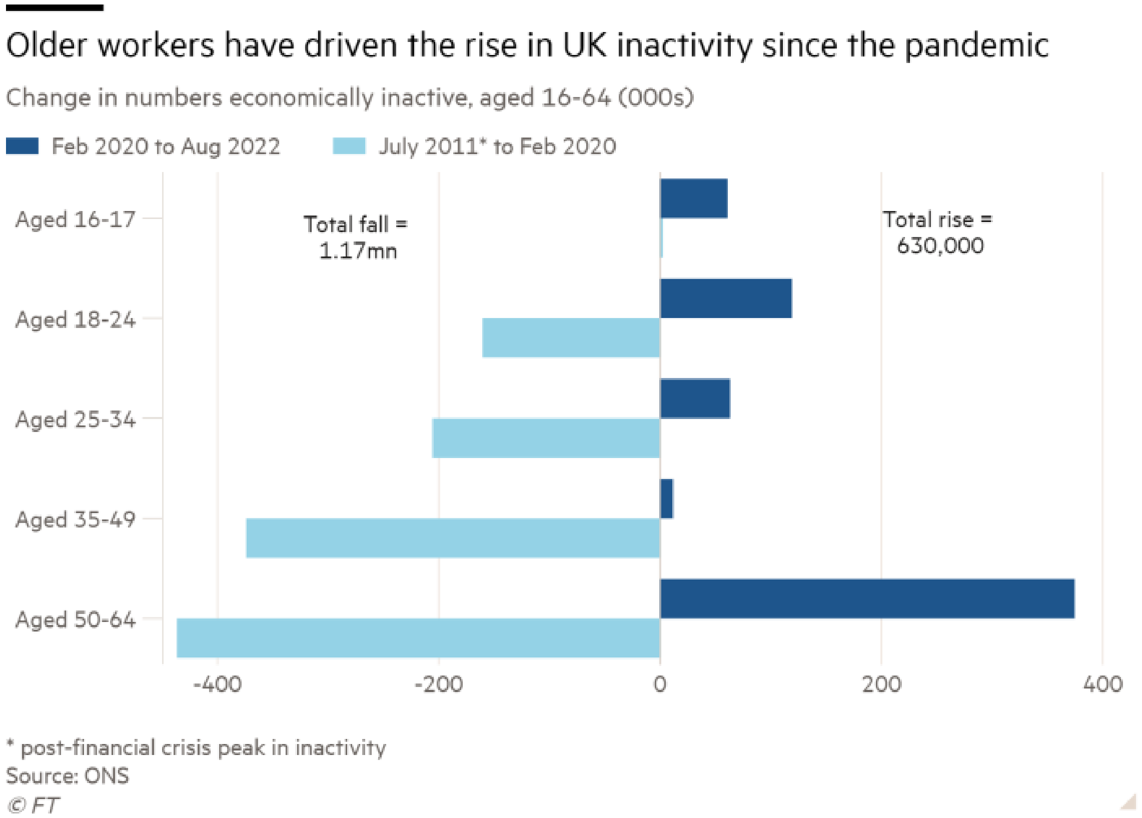

Figure 10: Change in economically inactive people aged 16 to 64 between June 2011 and February 2020 and between February 2020 and August 2022

Source: Financial Times

However, Figure 11 shows that younger population groups are also experiencing increasing long-term sickness. Since the pandemic, there has been a 29% increase in workers aged 16-24 who are economically inactive due to long-term sickness, and a 42% increase for those aged 25-34. The main reasons for the increase in long-term sickness in the 16-34 age group

[27] Tim Wallace and Tom Rees (2022) Why Britain is worse off than others in the big economic crunch - Unlike many of its neighbours, the UK has not yet returned to pre-pandemic GDP levels, Daily Telegraph, 11 November; https://www.telegraph.co.uk/business/2022/11/11/britains-weak-economic-recovery-means-faces-longer-recession/

[28] There was a fall in economic inactivity between 2011 and 2020, particularly among older workers. This corresponds to the growth in labour force utilisation in the final column of Table 1 – and was the biggest contributor to real economic growth during this period.

was mental illness, phobias and nervous disorders (including depression, bad nerves or anxiety) and progressive illnesses such as cancer.[29]

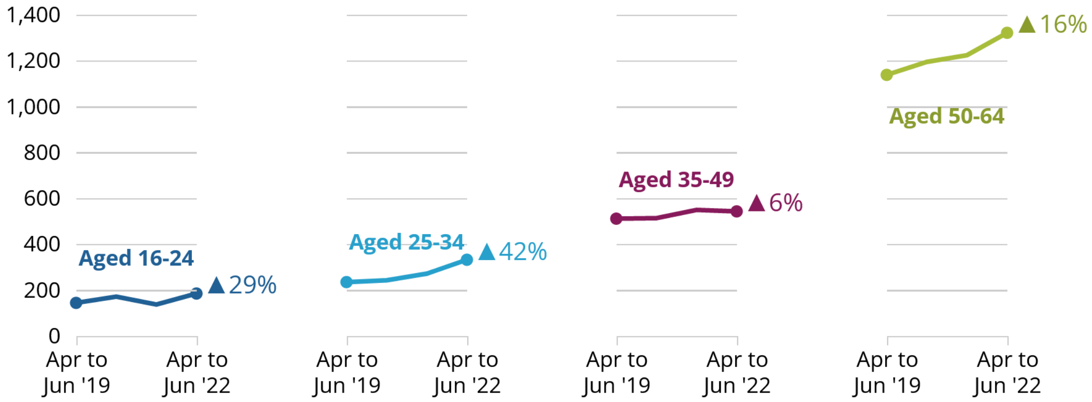

Figure 11: Change in economic inactivity owing to long-term sickness, by age group, UK, 2019 to 2022

Source: Labour Force Survey, Office for National Statistics

The IFS said that 'people are leaving work for retirement at a greater rate than they used to. At the same time, people already out of the labour force seem to be sicker and saying they are out of work because of that'. Data from the Office for National Statistics (ONS) in November 2022 reveal that the number of people classed as long-term sick was 2,519,000. This is the first time the number has exceeded 2.5m since records began in 1993 – see Figure 12. The number of people classified as long-term sick has risen sharply by 407,000 since the pandemic.[30]

The inactivity rate has increased to 21.6%. This means that 630,000 people have left the labour market since the pandemic (Figure 10), resulting in significant worker shortages that are impeding business expansion. The House of Lords report referenced earlier added that worker shortages were also caused by changes in the structure of migration with low-skilled, low-paid EU workers (in sectors like agriculture and hospitality) leaving the UK and being replaced by non-EU skilled workers (under the new points-based visa system). This has resulted in a mismatch in the labour market, magnifying labour shortages in specific sectors (e.g., agriculture and hospitality). Further, population ageing continues to drive down labour supply.

[29] 10 November 2022; https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/economicinactivity/articles/halfamillionmorepeopleareoutofthelabourforcebecauseoflongtermsickness/2022-11-10

[30] Tom Rees (2022) Britain's sickness crisis is damaging the economy and will only get worse, Daily Telegraph, 15 November; https://www.telegraph.co.uk/business/2022/11/15/record-number-long-term-sick-amid-nhs-backlogs/

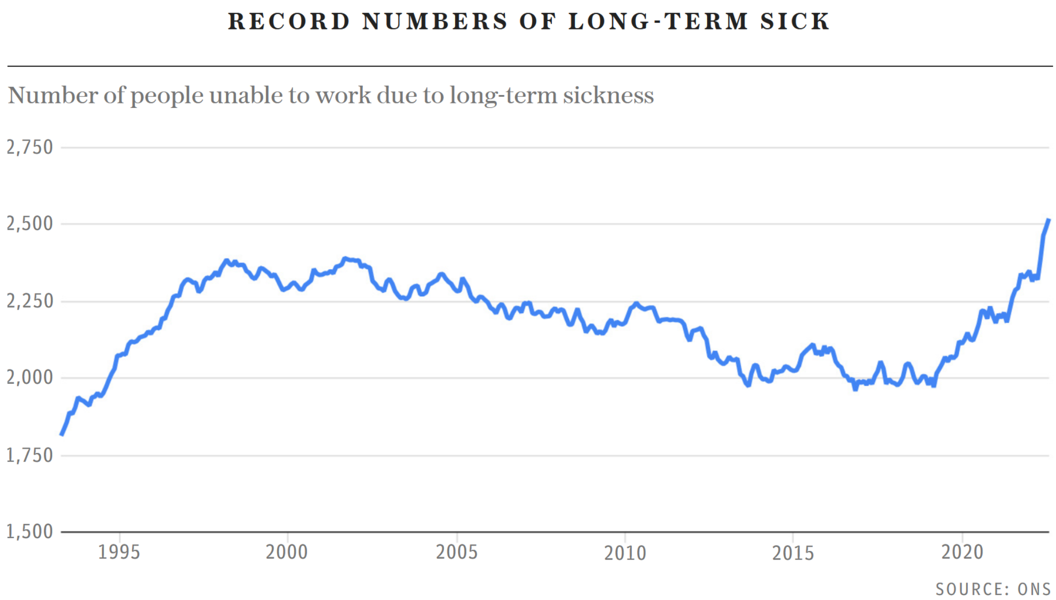

Figure 12: Number of people unable to work due to long-term sickness, 1993-2022
Source: https://www.telegraph.co.uk/business/2022/11/15/record-number-long-term-sick-amid-nhs-backlogs/

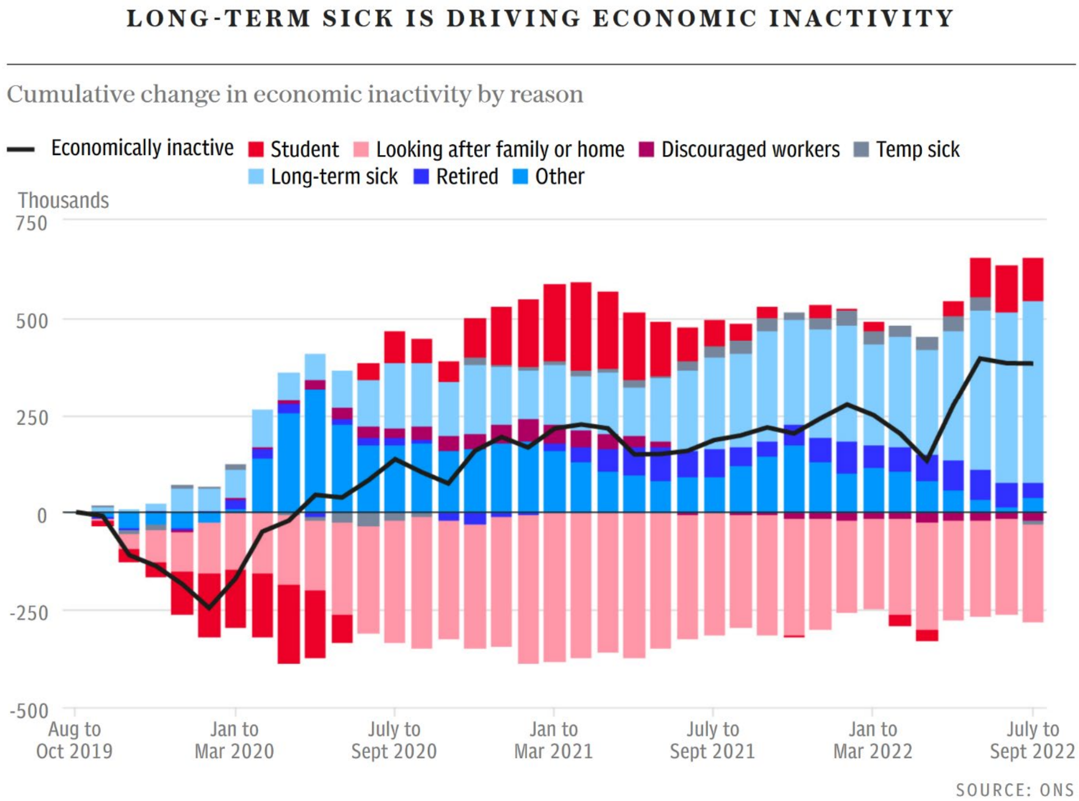

Figure 13: Cumulative change in economic inactivity by cause, August 2019 – September 2022
Source: https://www.telegraph.co.uk/business/2022/11/15/record-number-long-term-sick-amid-nhs-backlogs/

Figure 13 shows the change in economic inactivity by cause. Tony Wilson, Director of the Institute for Employment Studies (IES), argues that 'The single biggest driver of higher economic inactivity is people who left work before the pandemic and have long term health problems. I don't think it's necessarily that people are getting sicker, [though] that might be part of it. I think most of it is that people just aren't getting the help they need to get back to work, whether that's getting their conditions treated, hospital waiting lists or the right type of employment support'.[31] The IFS estimated that 70% of the increase in health-related inactivity is driven by people who have been out of work for at least five years.

NHS waiting lists were at an all-time high in November 2022 at 7m in England and the IFS forecasts that they will reach a peak of 8.7m in 2023 – see Figure 14. This is despite NHS spending in England being 12% higher in real terms than in 2019-20 and around a 10% increase in the number of doctors and nurses – see Figure 15. The UK now spends on its health system close to the average of advanced countries in terms of percentage of GDP, but has a lower number of doctors, ICU beds, and MRI scanners (per head of population) and also worse outcomes in key areas (such as cancer) than these other countries.[32] A number of explanations have been put forward: the UK has fewer hospital beds per head of population than other developed countries, bed blockages due to problems in social care delaying the release of elderly patients from hospital, and inefficiencies in the way the NHS is run.[33]

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[31] Quoted in Tom Rees (2022) Britain's sickness crisis is damaging the economy and will only get worse, Daily Telegraph, 15 November; https://www.telegraph.co.uk/business/2022/11/15/record-number-long-term-sick-amid-nhs-backlogs/

[32] Paul Nuki, Ben Butcher, Jorg Luyken and Henry Samuel (2022) The NHS is now no match for its foreign counterparts, Daily Telegraph, 10 December; https://www.telegraph.co.uk/news/2022/12/10/nhs-used-envy-world-what-went-wrong/

[33] Two recent examples illustrate the problems. Michael Portillo interviewed two NHS surgeons on his GB News show on 4 December 2022. The surgeons said that the number of operations they conducted had fallen over time by around 50%. One gave an example of why. You could have 7 operating theatres and staff fully ready at 8:30am, but only 3 theatre porters were on duty to bring the patients from their wards to the operating theatres. This meant that some operations did not start until 10am. Managers do not turn up to work until 9am and it took them until 10am to get the remaining patients to theatre. A second example familiar to the author: simple self-administered tests for Strep A that give results in 5 minutes (like Covid lateral flow tests) are available in many other countries for a few pounds. These tests are not available to GPs in the UK. What are available are swab tests conducted at GP surgeries which take 5 days to return results. So GPs, on the basis of phone calls with anxious parents, are prescribing anti-biotics for their children 'just in case'. In one example, this treatment turned out to be unnecessary – the anxious parent ordered a self-administered test online and the child did not have Strep A and so was taking anti-biotics unnecessarily. This meant that the NHS was spending money on an unnecessary expensive treatment because a simple low-cost test was not available. The NHS spends more than £2bn per week, but there are clear low-cost solutions for dealing with both the above problems.

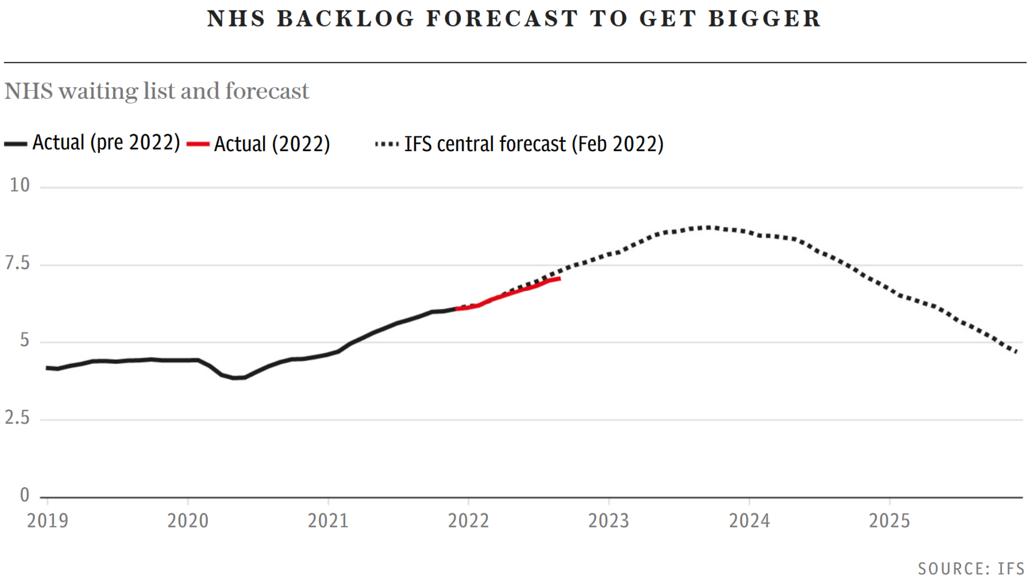

Figure 14: NHS waiting list and forecast, 2019-2026

Source: https://www.telegraph.co.uk/business/2022/11/15/record-number-long-term-sick-amid-nhs-backlogs/

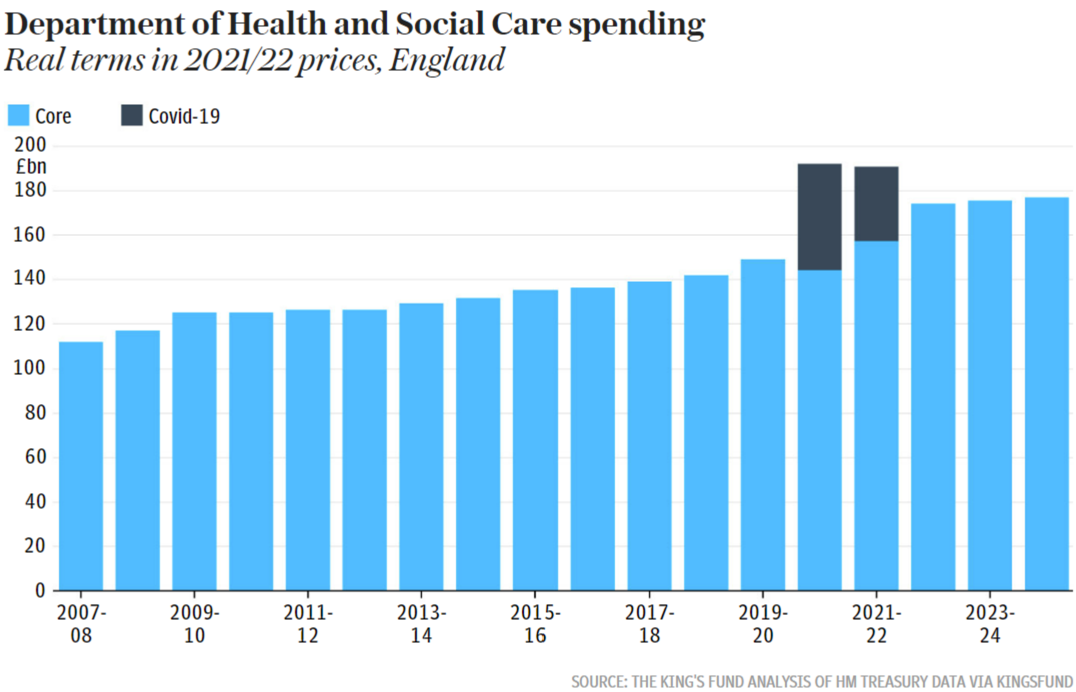

Figure 15: Health and social care spending in England, 2007-2024

Source: https://www.telegraph.co.uk/news/2022/02/12/will-nhs-waiting-list-problem-ever-solved/

Tom Rees comments: ‘Widespread staff shortages [in the NHS] are being exacerbated by a healthcare system unable to cope with backlogs and the legacy of Covid that is stopping many from seeking jobs. While most countries have seen employment levels quickly return to pre-pandemic levels, there remains a big hole in the UK’s sickly workforce. Britain has seen the biggest increase in economic inactivity among its workers in the G7 as it is hamstrung by an NHS that experts say is understaffed, underfunded and stretched by the crisis in social care. By contrast, Germany, Spain and France all have bigger workforces than before Covid. The shortages in the UK have only worsened a summer of discontent where strikes and price surges have reigned, and the issue cannot be ignored, says Tony Wilson, head of the IES. “To address these inflationary risks, these wage pressures, the tightness in the labour market, the risk of shortages and so on, we’ve got to raise participation in work,” he says. Britain is not working – and resurrecting the crumbling NHS is the medicine the economy needs’.[34]

David Finch, Assistant Director at the Health Foundation, adds: ‘NHS backlogs and long Covid seem to be making a contribution to the increase in poor health. This is something that's been happening over the longer term where gradually we've been seeing a rise in the number of people with long term sickness. Some of this is demographic change where we've got a bigger birth cohort coming through into that 50 to 65 age group. There is a higher prevalence of poor health in the population and one of the drivers of that seems to be increased mental health and depression’.[35] The IFS warns that staff shortages will continue until the backlog is cleared. The Confederation of British Industry (CBI) estimates that 131m working days are lost due to sickness every year, costing the economy £180bn a year.

All this shows the extent of the challenges in trying to encourage these groups to return to work. The IFS notes that only 5-10 per cent of those who retire ever return to the labour force. Some are forced to by financial pressures, but many will have paid off their mortgages and have final salary pensions.

Huw Pill, Bank of England Chief Economist, summed up the situation by saying that the pandemic effect on health was ‘probably a key driver’ of inactivity, arguing that long Covid, worsening NHS waiting lists, rising mental health issues and the need to care for family members at home all weighed on labour supply.[36] He also blamed early retirement for the increase in inflation: ‘there are around 600,000 fewer people in Britain’s labour force than the Bank had anticipated before Covid. The lack of workers is maintaining pressure on

[34] Tom Rees (2022) Britain really isn’t working – and the collapsing NHS is to blame; Economic inactivity has risen in the UK despite falling in most of the developed world, Daily Telegraph, 7 August; https://www.telegraph.co.uk/business/2022/08/07/britain-really-isnt-working-collapsing-nhs-blame/

[35] Quoted in Tom Rees (2022) Britain’s sickness crisis is damaging the economy and will only get worse, Daily Telegraph, 15 November; https://www.telegraph.co.uk/business/2022/11/15/record-number-long-term-sick-amid-nhs-backlogs/

[36] Quoted in Delphine Strauss (20220) Why are Britain’s over-50s really leaving the labour market?, Financial Times, 2 November; https://www.ft.com/content/125df3f1-b0c0-4a5b-bf96-9bca0fc06404

employers to pay staff more – and this is fuelling inflation – even though the economy is stumbling into a recession'.[37]

Long-term ill-health is having a significant impact in reducing productivity and lowering growth. Similarly, the early retirement of people in their 50s and 60s, many of whom are fit enough to work, is also lowering growth. The Bank of England predicts that the workforce will now be permanently smaller after the pandemic due to 'increasing detachment' by people who have left their jobs or given up looking for work since 2020. Torsten Bell, Chief Executive of the Resolution Foundation, forecasts 'perma-stagnation' for the economy.[38]

2.3.3 A welfare benefit system that discourages work-seeking post-Covid

Figure 16 shows that the UK is apparently at 'full employment', with the number of job vacancies exceeding the number of unemployed.

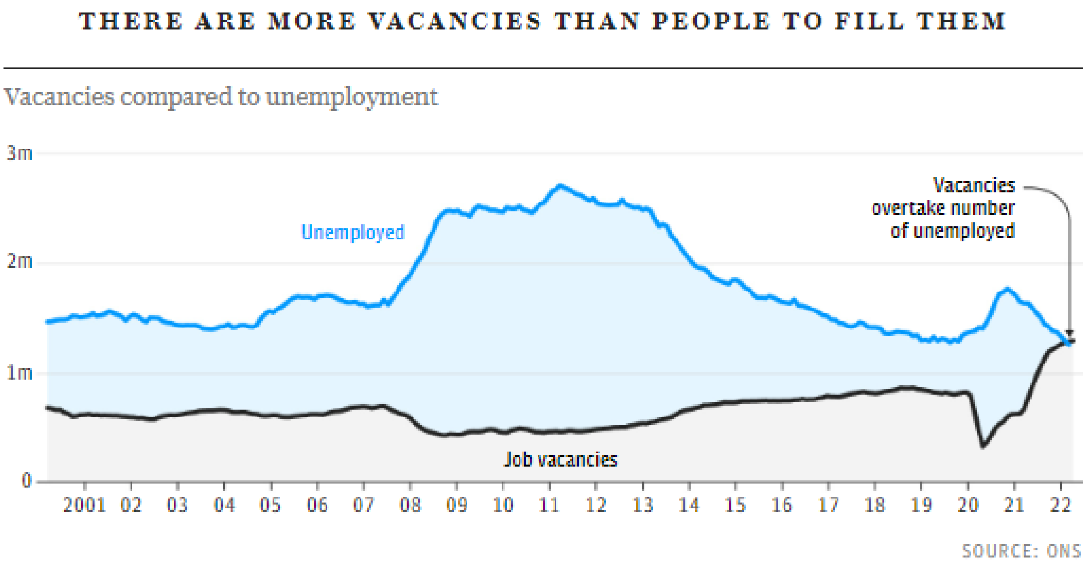

Figure 16: Job vacancies and unemployment in the UK, 2000-2022
Source: https://www.telegraph.co.uk/business/2022/09/25/reversing-britains-post-pandemic-worker-crisis-would-boost-economy

However, Fraser Nelson argues that: 'The low unemployment claim is a mirage. Britain has, in fact, been suffering a period of mass joblessness as big as any in our recent history. The proportion of people who are neither in work or looking for it is higher now than it was in the mid-1970s. More than five million people were claiming out-of-work benefits at the last count – a figure as big as the population of Scotland. But many of them don't count as unemployed, because they're not looking for jobs. So – presto! – they vanish from the national debate. This

[37] Tim Wallace and Hannah Boland (2022) Bank of England blames early retirement for surging inflation, Daily Telegraph, 8 November, https://www.telegraph.co.uk/business/2022/11/08/surge-early-retirement-will-mean-higher-interest-rates-bank

[38] https://www.telegraph.co.uk/business/2023/02/02/recession-will-not-bad-feared-says-bank-england/

overall figure masks horrific local blackspots. In Blackpool, official figures show 26 per cent on out-of-work benefits. In Middlesbrough it was 23 per cent, in Hartlepool 22 per cent, in Manchester, it's 18 per cent. All of these places have thousands of jobs going, which makes the joblessness all the less defensible. Why? How did we get here? How did Universal Credit (UC), the flagship reform of the Cameron era, start to produce the problems that it was designed to solve? It was created with strings of conditionality on welfare payments, with sanctions imposed if people turned down jobs or missed face-to-face meetings. During lockdown, the conditions were abandoned – and never properly restored. So the new system has started to trap people in welfare as surely as the old one did'.[39] In short, the system of furlough payments over such an extended period severely lowered the incentive to seek work.

A report by the Centre for Social Justice (CSJ) estimated that the bill for working-age benefits has risen by £13 billion a year as a result of a 1.6 million (or 23%) increase in claimants of benefits for people under the state pension age.[40]

It is also evident that the benefit system can be gamed to minimise work effort and maximise benefits. A *Daily Telegraph* investigation found that Universal Credit could be maximised by working no more than two days a week in a low-paid job. If someone worked two days on the National Living Wage, they would receive an annual salary of £7,904. But they would receive in addition tax free Universal Credit of £36,663 p.a., a total income of £44,567 p.a. Someone who was working and not on benefits would need to earn £62,000 a year to take home the same amount after tax. If someone worked three days a week instead of two, they would start losing benefits and their gross income would rise by only around £2,000. Comments on social media show people have been put off working more than the minimum. One said: 'I normally work 16 hrs a week but did 32hrs a week for a month. But my UC came right down, I worked 32hrs a week and was not much better off. No point in killing yourself to be very little better off. I won't be doing it again'.[41]

While these attitudes continue to permeate, they remain disastrous for both participation and productivity.

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[39] Fraser Nelson (2022) Benefits Britain is back – and it's condemning millions to dependency, Daily Telegraph, 2 June; https://www.telegraph.co.uk/news/2022/06/02/benefits-britain-back-condemning-millions-dependency/

[40] Edward Malnick (2022) Working-age benefit claims surge by nearly a quarter since Covid pandemic, Daily Telegraph, 16 October; https://www.telegraph.co.uk/politics/2022/10/16/working-age-benefit-claims-surge-nearly-quarter-since-covid/

[41] Britain's jobless crisis fuelled by benefits anomaly that encourages people to work just two days a week, Daily Telegraph, 9 December; https://www.telegraph.co.uk/news/2022/12/09/britains-jobless-crisis-fuelled-benefits-loophole-encourages/

2.3.4 Low levels of job mobility between companies and regions – this is holding back the careers of younger workers

It was common in the past for workers to move jobs in order to get promotion and a pay rise. This was because many UK companies did not have well established career ladders and so the most ambitious workers were forced to move on. We will see later that attitudes in the most productive companies have changed and retaining good workers is now a key priority for them. The average UK worker changes jobs around 8 times in a career,[42] with most of these changes occurring before the age of 35.[43] It used to be higher at around 10 times before 2000. So job mobility has fallen.

Low levels of job mobility (both between companies and regions) are reducing productivity and holding back the careers of younger workers. Stephen Clarke (2017) points out that:

> *There has been a significant decline in the share of people moving region and employer since it reached a high at the turn of the millennium. …This decline in regional job-to-job moves has occurred at a time when differences in employment rates between regions of the UK have significantly narrowed. In this sense the fall in internal migration may just reflect the fact that it is easier for people to find jobs nearer to home. However, it has also occurred at a time when differences in productivity between UK regions have increased suggesting that the decline in mobility may be contributing to poor productivity growth as workers fail to find jobs that best suit their talents.*
>
> *…. [P]ay rises are greater … among those who move both job and region. In 2016, the typical real gross pay rise associated with moving jobs was 7.8 per cent and the typical pay rise for moving region and changing employer was 9 per cent. In contrast, those remaining with the same employer achieved just 1.7 per cent growth. In cash terms, this means the typical earner … would have been around £1,650 better off moving job and £2,000 better off moving region and job than someone remaining with the same employer. Over time people who move region and employer consistently earn the highest rises.*

He adds that the UK has also come to rely on migrant workers from abroad to fill any shortage of local workers: 'At the same time that internal migration has declined, the UK has become more reliant on migrants to provide this mobility. Migrants accounted for 8 per cent of regional job-to-job moves in 1995, but now account for 24 per cent'.[44]

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[42] https://www.bbc.co.uk/news/business-38828581

[43] https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/compendium/economicreview/april2019/analysisofjobchangersandstayers

[44] Stephen Clarke (2017) Get A Move On? The decline in regional job-to-job moves and its impact on productivity and pay, Resolution Foundation, 15 August;

So the natural economic dynamics that would have helped to reduce inter-regional wage differences in the UK – namely inter-regional labour mobility by UK workers – broke down because migrants from abroad with no affinities to any particular city or region took over that role. Productivity has not improved as a result.

2.3.5 The service sector - difficulties in measuring productivity and the consequences of working from home

2.3.5.1 Productivity in the service sector

It is difficult to measure productivity in the service sector – which is 80% of the economy. Given the above definitions of productivity, it is hard to measure the output of, say, an office worker. Another issue involves the trade-off between quality and quantity. If a service is rushed in order to cover more customers, some customers might not feel they have been given a good service. This makes it difficult to improve productivity.

Some service organisations have attempted to address this by establishing a 'unit of service' and then 'provid[e] quality service while maximising efficiency by helping the highest number of clients [i.e, the unit of service] possible and keeping them satisfied at the same time'.[45]

2.3.5.2 Working from home

The Covid pandemic and the lockdown that the government imposed to reduce the spread of Covid has had a big impact on working practices, especially for service-sector workers such as office-based workers who supply services to their employers rather than directly to customers.

People started 'working from home' (WFH)[46] and the routine of travelling to work was lost. Worker attitudes and practices changed and have proved to be difficult to reverse for these office-based workers. 'Work-life balance' became a dominant theme. 'Quiet quitting' – doing the bare minimum – and 'act your wage' – only putting in the effort you are paid for – became

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https://www.resolutionfoundation.org/publications/get-a-move-on-the-decline-in-regional-job-to-job-moves-and-its-impact-on-productivity-and-pay/

[45] Chron Contributor (2021) Reasons That Productivity Is Difficult to Improve in the Service Sector, Chron, 23 February; https://smallbusiness.chron.com/reasons-productivity-difficult-improve-service-sector-18834.html

[46] Also known as hybrid or asynchronous work.

prominent themes particularly for younger workers of the TikTok generation.[47] Cyberloafing became easier.[48]

There are mixed views on whether WFH during and after the Covid pandemic increased or reduced productivity. It is possible that working the bare minimum could mean giving full attention to your work, and having a life outside work hours could actually increase productivity.[49] France, for example, has a 35-hour week and the German union I G Metall negotiated a 28-hour week for its members in 2018 – and both countries have higher productivity than the UK.[50]

A study by Escudero and Kleinman (2022) conjectured that 'The pandemic forced most firms to adopt working from home, often without providing their employees (at least initially) with the necessary support, infrastructure and skills required for remote work. Thus, productivity may have decreased due to increased distractions, and communication and coordination costs associated with working from home. Nevertheless, the greater willingness and need for visibility of workers in this new way of working, as well as greater job autonomy and self-leadership, could be reflected in higher individual productivity. The adoption of working from home has also meant that at least a fraction of the time saved in commuting is devoted to work-related activities, which may increase productivity'.[51]

The authors then examined three different productivity data sets: (1) productivity determined on the basis of accounting data; (2) productivity determined on the basis of systems for monitoring the activities and hours worked by employees; and (3) productivity determined on the basis of self-assessment by workers. They found that 'The first two approaches show a mainly negative relationship between WFH and labour productivity during the pandemic, while the self-assessment approach reports mixed results. Hence, the results seem to imply that a return to the workplace is necessary to recover economic performance'.[52]

In September 2022, Microsoft conducted a survey of around 20,000 workers across 11 countries on their views on working from home. A total of 87% of these workers believed they

[47] Maggie Zhou (2022) The 'Act Your Wage' Trend Is The New Quiet Quitting, Refinery 29, 28 November; https://www.refinery29.com/en-gb/act-your-wage-trend

[48] Chris Stokel-Walker (2020) Cyberloafing: The line between rejuvenating and wasting time, BBC, 7 February; https://www.bbc.com/worklife/article/20200206-cyberloafing-the-line-between-rejuvenating-and-wasting-time

[49] Kathryn Dill and Angela Yang (2022) 'Act your wage': The politics of quiet quitting, Financial News, 26 August; https://www.fnlondon.com/articles/whatisquietquitting-20220826

[50] Guy Chazan (2018) German union wins right to 28-hour working week and 4.3% pay rise – IG Metall's landmark deal is seen as benchmark for other sectors, Financial Times, 6 February; https://www.ft.com/content/e7f0490e-0b1c-11e8-8eb7-42f857ea9f09

[51] Cristian Escudero and Mark Kleinman (2022) How did working from home during Covid-19 impact productivity? A literature review, Policy Institute, King's College London, April; https://www.kcl.ac.uk/policy-institute/assets/how-did-working-from-home-during-the-covid-pandemic-impact-productivity.pdf

[52] Mark Kleinman and Cristian Escudero (2022) Remote working-the future of work or just shirking from home?, Policy Institute, King's College London 27 April; https://www.kcl.ac.uk/news/remote-working-the-future-of-work-or-just-shirking-from-home

are just as efficient at home. However, the same survey found that 80% of managers thought employees get more done in the office.[53]

Sir James Dyson, the founder of Dyson, argues that the homeworking revolution is damaging productivity and killing collaboration, causing British businesses to fall behind global competitors. He said: ‘The government ignores the fact that for many companies, especially creative businesses such as Dyson, this kills essential learning and collaboration, stunts development of our people, prevents access to vital equipment and laboratories, and undermines the security of our intellectual property. And we now have the evidence to show the damaging impact on productivity. Nowhere is that more evident than within the government itself where even now working from home is quoted as an excuse for any number of failures to complete work and to comply with statutory deadlines [discussed in more detail below]’.[54]

Dyson added that government plans to extend employees’ rights to work from home would ‘hamper employers’ ability to organise their workforce … [and] will generate friction between employers and employees, creating further bureaucratic drag. Employers, who are charged with being competitive and developing their workforce, know the huge damage [working from home] does to companies and employees alike. If they can’t remain competitive, they will fail and jobs will go to other, more ambitious economies. …Flexible work prevented collaboration and in-person training which was vital to developing new technology and maintaining competitiveness against global rivals. This is what makes us succeed. In other countries where Dyson operates, we are given the freedom to organise how – and where – our staff carry out the roles they are contracted to. In no other country have we experienced such overreach in terms of the government telling us how to organise our business. To impose this policy during what is likely to be one of the worst recessions on record is economically illiterate and staggeringly self-defeating. The UK increasingly looks like a lackadaisical global outlier that is determined to interfere in business and drive away investment. …Britain is losing the race, becoming less competitive, and this policy will make us fall even further behind’.[55]

[53] Lewis Pennock (2022) The great WFH divide: Staff say they work just as well at home as they do in the office... But guess what? Bosses disagree, Daily Mail, 24 September; https://www.dailymail.co.uk/news/article-11244835/Staff-say-work-just-home-office-guess-Bosses-disagree.html

[54] Tom Rees (2022) Working from home is a productivity disaster, warns Sir James Dyson, Daily Telegraph, 4 March; https://www.telegraph.co.uk/business/2022/03/04/working-home-productivity-disaster-warns-sir-james-dyson/

[55] Billionaire businessman says government plans to give workers more flexibility would generate friction and create further bureaucratic drag, Daily Telegraph, 8 December 2022; https://www.telegraph.co.uk/news/2022/12/08/james-dyson-extending-work-from-home-rights-economically-illiterate/

WFH is even creating problems in financial and professional services. Kristen McGachey and Justin Cash (2022)[56] report that: 'City workers' lack of motivation to return to the office has created a logistical nightmare for top bosses, who are still trying to iron out kinks in the new world of work post-pandemic. Most investment banks, asset managers and law firms have told *Financial News* they are requiring staff to be in at least three days a week. … However, in plenty of corners of the City, bids to get staff back to the office appear to have fallen on deaf ears. … The disconnect between what employers expect and what employees are willing to do is a new source of tension for executives, now forced to grapple with the uncertainty of their staffing within physical office spaces that are more frequently under-utilised, compared to pre-pandemic occupancy levels. The uncertainty that's become synonymous with hybrid working risks firms losing control over how to plan business costs such as leasing and office space maintenance, amid rising inflation and a cost-of-living crisis. …The changing nature of offices means a shift away from dedicated space for employees and that more companies are considering moving into campuses with other businesses'.

By contrast, Thomaz Teodorovicz et al (2022) found that the productivity of managers increased when the WFH: 'Our findings indicate that the forced transition to WFH created by the Covid pandemic was associated with a drastic reduction in commuting time for managers, but also an increase in time spent in work rather than on personal activities. This included reallocating time gained from commuting into more time spent in meetings, possibly to recoup some of the extemporaneous interactions that typically happen in the office'.[57]

2.3.6 The public sector

2.3.6.1 Productivity in the public sector

Productivity in the public sector is especially difficult to measure because people do not pay for these services and there is no market price for them. Nevertheless, the ONS has established a National Statistic for public service productivity which measures 'how much output the public services produce per unit of input, after taking account of the materials consumed (for example, medicines in the health service) and the impact of the outputs on outcomes'.[58]

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[56] Kristen McGachey and Justin Cash (2022) City bosses are losing the battle with hybrid working, Financial News, 8 December; https://www.fnlondon.com/articles/city-bosses-are-losing-the-battle-with-hybrid-working-i-can-guarantee-a-full-office-if-there-are-pizzas-20221208

[57] Thomaz Teodorovicz, Raffaella Sadun, Andrew L. Kun, and Orit Shaer (2022) How does working from home during Covid-19 affect what managers do? Evidence from time-use studies, Discussion Paper No.1844, Centre for Economic Performance, London School of Economics, April; https://cep.lse.ac.uk/pubs/download/dp1844.pdf

[58] Richard Heys (2020) Productivity measurement – how to understand the data around the UK's biggest economic issue, ONS, 13 March;

Josh Martin (2019) explains the problem:[59]

> *Since public services are not sold, it is much more difficult to decide how to measure output. But the public sector makes up about a fifth of the economy (by comparison, the manufacturing industry only accounts for around 10% of the economy), so it is vitally important to understanding the productivity of the UK economy as a whole.*
>
> *A review by British economist Sir Tony Atkinson in 2005 kick-started better measurement of public service productivity. High among his recommendations were that we should account for the changing quality of public services. In most of the economy, a higher price reflects higher quality – hence the famous saying "you get what you pay for". But with public services, there is no price, and cost might not be a good measure of quality either. New surgical techniques that reduce the risk of infection may cost little more, but could greatly improve patients' survival chances, a critically important factor in the value of a procedure. Adjusting for the quality is one way of recognising improvements in public services.*[60]
>
> *…We split public services into 9 core areas, of which healthcare and education are the largest. As it turns out, these are also the easiest to measure, since you can count the number of people interacting with these services (see Figure 17). We also adjust for the quality of these services. For education for instance, we measure improvements in test scores, since teaching more children is no good if they all fail their exams. For healthcare, we use data on the number of operations and consultations, and various measures of quality relating to how successfully the service delivers improved health outcomes, such as survival rates and waiting times. Measuring the quantity and quality of the output is crucial.*
>
> *Some other public services, such as defence, are 'collectively provided', which mean they aren't provided to people directly. In these cases, we usually measure the output of the services by simply looking at how much it costs to deliver them, meaning that we cannot easily measure their productivity. We also have good measures of output and productivity, including quality adjustments, for adult social care and criminal justice, with less well-developed measures for police, fire services, children's social care, and social security administration….*
>
> *ONS recently launched the Efficiency Measurement Unit to address … broader questions in relation to public service provision.*

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https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/articles/productivitymeasurementhowtounderstandthedataaroundtheuksbiggesteconomicissue/2020-03-13

[59] Josh Martin (2019) The hardest part of productivity measurement, ONS, 7 August 7; https://blog.ons.gov.uk/2019/08/07/the-hardest-part-of-productivity-measurement/

[60] https://www.ons.gov.uk/economy/economicoutputandproductivity/publicservicesproductivity/articles/aguidetoqualityadjustmentinpublicserviceproductivitymeasures/2019-08-07

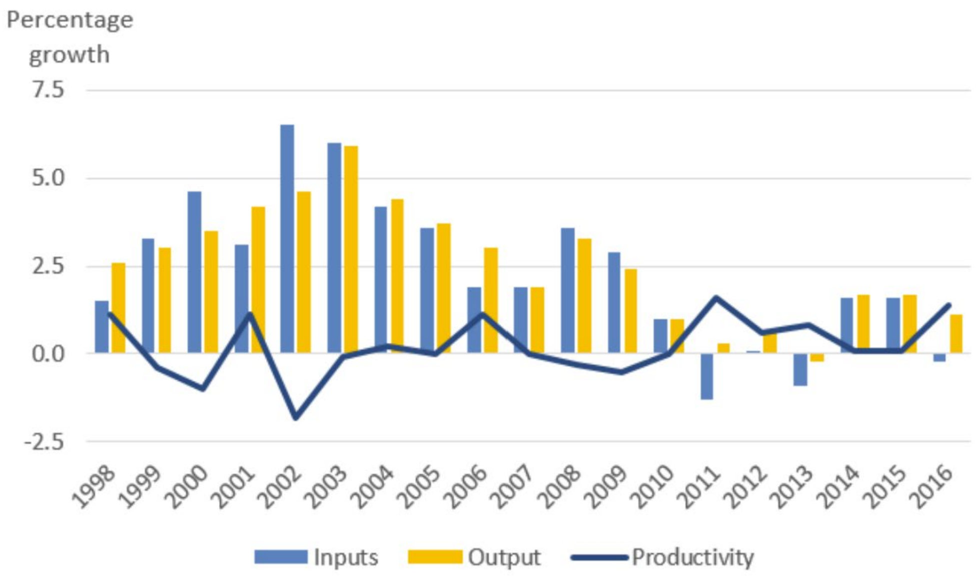

Figure 17: Growth in public services inputs, output and productivity 1998-2016
Source: https://blog.ons.gov.uk/2019/08/07/the-hardest-part-of-productivity-measurement/

The difficulties of measuring public sector productivity make it especially important that public services are not wastefully provided.

2.3.6.2 Working from home

When it comes to civil servants, their managers deny that working from home has had an impact on productivity, yet customer service has failed to recover following Covid and customer complaints about poor service are currently very high as Benedict Smith (2022) reports:[61]

- Taxpayers left on hold by HMRC

  While its civil servants work from home two days a week, waiting times for phone calls have more than doubled in three years, while child benefit and tax credit claims are 25pc slower.

[61] Benedict Smith (2022) Where the civil service is failing Britain: Taxpayer patience is fraying with 'because of Covid' excuses and working from home, Daily Telegraph, 8 November 2022; https://www.telegraph.co.uk/money/consumer-affairs/where-civil-service-failing-britain/

- Pensioners fall between cracks at the DWP

  Pensioners have spoken of their “seething rage” for the Department for Work and Pensions following delays in payouts during the cost-of-living crisis.

  It is one of the largest government bodies by headcount with 94,000 civil servants – but on the average day last month, only 56pc of desks were filled at the office.

- Holidaymakers stranded by passport backlog

  After years of seeing their holiday hopes dashed by Covid restrictions, would-be travellers are still being frustrated by the wait for new passports.

  Coronavirus may have retreated, and restrictions have largely disappeared, but applications still take around 10 weeks to process for British nationals. This wait – triple the normal three-weeks – has not improved in over 18 months, while complaints to the ombudsman have soared.

- Estates in limbo as probate drags on

  Members of the public are waiting months for the green light to sort out their relatives’ estates - known as probate - thanks to issues in HM Courts and Tribunals Service.

- Drivers kept waiting by the DVLA

  Setbacks in licence processing at the Driver and Vehicle Licensing Agency (DVLA) have meant missed hospital appointments, hefty costs and daily frustrations for a number of motorists.

  The agency has missed its target for responding to postal applications – while hitting its target for “effective and flexible working options” – but blames Covid disruption, industrial action and customers who fill in paper forms instead of going online.

While it might be difficult to measure productivity in the service sector, it is clear when services levels are poor – as these examples indicate.

In January 2023, the ONS estimated that public-sector productivity in the public sector was 7.4pc below pre-pandemic levels, compared with a 1.6pc increase for the rest of the economy – see Figure 18. Douglas McWilliams, Deputy Chairman of the Centre for Economics and Business Research (CEBR), said the collapse in productivity suggested spending on public services would be £73bn higher this year than if public sector productivity had climbed at its pre-pandemic rate. He said that a combination of weak management and working from home working had enabled unproductive staff to get away with doing less work. He added that ‘In the private sector, there has been some drag on productivity from working from home, but it's not huge. And people in the private sector often end up working more hours anyway because of the time they save travelling. In the private sector, if you're working from home and you don't work, you'll probably lose your job eventually. In the public sector, it's much less easy for that to happen’.[62]

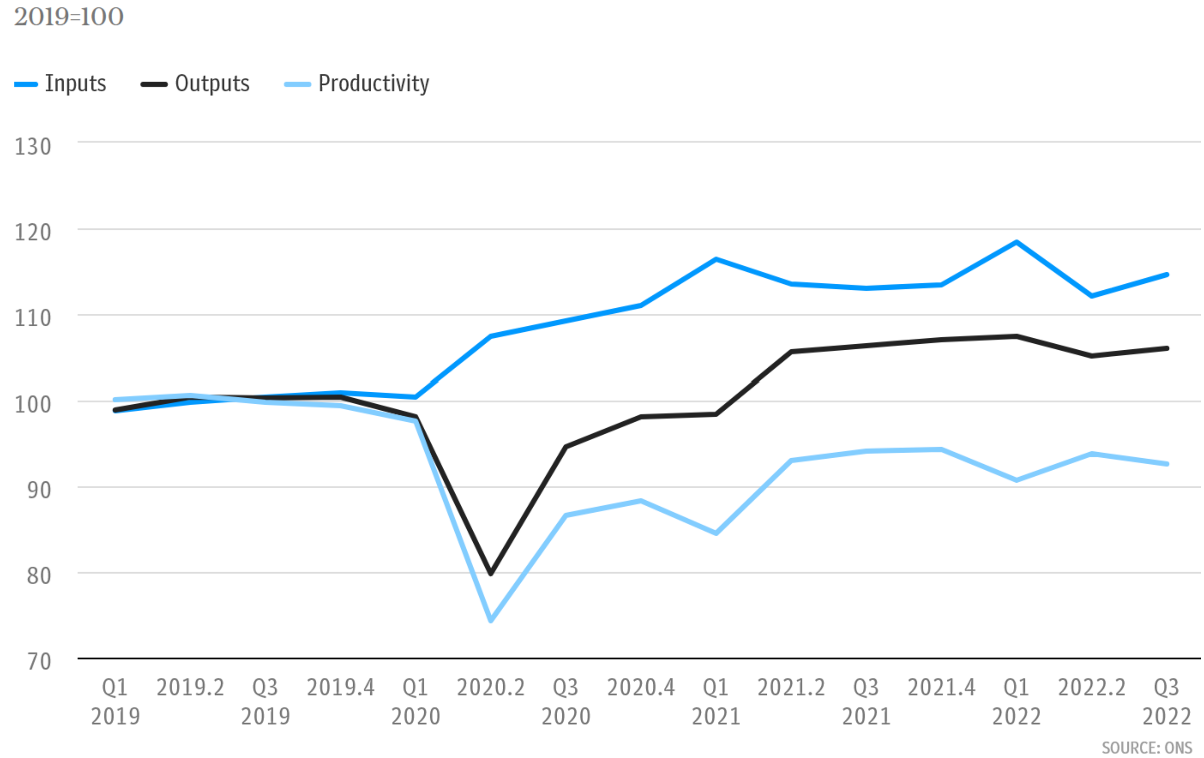

Figure 18: Public-sector productivity 2019-2022
Source: https://www.telegraph.co.uk/business/2023/01/26/public-sector-cost-uk-tens-billions-productivity-slumps

2.3.6.3 Public sector expansion by 200,000 workers during the Covid-19 pandemic

There are currently around 5.7m workers employed in the public sector, compared with 5.5m in 2016. Some of these were employed to deal with the UK’s departure from the EU, but most were taken on to deal with the Covid pandemic, in particular, NHS Test and Trace and the national Covid vaccination campaign.

Many of these additional workers are no longer productively employed. In addition, the IFS has estimated that if the government wants to fund planned pay rises of 5% and stay within

[62] Quoted in Szu Ping Chan and James Warrington (2023) Public sector to cost UK ‘tens of billions’ as Jacob Rees-Mogg blames working from home, Daily Telegraph, 26 January; https://www.telegraph.co.uk/business/2023/01/26/public-sector-cost-uk-tens-billions-productivity-slumps

spending plans, then it must reduce the public sector payroll by £5bn – which is equivalent to reducing the headcount by 220,000.[63]

Andrew Bailey, the Governor of the Bank of England, has said that this public sector job expansion had intensified labour shortages in the private sector: 'The shortfall in employment in consumer-facing services industries, which are looking for active labour, is not far off the same number [i.e., 200,000]'. Douglas McWilliams said many of the unskilled roles in the public sector were likely to have been filled by people who otherwise may have gone to work in hospitality.[64]

It will be interesting to see how quickly these 200,000 individuals return to the private sector and increase their effective productivity.

2.3.7 Low productivity amongst the self-employed and part-time workers

2.3.7.1 The self-employed

At the peak (just prior to the Covid pandemic), there were 5m self-employed workers in the UK (16% of the work force, one of the highest rates in the developed world). This figure fell by 800,000 during the pandemic – and some of these returned to being employees.

A study Blackburn et al. (2022) found that a third of those remaining in self-employment had difficulties in meeting basic expenses, with this rising to 67% for healthcare support workers. More than 40% of self-employed people had monthly incomes of less than £1,000.[65]

Another study by Andreas Teichgräber and John Van Reenen (2021) found that, between 1981 and 2019, the average self-employed worker's income grew by only 50%, compared to 80% for the average employee. This difference is explained by (1) the growth in the numbers of 'solo self-employed' (who have relatively low incomes), and (2) a much greater fall in hours worked by the self-employed than for the employed.[66]

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[63] Szu Ping Chan (2022) Kwarteng must cut 200,000 public sector jobs to meet spending plans, warns IFS, Daily Telegraph, 8 October; https://www.telegraph.co.uk/business/2022/10/08/kwarteng-must-cut-200000-public-sector-jobs-meet-spending-plans/

[64] Matt Oliver, Hannah Boland and Christopher Hope (2021) Public sector expansion by 250,000 workers intensifying labour shortages, says Bailey, Daily Telegraph, 21 November, https://www.telegraph.co.uk/business/2021/11/21/public-sector-land-grab-250000-workers-intensifying-labour-shortages/

[65] Robert Blackburn, Stephen Machin and Maria Ventura (2022) Covid-19 and the Self-Employed – A two year update, Centre for Economic Performance, London School of Economics and Political Science, July; https://cep.lse.ac.uk/pubs/download/cepcovid-19-028.pdf

[66] Andreas Teichgräber and John Van Reenen (2021) Have productivity and pay decoupled in the UK?, Programme of Innovation and Diffusion, Working Paper No.021, Centre for Economic Performance, London School of Economics and Political Science, November; https://cep.lse.ac.uk/pubs/download/dp1812.pdf

It is clear that the incomes and hence productivity of a significant proportion of self-employed people have never recovered from the pandemic and this will drive down average productivity across the economy.

2.3.7.2 Part-time workers

A report by Louise Murphy (2022)[67] for the Resolution Foundation – which involved focus group interviews – found that part-time work is concentrated in low-paying sectors. One implication of this is that productivity is typically lower in part-time work than full-time work, although that is not the whole story.

Some people welcome part-time work because it is good for wellbeing and stress levels, and meant that work did not obstruct home life. The report states that: 'Workers … said that part-time work is often the only way they can achieve flexibility and balance work with their other commitments. Sometimes the only way to avoid weekend or evening shifts was to accept a job offering less than full-time hours, and in other cases, the cost of childcare meant it was not worth working full-time'.

But part-time work also typically involves low hourly pay and fewer options for progression into higher paid and more interesting jobs. The report said that: 'there is both a pay and a progression penalty attached to part-time work that has real living standards consequences. Part-time work is concentrated in low-paying sectors, and those looking for part-time work face far fewer options of well-paid jobs than those able to work full-time. In 2015, only one-quarter of part-time workers felt like their job had prospects for advancement, compared to 38 per cent of full-time workers. …[W]orkers in our focus groups acknowledged that they made decisions about their working hours within considerable constraints. Low-paid work is often of poor quality and feels stressful and unfulfilling, and job satisfaction among the lowest earners has fallen from over 70 per cent in the early 1990s (far higher than for those with higher earnings at this point) to 56 per cent in 2017-2019'.

The report concludes 'that policy should target some of the drivers of shorter-hour working amongst lower earners – namely those that constrain workers' choices – while recognising both the real benefits it can bring and the complexities of lives that sit behind decisions about how – and for how long – we work'. The report also notes that 'people who switch from part-time to full-time work are more likely to escape low pay that those who remain in part-time work'.

[67] Louise Murphy (2022) Constrained choices: Understanding the prevalence of part-time work among low-paid workers in the UK, Resolution Foundation, 30 November; https://www.resolutionfoundation.org/publications/constrained-choices/

2.3.8 Demographic challenges

A longer-term issue which will affect productivity is the demographic imbalance caused by an ageing population and declining fertility. Women born in the UK in 1975 had on average 1.92 children which is below the replacement rate of 2.1 – a situation which has been called the 'baby bust'. Whatever the reason for this,[68] the outcome will be an increasing dependency ratio (the ratio of retired to working population) that will require higher taxes from a relatively smaller working population to pay for the pensions and long-term care of the retired population – and this will have the effect of reducing productivity. The birth rate is even lower in some other countries, e.g., 1.19 children per woman in Spain and 0.84 in South Korea.

Some countries have introduced 'pronatalist' initiatives to overcome the baby bust:[69]

> China
>
> *At the Communist Party Congress, President Xi Jinping promised more policies to tackle China's birth rate of 1.16 children per woman. Since 2015, the country has flipped from a one-child to a three-child policy, made fertility help more accessible, discouraged abortions and then offered tax deductions, longer maternity leave, better medical insurance and housing subsidies to women choosing to have children.*
>
> Japan
>
> *Since the late 1980s, Japan has introduced several measures to halt its declining birth rate although not much has worked: in 2021, fewer than 400,000 babies were born – a record low. Tanking marriage rates and later-life marriage is considered a primary issue so, in 2020, funding was given to local governments to create sophisticated AI matchmaking services to assist singles in meeting suitable partners.*
>
> Hungary
>
> *Hungarian PM Viktor Orban has pledged to spend five per cent of the country's GDP on policies to reverse the declining birth rate. IVF clinics have been nationalised, offering free treatment to native Hungarian heterosexual women under 40. Mothers with four children will be given a lifetime exemption from income tax and loans of up to £25,000 are offered to young married couples; if they have three children within the required time frame, the loan is written off.*

[68] See, e.g., Rosa Silverman (2022) Child-free by choice: The birth rate crisis gripping the West, Daily Telegraph, 22 October; https://www.telegraph.co.uk/family/parenting/child-free-choice-birth-rate-crisis-gripping-west/

[69] Lucy Foster (2022) Child-free by choice: The birth rate crisis gripping the West, Daily Telegraph, 22 October; https://www.telegraph.co.uk/family/parenting/child-free-choice-birth-rate-crisis-gripping-west/

Poland

Since 2016, Poland's Family 500+ programme has given families around £105 a month for second and subsequent children up to the age of 18. Now, the new "Demographic Strategy 2040" promotes further measures, including guaranteed flexible working for parents of children up to the age of four, reduced working hours, redundancy protection and one-off "parental care capital" payments of around £2,300 for children between 12 and 36 months.

Singapore

Birth rates in Singapore have slumped to 1.14 children per woman. Expensive childcare is thought to be a prohibitor so, to help parents work and raise children, the government now offers a Proximity Housing Grant (around £19,000) for families buying a home within a 4km distance of grandparents (or vice versa). First and second children also receive a Baby Bonus cash gift of £5,000, children thereafter receive £6,300.

These initiatives have only had a limited effect, e.g., Poland's 500+ scheme did increase but rates, but not by enough to overcome population ageing.

The UK government has not offered such incentives. Indeed, it has done the opposite. In 2017, it introduced a two-child limit on child benefits, with the benefit removed altogether if the higher-earning parent earned more than £60,000.

Demographic factors are particularly important for determining the standard of living. Equation (1) shows that one of the factors driving real GDP growth is the growth in working age population. This, in turn, is dominated in the long-run by the difference between birth and mortality rates (controlling for years of education and the retirement age).

2.4 Companies – their contribution to the UK's poor productivity record

In 2021, there were around 5.6 million private sector businesses in the UK:[70]

- there were 5.548 million small businesses (with 0 to 49 employees, 4.2 million had no employees), 99.2% of the total business population
- there were 35,600 medium-sized businesses (with 50 to 249 employees), 0.6% of the total business population
- a further 7,700 businesses were large businesses (with 250 or more employees), 0.1% of the total business population.

The employment in small businesses was 12.9 million (48% of the total) and their turnover was £1.6 trillion (36%); the employment in medium-sized businesses was 3.5 million (13%) with turnover of £0.7 trillion (16%); and the employment in large businesses was 10.6 million (39%) with turnover of £2.1 trillion (48%). So 61% of the employment and 52% of the turnover

[70] https://www.gov.uk/government/statistics/business-population-estimates-2021/business-population-estimates-for-the-uk-and-regions-2021-statistical-release-html

comes from small and medium-sized enterprises (SMEs) in the UK – and these companies are the most sensitive to the effect of corporation tax on their investment and hence future productivity.

2.4.1 A long tail of inefficient firms that are poorly managed and underinvest

A joint study by study Oliveira-Cunha et al (2021) from the Centre for Economic Performance (CEP) at LSE and the Resolution Foundation[71] finds that UK productivity is dragged down by the underperformance of a 'long tail' of inefficient (sometimes called 'zombie') firms that are poorly managed. These firms are run by managers with a poor understanding of not only the skills of their employees but also the skills needs of those employees. Further, the managers are unable to identify the strengths and weaknesses of employees and so fail to get the best results from each of them, particularly when they need to work in teams. Part of this is down to the quality of the managers themselves and part of it is down to inadequate training by the managers for their own jobs.

The study finds that 'the gap between the most and least productive firms is huge: a worker in the 90th percentile of the firm productivity distribution is around 16 times more productive than at the 10th percentile. …Moreover, the share of output produced in firms in the long tail is so low that raising their productivity will not do much to boost the average. The least productive 40 per cent of firms (weighted by employment) produce only around 12 per cent of total value added, while the most productive 40 per cent produce three-quarters. Raising the productivity of the bottom firms employing 40 per cent of workers by 10 per cent would therefore raise productivity by around 1.2 per cent, whereas the same boost at the top would increase it by 7.5 per cent. [By contrast], transferring one-tenth of those workers from the bottom to the top (assuming, for illustrative purposes, that this could be done without affecting the productivity of the firms they move between) would boost GDP by some 6 per cent. Therefore, if improving aggregate productivity is a central objective of policy makers, a more promising avenue to pursue than transforming low-productivity firms may be to reallocate resources from them to better-performing firms'. The report finds that workers do eventually move to more productive firms, which will increase average productivity, but this is happening only slowly.

The study also finds that years of underinvestment by UK firms has affected their productivity:

> *UK firms have not been investing in capital, ideas or processes at anything like the rates of their peers. French workers, for example, have over 40 per cent more capital than UK workers, enough to account for the whole productivity gap with the UK. Business capital investment in the UK as a share of GDP (at 10 per cent in 2019) has consistently*

[71] Juliana Oliveira-Cunha, Jesse Kozler, Pablo Shah, Gregory Thwaites and Anna Valero (2021) Business time: How ready are UK firms for the decisive decade?, The Economy 2030 Inquiry, Resolution Foundation, November; https://economy2030.resolutionfoundation.org/wp-content/uploads/2021/11/Business-time.pdf

lagged France, Germany and the US (13 per cent, on average), as has business investment in research and development (1.2 per cent versus an average of 2 per cent in 2019). Despite the UK's strong research system, its patenting intensity – a key measure of innovation output – lags other innovative countries: on average, patenting intensity across France, Germany and the US is over twice that in the UK.

…Management practices in UK firms are, on average, worse than those in the US and Germany. There is a thicker tail of worse-managed firms in the UK, and a thinner tail of good firms – only 11 per cent of UK firms were as well managed as the best quarter of US firms in the 2004-2014 period (though there is some evidence that this might be improving in recent years). Furthermore, UK firms are middling when the extent of digitisation is compared across countries.

A key aspect of the UK's underperformance relates to human capital. Despite rising tertiary education attainment, there are gaps in basic and technical skills that hold back productivity of workers and firms in the UK [confirming what was said above]. Moreover, research has shown that skilled workers and managers are more likely to successfully adopt productivity-enhancing technologies and management practices.

There are also troubling patterns of attainment across generations: literacy and numeracy skills of the young in the UK have slipped relative to previous cohorts [again confirming what was said above]. The UK needs to address these challenges to improve the productivity of workers and firms, and to ensure that the labour force is adequately equipped for the technological change and transitions ahead.

But higher investment means either importing more or consuming less.

It is clear that investment, broadly defined, needs to rise to narrow these gaps in the resources available to firms. This extra investment must be wisely targeted to raise productivity, as well as helping the UK meet its net zero commitments and benefit from sustainable growth opportunities along the way. These issues have been widely understood for some time, but have not been addressed: total investment in the UK economy rose by only 1 per cent in the five years to Q2 2021, whereas it rose by an average of 16 per cent in France, Germany and the US.

Less well understood is that investment is an expenditure, but one that provides future opportunities for consumption as the reward. In a more-or-less fully employed economy (which may or may not be a feature of the 2020s as a whole), higher investment must be resourced with increased net imports, which already start at a high level in the UK, or with lower domestic consumption. Simple simulations suggest that the path to a higher investment economy involves a large rise in foreign net liabilities or a long period of subdued consumption. For example, financing a 5 percentage point rise in total investment – something that would enable the UK's investment rate (public and private) to match the average of France, Germany and the US – from lower consumption and higher domestic savings could boost growth immediately and generate a cumulative 8 percentage points of extra GDP growth over 20 years. But it would be 15 years before consumption recovered from the initial fall.

The balance between investment, consumption and net imports, and whose consumption takes any hit, are two of the difficult trade-offs that policy makers will need to consider in this area. …

Lastly, any retooling of the corporate sector will need to be driven by, and maximise benefits from, the drivers of change that will dominate the 2020s – in particular net zero, but also the restructuring initiated by the Covid-19 pandemic and from exiting the EU. Business and government alike will need to take long-term decisions in a climate of high uncertainty.

Mitha (2019) adds:

…Britain has many innovative and highly productive companies. It is also renowned for the quality of its R&D [research and development] and start-ups. But there is a wide variation in the degree of technological adoption and penetration among British companies. Some of them, the so-called upper-tail companies, are constantly on the look out for new talent, ideas and technology. They rapidly adopt new technologies and spread them equally quickly within the firm. They tend to be highly productive. They include the 400 large companies (less than 0.01% of the business population) that account for three-quarters of Britain's private R&D spending, and other companies involved in exporting goods and services.

…However, the long and lengthening lower tail of companies that have little or very low productivity have dragged down Britain's aggregate productivity. About half of British firms have not experienced any increase in productivity since before the financial crisis. In some regions and sectors, the fraction of firms that have practically stood still since the turn of the century is almost two-thirds. Smaller companies tend to have a poor track record of innovation. They are often slow to introduce new products and processes. The poor performance of businesses in the lower tail goes a long way towards explaining why British productivity has stubbornly failed to recover since the financial crisis.

… There has [also] been slower growth in the capital per hour worked ('capital deepening') and the efficiency with which companies put their labour and capital inputs to use ('total factor productivity') even among highly productive companies. Uncertainty has made businesses reluctant to invest in productive capital, preferring to employ more labour on temporary contracts. Firms can get rid of workers quickly if, as they expect, economic and market conditions worsen. The new jobs are insecure and offer little scope for real wage growth.

Mitha (2019) is also critical of knowledge diffusion in the UK and puts this down to low job mobility:

British industry is poor at disseminating and diffusing the innovation it is so good at generating. It is consistently in the top five for global innovation but Britain's ranking for domestic knowledge diffusion is a poor 38th – and falling. Human capital is a powerful transmission and diffusion mechanism for channelling ideas and innovations *within and across companies and countries. As people move between companies, they take their knowledge, expertise and experience with them and share it with their co-workers. Churn in the labour market tends to promote technological diffusion. The fact that it is about half the level in Britain than it is in the United States may partly explain why British workers are significantly less productive than those in the US.*

As mentioned earlier, part of the reason for low job mobility by British workers in the UK was that migrant workers from Eastern Europe found it easier to move than the British workers. However, many of the Eastern European workers left the UK at the start of the pandemic, so that 'powerful transmission and diffusion mechanism for channelling ideas and innovations within and across companies' has been seriously weakened.

In terms of intangible assets, Mitha (2019) makes the following observations:

There is a strong correlation between investment in intangible assets and productivity. Investment into intangibles was affected to a lesser extent than tangible investment after the financial crisis, but it had a disproportionately large adverse impact on productivity. This is because intangible capital tends to produce higher spillover effects than tangible capital. Intangible capital is highly productive.

Intangible assets comprise ideas and know-how, intellectual property, software, licensing agreements, secret recipes, branding, proprietary relationships with suppliers and partners, and product design. Since the 1980s, the growth of investment in intangible assets has outstripped that of investment in physical capital, such as plant and equipment and structures. Even businesses in countries renowned for their 'dark satanic mills' of manufacturing are increasingly dominated by intangible capital.

Knowledge capital can be re-combined into new forms. It is easy to scale intangible capital at near zero marginal cost, thereby generating increasing returns from such investments. Despite being specific to its originator, intangible capital produces large spillover effects. Its characteristics can often be readily copied or imitated because they aren't always capable of being fully patented. For example, the outstanding success of the iPhone's design and touch-screen technology led Apple's rivals first to imitate it, and then to improve upon it. Intangible assets are not always adequately reflected in company balance sheets and in share prices, or in the GDP statistics. It isn't easy to value intangible assets because there are no ready markets for them.

Businesses can create their own intangible assets. For example, firms can either write down their knowledge of their production processes in lines of code themselves or pay a business development firm to do it for them. The former would be treated as an intermediate production expense, and the latter as an output that would be reflected as additional GDP. But, in both instances, the code would be an intangible capital asset if the software were of enduring value. Such assets can be essential to the productive ability of businesses. For example, some financial institutions are totally dependent on their ageing legacy coding. It is important for the tax system to recognise the vital importance of intangible assets.

Figure 19 shows that business investment in the UK lags behind whole economy investment, while Figure 20 shows that low business investment is bad for economic growth. Figures 21 and 22 confirm that UK investment lags behind other big high-income countries and that UK total investment as a share of GDP is very low compared with these countries. Further, since 2004, UK companies have injected around £628bn into their pension schemes, of which £340bn was in the form of deficit repair contributions – money that could otherwise have gone into investment.[72] Jeremy Warner (2022)[73] reports that: 'Britain's growth potential – the amount the economy can expand before triggering inflation – has fallen behind every major economy modelled by the OECD (43 of them) bar Mexico, and will remain that way until 2024 at the earliest. … A key reason for this depressing state of affairs is persistently poor levels of business investment. Despite Rishi Sunak's "super deductions" initiative [the Annual Investment Allowance] – designed to offset the impact on investment of rising corporation tax – business investment has yet to recover to its pre-Covid level, which was itself badly deficient by international standards. … You might have thought that [labour shortages] would encourage a leap in labour saving investment so as to enhance productivity and reduce employment needs, but in fact it seems to be working the other way around. On the whole, businesses only invest if they expect to be expanding, and again, on the whole business expansion requires more staff. If struggling to fill positions even in a recessionary market, then business expansion becomes next to impossible. Lack of staff thus acts as a deterrent to investment rather than an incentive. …[Further], idleness and state dependence [ready access to disability and other benefit payments] have triumphed over a once culturally ingrained work ethic. Small wonder that nobody wants to invest'.

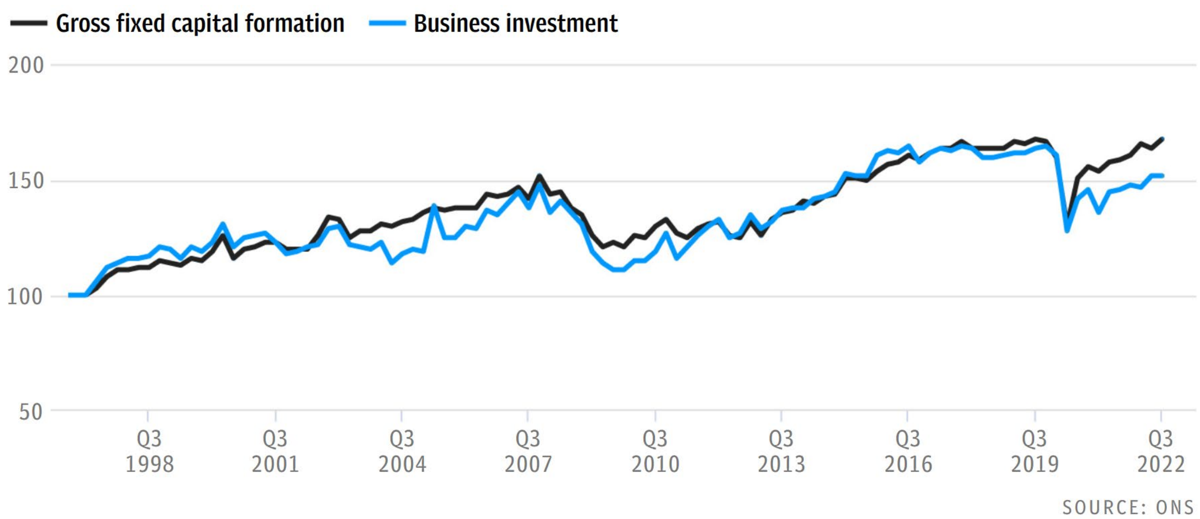

Figure 19: Gross fixed capital formation and business investment in the UK, 1998-2022
Source: Daily Telegraph, 10 December 2022

[72] Tony Nangle, 31 January 2023; https://twitter.com/toby_n/status/1620391047275884544?
[73] Jeremy Warner (2022) Britain is an investment no-go zone, Daily Telegraph, 6 December 2022

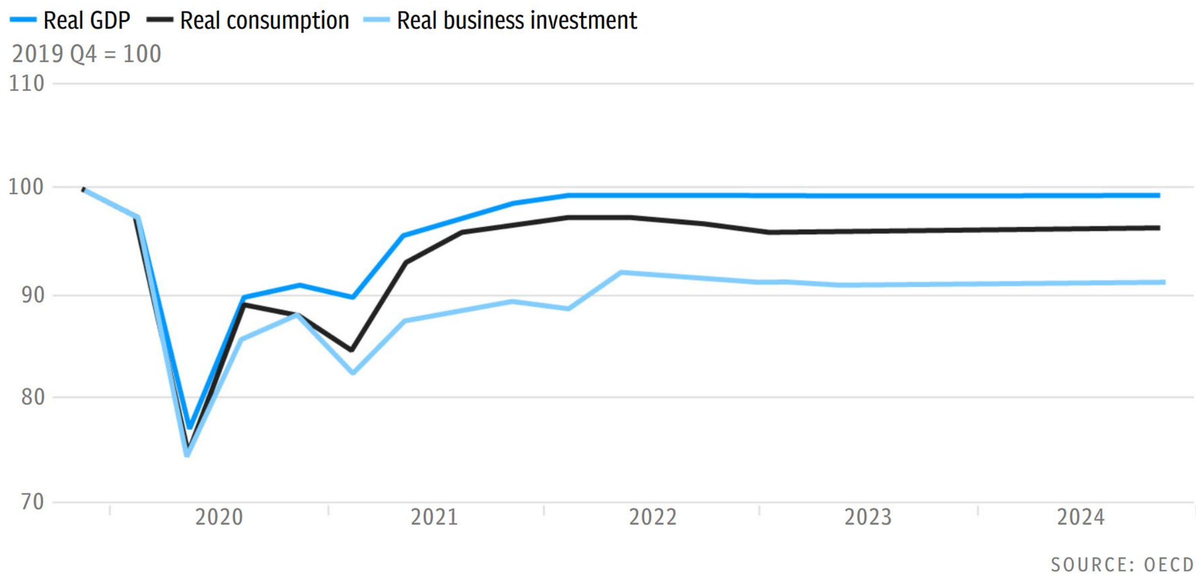

Figure 20: Real GDP, real consumption and real business investment in the UK, 2019-2024
Source: Daily Telegraph, 10 December 2022

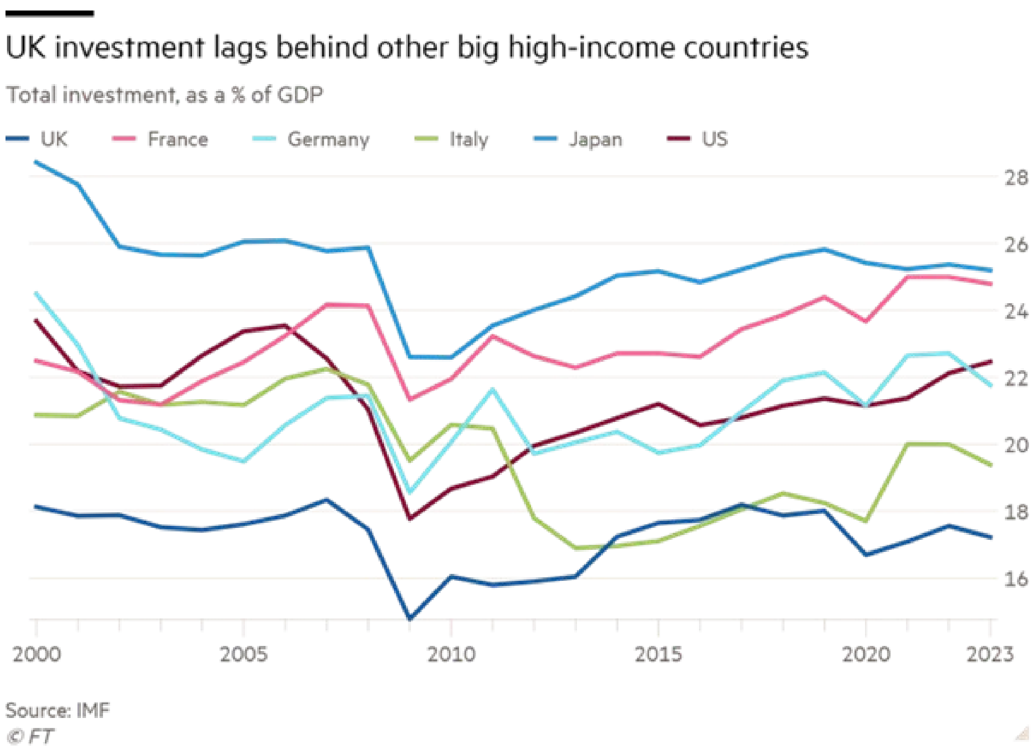

Figure 21: Total investment as a % of GDP, selected countries, 2000-2023
Source: Financial Times

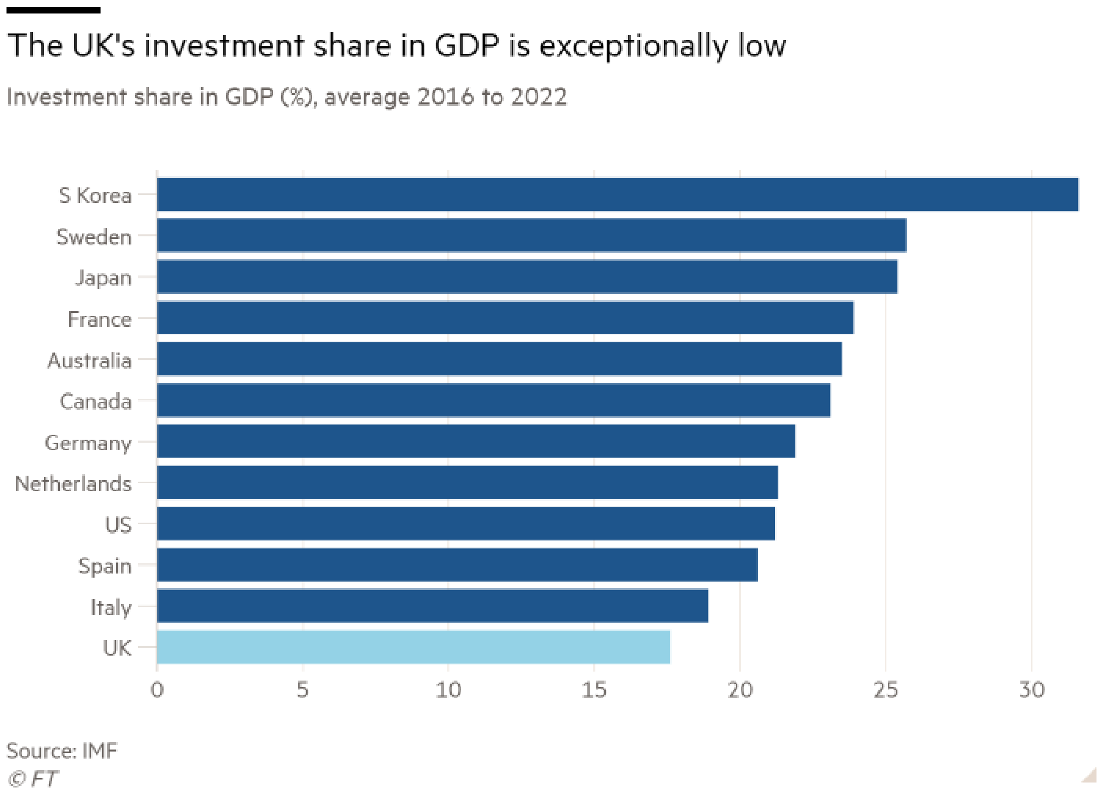

Figure 22: Total investment as a % of GDP, selected countries, average 2016-2022
Source: Financial Times, https://www.ft.com/content/5a8d439b-da0f-41c0-9e6b-e857a75c2a30

2.4.2 Reliance on migrant labour

Another explanation for the UK's low productivity, touched upon earlier, has been the reliance of UK companies on migrant workers, many of whom came from Eastern Europe beginning in the early 2000s (some of these workers returned to their homelands when the pandemic started).[74] Plentiful cheap labour means that companies do not need to invest in productivity-enhancing capital and, without this, real wages will not grow. The UK is stuck in a low-skill, low-productivity, low-wage trap – see Figure 23.

This has led to a debate in the media about migrant workers and their impact on productivity.

[74] Gordon Rayner, Ben Riley-Smith, and Harry Yorke (2021) Businesses have become 'drunk on cheap labour', say Tories, Daily Telegraph, 4 October; https://www.telegraph.co.uk/politics/2021/10/04/businesses-have-become-drunk-cheap-labour-say-tories/

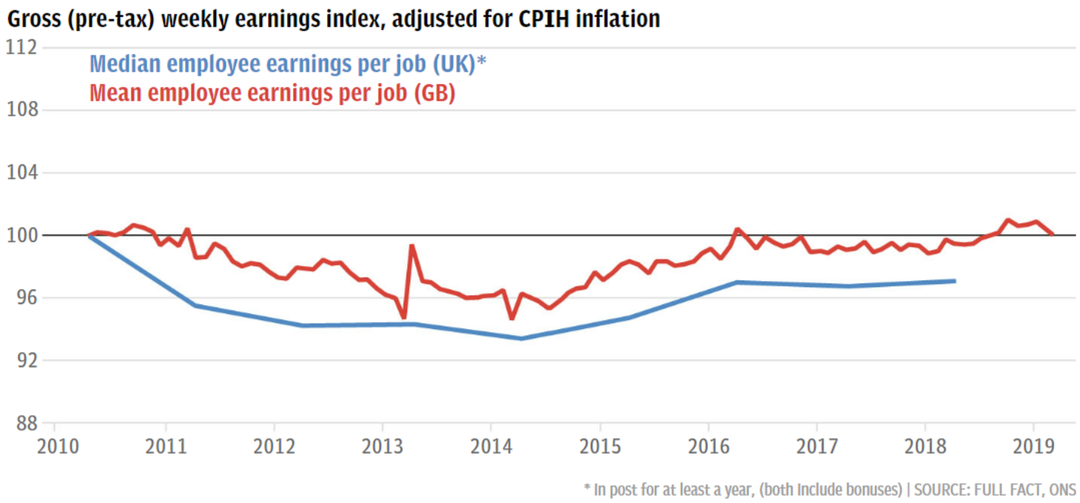

Figure 23: Weekly wage index adjusted for inflation

Source: https://www.telegraph.co.uk/politics/2021/10/04/businesses-have-become-drunk-cheap-labour-say-tories/

Matthew Lynn (2022)[75] argues that:

> *a return to mass, low-skilled immigration is not the answer. All it does is allow companies to fix every problem with more cheap people instead of investing in training, automation and efficiency. And it absolves the welfare and tax system of responsibility for making sure work pays. It is absolutely right that the UK opens its doors to skilled immigrants, but hundreds of thousands of visas for waiting on tables, washing cars and picking fruit are just a short-term fix. It hasn't worked for the last 20 years and it is not going to work now.*
>
> *…First, it doesn't raise productivity. Investing in more machinery, upgrading skills and shifting to higher value output is all hard work. If companies can just throw minimum wage labour at a problem then they will. Migration makes it too easy for companies to just bring in people instead of raising output from their existing team. But if we can't work out a way of getting productivity moving again it will be impossible to grow the economy.*
>
> *Next, it stops work from paying. True, we have been steadily raising the national living wage to put a floor under what employers can offer. However, you don't need to spend very long with the supply and demand chapter of an economics textbook to understand that if you increase the supply of something — in this case people — the price will go*

[75] Matthew Lynn (2022) The return of unskilled migration will do nothing to solve the productivity crisis - Cheap foreign labour allows companies to get away without investing in growth, Daily Telegraph, 1 October; https://www.telegraph.co.uk/business/2022/10/01/return-unskilled-migration-will-do-nothing-solve-productivity/

> *down. We were hoping for higher wages, but an increase in unskilled migration will push them back down again.*
>
> *Finally, it stops us from working out the solutions to our labour market issues. To take just one example, the Office for National Statistics reported last week that 386,000 over-50s had left the workforce since the pandemic, the equivalent of losing a city the size of Coventry. Over 70pc of them were willing to go back to work, but were deterred by the pay, the conditions, or were stuck on NHS waiting list. Likewise, more than half a million more people are on Universal Credit, and only required to put in 15 hours a week before they can refuse more work. There are lots of people who could be working more in the country. We just need to figure out how to get them back into full-time employment.*

Professor Alan Manning, a former chair of the Migration Advisory Committee, found that 'the impact of a well-chosen immigration policy on growth was very small unless one focused on total GDP, which is the wrong measure. For high-skilled immigrants, it is likely that GDP per capita is raised but for lower-skilled immigrants it is much more debatable. And a lot of the current discussion is about reducing restrictions on immigration to address labour shortages in sectors like agriculture and hospitality, where productivity and salaries are low. … But we need to be aware that most of the benefits go to the migrants themselves, and that some controls are needed to avoid harm to some of the locals. Pretending there is a strong case that immigration always raises growth in the local economy may be in a good cause, but when that case is exaggerated, it runs the risk of undermining public confidence in the immigration system, something that tends to lead ultimately to more restrictive policies'.[76] Peter Foster (2022) points out that 'expanding the workforce creates more demand (for housing, healthcare, consumer products). It is not at all clear that there is an overall economic benefit to GDP per capita'.[77]

Sir Keir Starmer, Labour Party leader, has said that Britain must end its economic dependence on immigration. He told a Confederation of British Industry conference that with a Labour government, 'any movement in our point-based migration system, whether via the skilled occupation route, or the shortage worker list, will come with new conditions for business. We will expect you to bring forward a clear plan for higher skills and more training, for better pay and conditions, for investment in new technology. But our common goal must be to help the British economy off its immigration dependency. To start investing more in training up workers who are already here. …Migration is part of our national story – always has been, always will be. And the Labour Party will never diminish the contribution it makes to the economy, to public services, to your businesses and our communities. But let me tell you, the

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[76] Alan Manning (2022) The link between growth and immigration: unpicking the confusion, 3 October; https://blogs.lse.ac.uk/politicsandpolicy/the-link-between-growth-and-immigration-unpicking-the-confusion/

[77] Peter Foster (2022) UK faces some tough choices to solve its labour shortages, Financial Times, 21 July, Financial Times; https://www.ft.com/content/5ba5b01c-9ab8-4832-b713-99f0ca271040

days when low pay and cheap labour are part of the British way on growth must end'. He also wants to give the Migration Advisory Committee, which assesses labour shortages and offers policy recommendations, a bigger role in decision making.[78] Figure 24 shows net immigration into the UK over the last century.

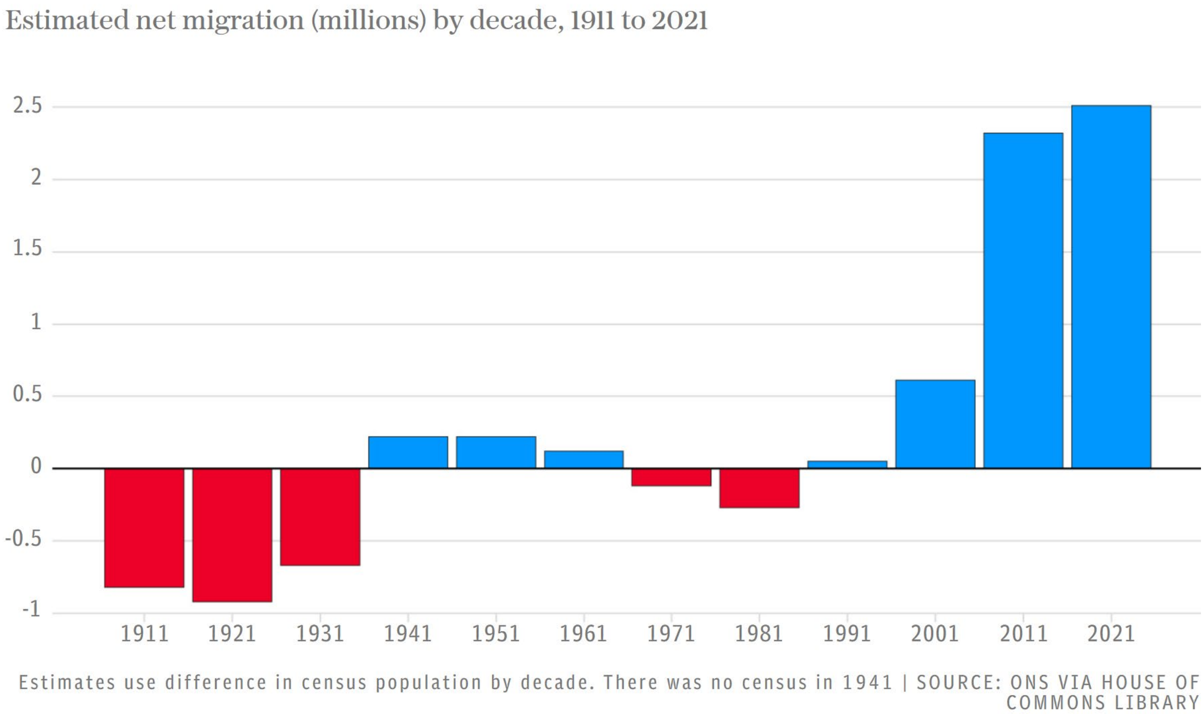

Figure 24: Net immigration into the UK over the last century
Source: https://www.telegraph.co.uk/politics/2022/11/21/uk-must-wean-migrant-labour-says-keir-starmer

The Common Sense Group of MPs argues that immigration cuts GDP through stagnant wages, stalled productivity, and underinvestment in domestic skills.[79]

Nick Timothy (2022) goes further and claims that 'mass migration is making us poor':[80]

> *mass immigration … has left the British economy addicted to a supply of low-skilled, low-paid migrant workers, with too little public and private investment in the skills and technology that improve productivity.*
>
> *Britain is for example the only G7 economy with a robot density – the ratio of robots per employees – lower than the world average. We have a far lower degree of manufacturing automation than countries like Spain and Italy. In farming, a*

[78] Ben Riley-Smith (2022) UK must wean itself off migrant labour, says Keir Starmer, Daily Telegraph, 21 November; https://www.telegraph.co.uk/politics/2022/11/21/uk-must-wean-migrant-labour-says-keir-starmer

[79] Daily Telegraph, 26 November 2022.

[80] https://www.telegraph.co.uk/news/2022/09/25/when-will-tories-realise-mass-migration-making-us-poor/

government automation report found "critical elements of the industry have a high dependency on seasonal migrant labour to harvest crops."

Technology is supposed to increase economic output per hour worked, but our addiction to low-skilled migrant labour means we are behind other countries, and in some sectors we are going backwards. In the 15 years to 2018, for example, the number of automated car washes in Britain fell by half, while manual car washes – performed by poor migrant workers increased by 80 per cent.

With a steady supply of cheap foreign workers, there is little incentive to get our own people skilled and reskilled. The Treasury limits the number of medics we train, causing a deliberate undersupply and leading to the import of foreign doctors from poor countries. According to one study, in a single year England recorded 745,000 undergraduate and postgraduate degrees, while only 4,900 learners in colleges achieved post-secondary technical qualifications. There were 81 undergraduates for every person getting a technical qualification.

There are other costs too. English secondary schools need to find an extra 213,000 places by 2026 compared to a 2020 baseline. Around half of all rough sleepers are migrants from Europe. And the supply-side problems the Growth Plan[81] identifies are made worse by mass immigration. It drives around half of all new housing demand, and pushes house prices up. It creates pressure with social housing, contributing to shortages, and with private rental accommodation, contributing to increases in rents.

So why is the government so keen to increase immigration even further? In part, because libertarians see borders as impediments to free market economics, and countries not as communities but platforms upon which anybody should be free to work and trade.

But there is another reason too. The Treasury has always loved immigration. It reduces debt as a percentage of GDP without the hard yards of fiscal consolidation, reform and improvements in productivity. Set a growth target, it can simply grow the economy by growing the population through immigration. Never mind that it does nothing for GDP per capita, and causes no end of longer term social, cultural and economic problems.

Truss and Kwarteng insist they are overturning Treasury orthodoxy. But in this case, they are turbocharging it. Mass immigration has already made our economic problems worse: we cannot expect a cause of our illness to be its cure.

[81] The Truss government's Growth Plan was announced on 23 September 2022; https://www.gov.uk/government/publications/the-growth-plan-2022-documents

Sarah O'Connor (2022)[82] points out that:

> *Since January 2021, the UK's immigration policy has had two quite different strands. It is now fairly welcoming for people coming to do jobs above a certain skill and salary threshold, but for the most part it does not allow employers to hire people from abroad to do low-paid jobs. This was a deliberate decision to try to wean the British economy off lower-paid migrant labour, which the government argued was bad for local workers and disincentivised employers from investing in technology and training.*
>
> *…The question of whether Britain should become more open to low-paid migrant workers is trickier. It's clear that a number of sectors that had relied on EU workers under freedom of movement are now struggling with labour shortages, from hospitality to food and drink manufacturing. In a sense, that was the point of the government's policy — to put those employers under pressure to do something differently. It's also hard to disentangle the effect of Brexit from other factors such as the pandemic, which has caused labour shortages in countries all around the world.*
>
> *I think it's clear that in some occupations, local workers have benefitted from the end of freedom of movement. Many HGV drivers, for example, have seen pay rises in the range of 10 to 20 per cent since they found themselves in short supply, unions say. Brexit wasn't the only cause of the shortage, but for many years migration from the EU helped employers to limp on with an employment model based on relatively low pay for antisocial hours and a lot of responsibility.*
>
> *That said, there are plenty of other sectors that have struggled to raise wages even though they can't find enough staff. A study by the Institute for Fiscal Studies found that vacancies for lower-paid jobs rose a lot between 2019 and 2021, but there was no correlation between vacancy growth and wage growth. Chris Forde, an academic who has been studying employer responses to Brexit, says there is also little sign yet of companies investing in automation as an alternative: "Employers we've spoken to have spoken about the quite profound challenges associated with automation — yes some processes can be automated . . . [but] they're really expensive and they're long-term investments."*
>
> *The lesson from this experience is that cutting off immigration isn't the best tool with which to tackle problems such as low pay, poor working conditions or weak investment*

[82] Sarah O'Connor (2022) Immigration policy will not cure Britain's labour market ills, Financial Times, 26 October; https://www.ft.com/content/77b5718f-c4be-4e9f-a760-abe0fb8d9fce

— especially when government action or inaction in other policy areas (such as dreadful enforcement of employment law) is pulling in the opposite direction.

But issuing a spree of visas for people in low-paid sectors isn't risk-free either. Visas that tie workers to their employer and potentially expose them to illegal recruitment fees in their home country could be a recipe for a new and exploited group of workers in Britain's economy. Nor would it change the country's underlying problems with lax labour market rules and under-investment in technology and skills.

Immigration wasn't the cause of all Britain's problems. But it won't be an easy solution to them either.

However, there are still arguments being made to increase unskilled labour. A recent example is Lord Simon Wolfson, CEO of fashion chain Next, who was struggling to recruit British workers at his Dearne Valley warehouse near Rotherham, where the shift starts at 5am and hourly rate is £9.80, 30p above the minimum wage. This is despite the fact that 16 per cent of Rotherham's working-age population are on out-of-work benefits (20 per cent across the whole country, or 5.3 million people in total). Wolfson says: 'We have got people queuing up to come to this country to pick crops that are rotting in fields, to work in warehouses that otherwise wouldn't be operable. And we're not letting them in!'.[83] Despite these recruitment problems, Next had one of its most profitable years in 2022.[84]

Wolfson's view has some support. For example, Kate Andrews (2022)[85] argues that 'the restrictions in our system are not just withholding opportunities from migrants – they are making UK residents and native Britons poorer, too. Government so often thinks it can do so more than it can, especially when it comes to directing the economy. That's why so many of its schemes over the years to upskill workers or increase apprenticeships have failed spectacularly. On immigration, the points-based system … assumes that the state knows better than business what jobs are needed in the economy. It allows for fast-track visas for hundreds of jobs on the shortage occupations list – an acknowledgement from government that this kind of migration is needed to keep the economy afloat. … Still these jobs aren't getting filled. Part of the problem is that up to one million migrants are estimated to have left

[83] Fraser Nelson (2022) With millions on benefits, we don't need mass migration to boost GDP, Daily Telegraph, 10 November**;** https://www.telegraph.co.uk/news/2022/11/10/millions-benefits-dont-need-mass-migration-boost-gdp

[84] https://www.reuters.com/business/retail-consumer/britains-next-expects-lower-profit-2023-24-2023-01-05/

[85] Kate Andrews (2022) Lord Wolfson is right. Britain needs low-skilled foreign workers, Daily Telegraph, 11 November; https://www.telegraph.co.uk/business/2022/11/11/lord-wolfson-right-britain-needs-low-skilled-foreign-workers

the UK during the pandemic with many unable to return under the new rules. It's a mass-emigration event the new policies didn't plan for, and more evidence that governments simply cannot predict such trends. And in their absence British workers are not taking up these roles, for reasons that go far past salary complaints. Britain lost £60m worth of fresh produce this summer which rotted away in the fields because of the undersupply of workers to harvest the crops. Enticement simply did not work. Farmers were reported this summer to be offering up to 60pc more an hour for people to pick, pack, and transport their crops – between £20 - £30 per hour depending on the day – and yet still jobs couldn't be filled. … Meanwhile there are people abroad knocking down the door to clinch these opportunities and make the most of them'. Figure 25 shows occupations reliant on foreign workers.

So there are widely differing views on the need for and consequences of immigration, whether it be skilled, unskilled, short-term or long-term. In terms of Equation (1), immigration affects all three components determining real GDP growth. It has a positive effect on the size of the working age population. It could have a positive or negative effect on average labour force productivity and average labour force utilisation, depending on the relative skill levels of the migrant workers and the response of domestic workers.

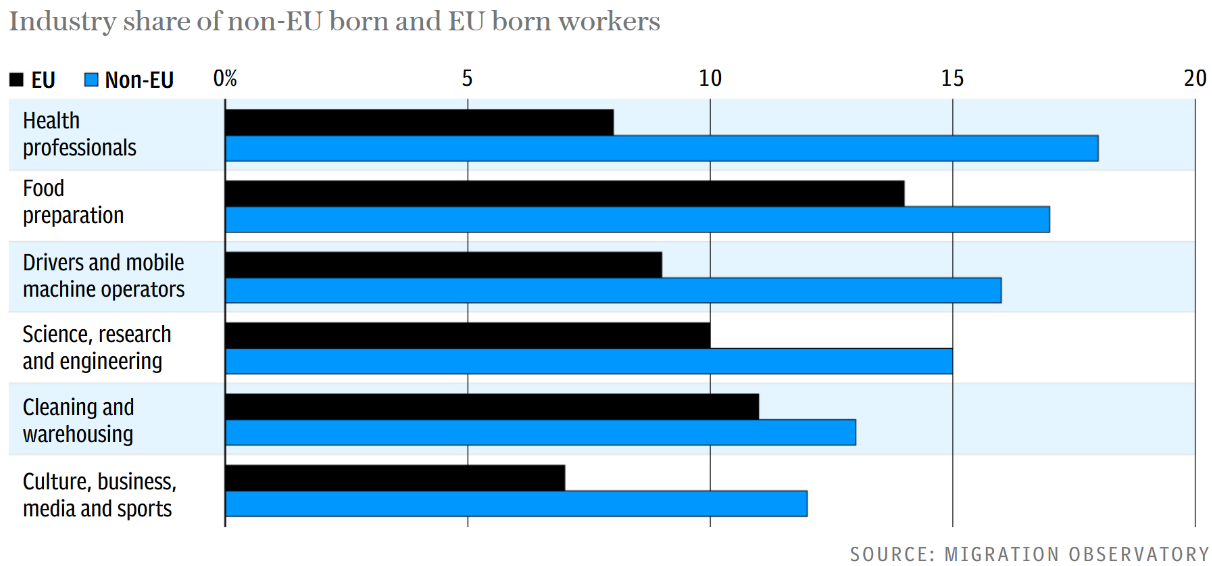

Figure 25: Occupations reliant on foreign workers
Source: https://www.telegraph.co.uk/business/2022/11/11/lord-wolfson-right-britain-needs-low-skilled-foreign-workers

2.5 Government – its contribution to the UK's poor productivity record

We consider three key factors that the government controls and which influence productivity: the national infrastructure, regulation and taxation.

2.5.1 National infrastructure

The UK's national infrastructure comprises those facilities, systems, sites, information, people, networks and processes, necessary for a country to function and upon which daily life depends. There are 13 national infrastructure sectors: Chemicals, Civil Nuclear, Communications, Defence, Emergency Services, Energy, Finance, Food, Government, Health, Space, Transport and Water. Several sectors have defined 'sub-sectors'; Emergency Services for example can be split into Police, Ambulance, Fire Services and Coast Guard.

Some parts of the national infrastructure sector are classified as 'critical': 'Those critical elements of infrastructure (namely assets, facilities, systems, networks or processes and the essential workers that operate and facilitate them), the loss or compromise of which could result in: (1) Major detrimental impact on the availability, integrity or delivery of essential services – including those services whose integrity, if compromised, could result in significant loss of life or casualties – taking into account significant economic or social impacts; and/or (2) Significant impact on national security, national defence, or the functioning of the state'. Responsibility for the protection of the critical national infrastructure (CNI) IT networks, data and systems from cyber attack lies with the UK's new National Cyber Security Centre (NCSC).[86] The National Security and Investment Act 2021 was introduced to deal with national security risks arising from the acquisition of control over certain types of entities and assets, particularly by investors linked to foreign governments.[87]

The persistent underinvestment in the UK's national infrastructure over many years has resulted in significant degradation. We consider five specific examples – a lack of public investment, shortages of front-line medical staff, water shortages, high energy costs and food security – that reflect three features that have plagued UK economic policy for decades: short-termism, short-sightedness and complacency. Government policy has also been reactive rather than proactive and anticipatory. This has led to policy uncertainty with frequent changes of policy, e.g., sudden cuts in planned investment spending.

In terms of public investment, Mitha (2019) argues that there has been a significant underinvestment as well as a significant misdirection of resources:

> *The 2010 Coalition government could have implemented countervailing increases in public investment in the wake of the slump in private sector investment. Instead, it chose to cut public capital investment from 3.4% to 1.7% of GDP between 2009 and 2014. It was politically easier for it to cut capital rather than current spending as part of its austerity measures. In contrast, countries such as Switzerland, Sweden and Denmark maintained their capital public investment at 4% of GDP throughout the recession that followed the financial crisis. They continue to enjoy the highest per capita incomes in Europe. Some economists have argued that the government should use debt finance to increase public capital investment. 'Put bluntly, [increasing] public*

[86] https://www.cpni.gov.uk/critical-national-infrastructure-0
[87] https://www.legislation.gov.uk/ukpga/2021/25/contents/enacted

debt may have no fiscal cost' (David Blanchflower, former member of the Bank of England's Monetary Policy Committee, 2019).

Public investment projects have a 'multiplier' effect greater than one: they pay for themselves. An increase of say, 0.5% of GDP in public investment would lift output by 0.6%. Borrowing to fund public capital investment is 'good debt'. The Treasury's National Infrastructure and Construction Pipeline lists some 700 projects ranging from social housing to smart motorways. They would require public capital expenditure of £600bn over the next ten years. But the government is giving scant priority to projects that would enhance productivity growth; for example, the urgent need to extend broadband coverage throughout the country and to improve its speed. The UK ranks 34th in the world broadband speed league table. This is a pitiful rank for a country that has the fifth largest economy in the world.

The government has instead chosen to pour funding into political vanity projects such as HS2. It has also allowed cash-strapped local authorities to borrow vast sums from the Treasury's Public Works Loan Board (PWLB) to purchase shopping malls and other commercial properties in an attempt to keep open shopping centres in communities that have been ravaged by the growth of e-commerce. The expenditure has bailed out commercial landlords, but it has not added to Britain's productivity and future growth. Local authorities may come to regret investing so heavily in over-priced commercial property. They were able to do so because the PWLB applies less due diligence than commercial banks, and pays little regard to loan-to-value discipline of capping borrowings to a given proportion of the purchase price.

Unless Britain's productivity snaps out of the doldrums and picks up, we will need to accept that we are in a new paradigm of lower productivity growth. Namely, there is a permanent impairment to the economy's productive capacity to grow by at least 2% a year. Optimists argue that Britain is simply suffering from a bad case of a global weakness. And that once the dampening effect of Brexit on uncertainty and business investment is lifted, productivity growth will return to its former trend. Few economists share this outlook.

In terms of the National Health Service, there has been a shortage of frontline doctor and nursing staff for years, but only now is the government considering increasing training for homegrown doctors and nurses. NHS England has more than 133,000 vacancies and has been spending £3bn a year on agency staff, with an agency nurse costing £2,500 per shift and an agency doctor £5,200. The NHS has also become 'over-reliant' on foreign staff, according to Amanda Pritchard, chief executive of NHS England. Around half of new doctors, nurses and midwives registered in the UK received their training abroad. Yet there are only 7,500 medical school places in the UK each year which are heavily oversubscribed and only 16% of applicants get a training place for medicine or dentistry. Pritchard said the NHS 'would want to be very ambitious' in increasing the number of homegrown medical staff. Jeremy Hunt, the Chancellor, who had previously been the UK's longest serving Health Secretary, is now calling for a big expansion in medical training.[88] This illustrates precisely the problem when government policy is reactive rather than proactive and anticipatory. Medical training in the UK should have been expanded years ago and then taxpayers would not now be paying an agency doctor £5,200 per shift.

In terms of water shortages, we constantly face annual hosepipe bans and requests to reduce ‘unnecessary consumption’ by taking showers not baths. Yet 3 billion litres of water leak from our Victorian water pipelines daily – enough to supply 20 million people – and there are frequent releases of raw sewage into rivers and the sea. The problem is that there has been insufficient investment in the national water and sewage infrastructure to ensure it is able to capture, store and distribute the UK's huge amount of rain. To illustrate, the last major public water supply reservoir to be built in the UK was Carsington in 1991,[89] yet the UK population has increased by 18% since then (from 57.4 million to 67.5 million).[90]

Thames Water, the UK’s largest supplier of water, has stated that ‘As our climate changes, we’ll likely see more severe and frequent droughts. In severe droughts, water restrictions could see us rationing water for everyday activities or turning off supplies for certain periods during the day. Restrictions like this could last for several weeks’. Sarah Bentley, the CEO of Thames Water, has said: ‘If we are to ensure a secure and sustainable water supply for future generations, we need to act now, to protect our communities and our environment against the impact of drought and water shortages. Even after reducing leakage and water usage across our region, we will still need an extra one billion litres of water every day for customers by 2075 to accommodate climate change and population growth. Planning and constructing new resources takes time, which is why we must start now, otherwise we will have more restrictions and shortages in the future’.[91] The chairman of the National Infrastructure Commission has also said there is an increasing probability of having to queue for water from standpipes on the streets. London has just 24 hours of water storage, compared with 36-48 hours in some overseas capital cities. Some have argued that the water situation in the UK is so serious that it should be treated as a national security threat.[92]

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[88] Kat Lay, Rachel Sylvester, and Chris Smyth (2023) NHS chief Amanda Pritchard: UK must train many more doctors and nurses - Health service boss demands more places in medical schools as she warns that hospitals are ‘over-reliant’ on foreign staff, The Times, 14 January; https://www.thetimes.co.uk/article/nhs-chief-amanda-pritchard-uk-must-train-many-more-doctors-and-nurses-tknmm7lp3

[89] https://www.ciwem.org/assets/pdf/Policy/Policy%20Position%20Statement/New-public-water-supply-reservoirs.pdf

[90] https://www.macrotrends.net/countries/GBR/united-kingdom/population

[91] Quoted in Oliver Gill and Rachel Millard (2022) Water supplies will be turned off ‘for weeks’ amid summer heatwaves, Daily Telegraph, 17 December; https://www.telegraph.co.uk/business/2022/12/17/water-supplies-will-turned-weeks-amid-summer-heatwaves

[92] Ben Marlow (2022) Britain’s water crisis should be treated as a national security threat, Daily Telegraph, 9 August; https://www.telegraph.co.uk/business/2022/08/09/britains-water-crisis-should-treated-national-security-threat

In terms of energy costs, the Joshua Nevett (2022) argues that high energy bills in the UK were decades in the making:[93]

Gas dependency

For decades now, UK governments have bet on gas to keep the lights on and our homes warm [see Figure 26].

Our appetite grew in the 1990s, when a fossil-fuel frenzy in the North Sea set off what was dubbed the "dash for gas". As that dash slowed to a stroll, the UK became a net importer of gas in 2004 and reliant on supplies from friendly countries such as Norway.

Adam Bell, who was head of government energy strategy until last year, said there was an assumption that global supplies of gas "were always going to be deep".

Mr Bell said the government "wasn't thinking of potential downside scenarios", leaving the UK vulnerable to this year's stratospheric rise in gas prices.

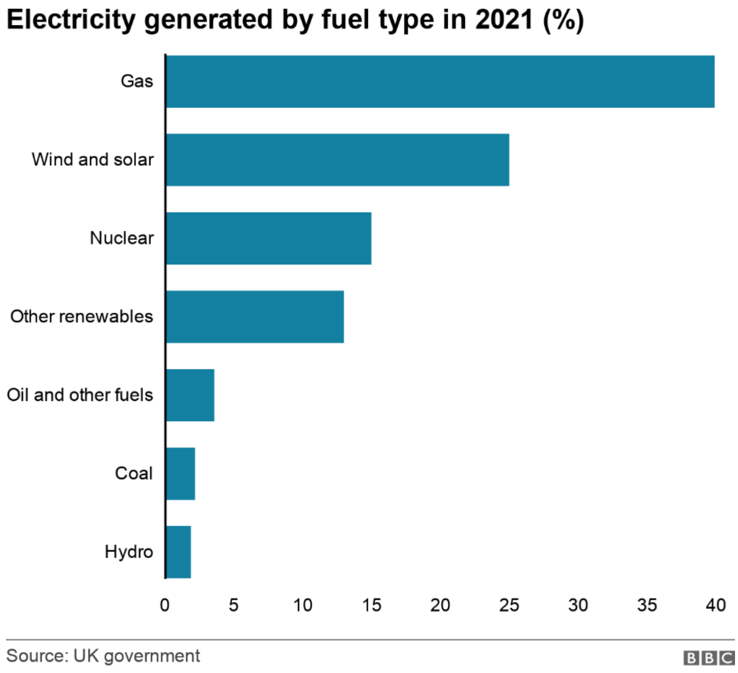

Figure 26: Reliance on gas to generate electricity in 2021

[93]Joshua Nevett (2022) Why high UK energy bills were decades in the making, BBC, 7 November; https://www.bbc.co.uk/news/uk-politics-63477214

...In 2009, Ofgem produced an unsettling report,[94] *which flagged dependency on gas imports as a key risk to energy security* [see Figure 27 which shows the UK's low level of storage capacity compared with other parts of Europe].

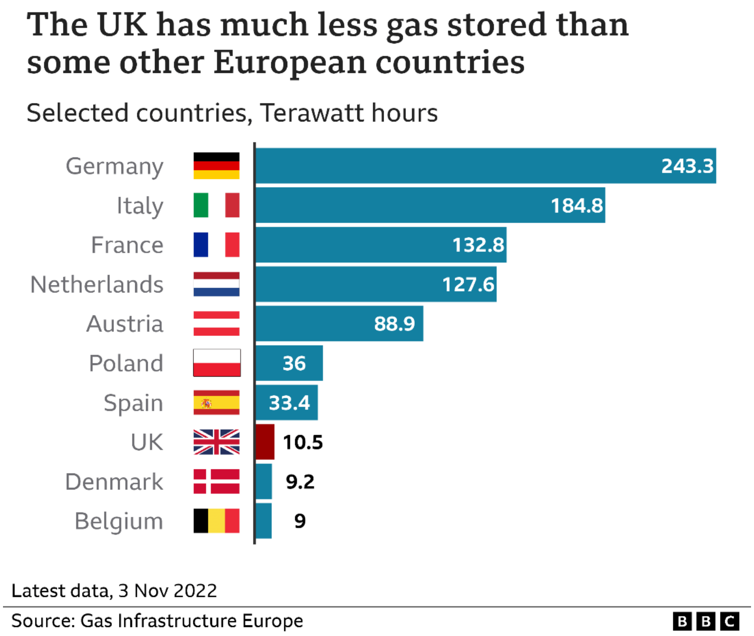

Figure 27: Gas storage in the UK relative to other European countries

The founder of Stag Energy, George Grant, had one idea to mitigate this risk. It involved drilling into salt caves beneath the East Irish Sea Basin to build gas storage for a rainy day.

Ministers were initially enthusiastic about the Gateway Project[95] *and planning permission was granted in 2008. Then the financial crisis hit, choking off investment.*

...Without state support, his project was sunk. Then the government went even further, ruling out any public subsidies for gas storage. It meant no state handouts for Rough, the UK's largest gas storage facility, which was unable to afford engineering upgrades and was mothballed in 2017.

The no-subsidy policy was "absolutely" short-sighted, Mr Grant said, particularly because the government has since asked him about the possibility of reviving Gateway and pushed for Rough to reopen.

Had we invested in gas storage sooner, "we would have been much more protected this winter", said Charles Hendry, a former Conservative energy minister.

[94] https://www.ofgem.gov.uk/publications/project-discovery-energy-market-scenarios
[95] https://www.stagenergy.com/gateway/

The choice not to had consequences for the UK's energy security, as it did in the nuclear industry.

Nuclear naysayers

In the 1990s, nuclear power generated about 25% of the UK's electricity. Since then, the industry has been in decline, with almost half of the UK's current nuclear capacity due to be retired by 2025.

Notoriously expensive and complex to build, nuclear projects have been kicked around like radioactive footballs by generations of politicians.

"I will diagnose the problem," former Prime Minister Boris Johnson said, announcing state funding for a new nuclear power station earlier this year. "It's called myopia."

He said the culprits were Labour and the Liberal Democrats, whose former leader Nick Clegg snubbed nuclear in "a famous video" from 2010.[96]

Twelve years on, some would argue that the UK could do with a new nuclear plant or two.

…The [previous] lack of public subsidy "made it very difficult to secure new nuclear plants", said Mr Hendry, who also served in the coalition government. The turn away from nuclear following the Fukushima disaster of 2011 can't have helped either, nor decisions made by previous governments.

…The buck doesn't just stop with Labour though. The privatisation of the energy market – started by Conservative Prime Minister Margaret Thatcher in the 1980s – has also been blamed for stalling nuclear power.

In 1996, eight nuclear plants were privatised as British Energy by John Major's government. Faced with big start-up costs and uncertain profits, the private sector on its own has not completed any new nuclear power stations since.

This "big structural choice" partly explains "why power prices in particular are so expensive today", said Adam Bell, who is now head of policy at management consultancy Stonehaven.

'Cut the green crap'

Another explanation with more weight, he said, hinges on choices made by Mr Cameron's government.

"The first and most important one was 'getting rid of the green crap'," he said.

[96] https://www.youtube.com/watch?v=yO82IZEk_gA&t=375s

The crude phrase, splashed on the front page of the Sun newspaper, was the "PM's solution to soaring energy prices" in 2013. Back then, Labour was campaigning hard on the cost of living, promising to cap energy bills if the party won the 2015 general election.

In a surprise reshuffle, Mr Hendry was replaced as energy minister by John Hayes, who vowed to put "coal back into the coalition".

"He wanted to see a huge growth in coal," Mr Hendry said. "He did really throw the low-carbon agenda into reverse."

Over the next two years, subsidies for renewables were cut, planning rules for onshore wind were tightened, and a zero-carbon homes policy was scrapped.

Had those green policies remained, estimated annual energy bills would have been £9.5bn lower under the October price cap, according to research by energy analysts Carbon Brief.

…For too long, politicians "haven't wanted to do the boring stuff", said Emma Pinchbeck, chief executive of Energy UK, a trade association.

Instead, they've focused on the "big infrastructure projects, which are sexy", she said.

"For the last decade in this country, every single year we've been missing out on installing energy efficient measures and clean heating, which would have reduced our exposure to these prices.

"And those decisions were made because of pretty short-term politics."

In terms of food security, Michael Portillo (2022)[97] interviewed two farmers in December 2022 on potential food shortages. This was in response to the National Farmers Union (NFU) beginning to question whether the UK was sleepwalking into a food crisis. One farmer said that Department of Environment, Food and Rural Affairs (DEFRA) was more concerned with the environment and rewilding than producing food – its target is to rewild land equivalent to the size of Lancashire by 2040. He said farmers were facing huge cost increases. An example of rising costs was fertilizer – much of which had previously been imported from Russia and Ukraine. As a result of the war in Ukraine, fertilizer costs have risen by 300%. Yet there are two fertilizer factories in the UK which are mothballed and the government has done nothing about this to secure our fertilizer and left us reliant on imports.

When DEFRA is warned that food production in the UK will fall because of rising costs and this will lead to more imports of food, it is at best complacent: 'The UK has a large and highly resilient food supply chain…[and DEFRA] is in regular contact with food and farming industries

[97] Sunday with Michael Portillo, GB News, 11 December 2022.

to ensure they are well prepared for a range of scenarios, and we continue to take necessary steps to ensure people across the country have the food they need'.

The second farmer interviewed said this is not what it feels like from the NFU's point of view. While in regular contact with DEFRA, there has been massive churn within DEFRA recently of both civil servants and ministers. He warned that production would not recover quickly and wanted the government to declare that there were 'exceptional market conditions' which would allow it to work with the farming industry to restore confidence and help the industry recover so it could continue to put British produce on consumers' plates. In the meantime, the horticultural and poultry sectors are not restocking because of a lack of confidence. Part of this is due to the shortage of seasonal workers.[98]

Olivia Utley, GB News political reporter, drew parallels with the energy crisis, commented that successive governments have not put a food strategy plan in place and have been relying too heavily on foreign imports. She said this is very similar to the energy crisis which is 'beginning to spiral out of control so it is not hard to imagine that a food crisis could be a little bit further down the line'.

In 2015, the government established the National Infrastructure Commission (NIC) to advise the government on how to rectify the situation and close the investment funding gap. It published the first National Infrastructure Assessment (NIA) in 2018, outlining the most important infrastructure needs and made seven recommendations:[99]

- Nationwide full fibre broadband by 2033
- Half of the UK's power provided by renewables by 2030
- Three-quarters of plastic packaging recycled by 2030
- Allocating £43 billion of stable, long-term transport funding for regional cities
- Preparing for 100% electric vehicle sales by 2030
- Ensuring resilience to extreme drought
- A national standard of flood resilience for all communities by 2050.

To illustrate, in 2020, the NIC estimated that by 2050 England will need an additional 3.4 billion litres of water per day, unless action is taken. The NIC launched a National Framework for Water Resources with the aims of reducing demand, halving leakage rates, developing new supplies, moving water to where it is needed and reduce the need for drought measures that can harm the environment.[100]

[98] Luke Hanrahan (2020) It's just not happening': Crops go to waste as UK farmers struggle to find workers, Euronews, 10 June: https://www.euronews.com/2022/06/10/it-s-just-not-happening-crops-go-to-waste-as-uk-farmers-struggle-to-find-workers
Grace Duncan (2022) UK farms missing up to 75% of seasonal workers needed for harvest, The Grocer, 19 May; https://www.thegrocer.co.uk/fruit-and-veg/uk-farms-missing-up-to-75-of-seasonal-workers-needed-for-harvest/667635.article
[99] https://nic.org.uk/studies-reports/national-infrastructure-assessment/
[100] https://www.gov.uk/government/news/preserving-our-water-resources-in-a-changing-climate-industry-and-government-tackle-threat-to-future-water-supplies

There is a clear link between national infrastructure and productivity, as the 2011 National Infrastructure Plan makes clear: 'Infrastructure networks form the backbone of a modern economy and are a major determinant of growth and productivity'.[101]

However, the 2011 Plan identifies reasons for the UK's underinvestment in its infrastructure: 'historically the UK's approach to the development of these networks has been fragmented and reactive...To remain globally competitive, the UK needs to address these failures and develop an infrastructure capable of supporting a dynamic, modern economy'.[102]

There is also poor value for money as the 2010 Plan makes clear: 'The UK is one of the most expensive countries in which to build infrastructure. For example, civil engineering works cost some 60% more than in Germany...If we were only to reduce public sector construction costs by 15% that would result in annual savings, or additional investment, of £1 billion'.[103]

It is important to distinguish between infrastructure that is binary (the service either works or does not, as with say water and electricity) and infrastructure where connectivity is variable (such as transport and broadband/digital).

Transport infrastructure, for example, is linked to land and property development, the land-use planning system, wider economic development strategies and, hence, key economic outcomes such as better productivity, as Docherty and Waite (2020) point out.[104] A 2006 report by Sir Rod Eddington[105] found that there was an increasing gap in standards of connectivity between most UK cities and those in Europe. Figure 28 shows the benefits of a well-connected transport system, according to STAG (Scottish Transport Appraisal Guidance).[106]

Yet a 2012 report by Sir Roy McNulty estimated that railway infrastructure costs 30–40% more in the UK than incomparable countries.[107] Shaw and Docherty (2013)[108] provided the following explanations: extreme organisational fragmentation of the civil engineering and transport sectors, the resulting legal and contractual complexity, and a political culture that repeatedly switches infrastructure spending on and off, leading to a procurement culture that treats infrastructure construction as being a high financial risk.

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[101] HM Treasury (2011, p.5) 'National Infrastructure Plan 2011'. https://www.gov.uk/government/publications/national-infrastructure-plan-november-2011
[102] HM Treasury (2011, p.5) 'National Infrastructure Plan 2011'. https://www.gov.uk/government/publications/national-infrastructure-plan-november-2011
[103] HM Treasury (2010, p.4) 'National Infrastructure Plan 2010'. https://www.gov.uk/government/publications/national-infrastructure-plan-october-2010
[104] Iain Docherty and David Waite (2020) Infrastructure and productivity, Chapter 13 in Philip McCann and Tim Vorley (Eds) Productivity Perspectives, Elgar Online; https://doi.org/10.4337/9781788978804
[105] Eddington, R. (2006) Transport's Role in Sustaining UK's Productivity and Competitiveness: The Case for Action, London: Department for Transport.
[106] https://www.transport.gov.scot/media/41507/j9760.pdf

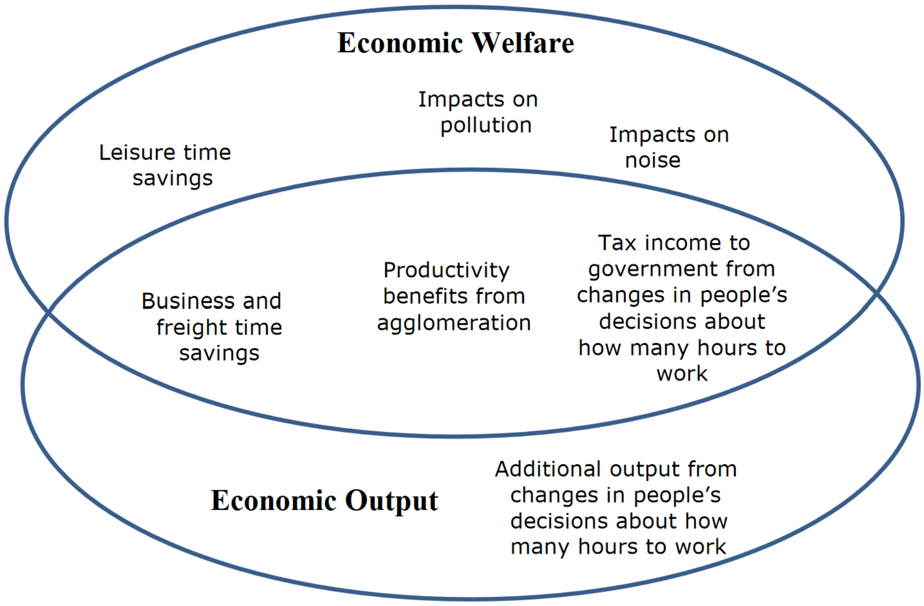

Figure 28: The welfare and economic benefits of a well-connected transport system
Source: https://www.transport.gov.scot/media/41523/j358676-09.pdf, p. 31.

It is quite clear that persistent underinvestment in our national infrastructure over many decades has significantly increased health, water, energy and food insecurity – with potentially devastating consequences for not only our productivity but also for our quality of living. A key reason for this is policy uncertainty and the risk of spending being cut whenever the government gets into financial difficulties.

2.5.2 Regulation

Most academic studies find a negative relationship between regulation and productivity.

For example, Davies (2014)[109] finds that less regulated industries outperform more heavily regulated industries. Over the data period studied (1997 to 2010), the least regulated industries in the US experienced 63 percent growth in output per person, 64 percent growth in output per hour, and a 4 percent decline in unit labour costs. By contrast, the most regulated industries experienced only 33 percent growth in output per person, 34 percent growth in output per hour, and a 20 percent increase in unit labour costs.

[109] Antony Davies (2014) Regulation and Productivity, Mercatus Center Research Paper, George Mason University, 8 May; https://www.mercatus.org/publications/regulation/regulation-and-productivity

Similarly, Égert (2017),[110] looking at OECD countries, finds anti-competitive product market regulations – those that benefit incumbent firms over new entrants – are associated with lower multi-factor productivity (MFP) levels (which includes labour and capital) and that higher innovation intensity and greater openness are associated with higher MFP. He also finds that the impact of product market regulations on MFP may depend on the level of labour market regulations. Better institutions, a more business friendly environment and lower barriers to trade and investment amplify the positive impact of R&D spending on MFP. Finally, he shows that cross-country MFP variations can be explained to a considerable extent by cross-country variation in labour market regulations, barriers to trade and investment and institutions (including corruption).

Crafts (2006)[111] also finds that regulations which inhibit entry into product markets have an adverse effect on MFP growth in OECD countries, but points out that the UK is more lightly regulated than France and Germany, and this may have contributed to a reduction in the UK's MFP gap.

Wolf (2020)[112] also argues that the UK is in fact a relatively deregulated economy, using Figure 29 as evidence. He says that:

> *Thatcher did liberalise labour markets, curb trade unions, privatise nationalised industries and slash top tax rates. Her policies…,as well as those of later governments, also strengthened competition in product markets. Overall, today's UK … has a deregulated economy, in which the successful are well rewarded, but those who do less well are penalised. Such Thatcherite aims then are now a reality.*
>
> *What then did Thatcher and those who followed her fail to achieve? They did not liberalise the biggest distortion in the economy, which is land use. They did not transform the skills of the population, which has been made harder by the conditions in which many children grow up. They failed to address defects in corporate governance, which bias spending against investment. They allowed the search for safety in corporate pensions to shift portfolios away from the supply of risk capital to business to ownership of government bonds. This in effect turned the plans into state-backed pay-as-you-go schemes.*

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110 Balázs Égert (2017) Regulation, institutions and productivity: New macroeconomic evidence from OECD countries, OECD Economics Department Working Papers, No. 1393, OECD Publishing, Paris, https://doi.org/10.1787/579ceba4-en.

111 Nicholas Crafts (2006) Regulation and Productivity Performance, Oxford Review of Economic Policy, Volume 22, Issue 2, Summer, Pages 186–202, https://doi.org/10.1093/oxrep/grj012

112 Martin Wolf (2020) The economic consequences of Liz Truss: It is surely a fantasy that further tax cuts and deregulation will transform performance, Financial Times, 20 September; https://www.ft.com/content/a9be9db6-a91e-48e4-8d69-4bbfff7e0f5f

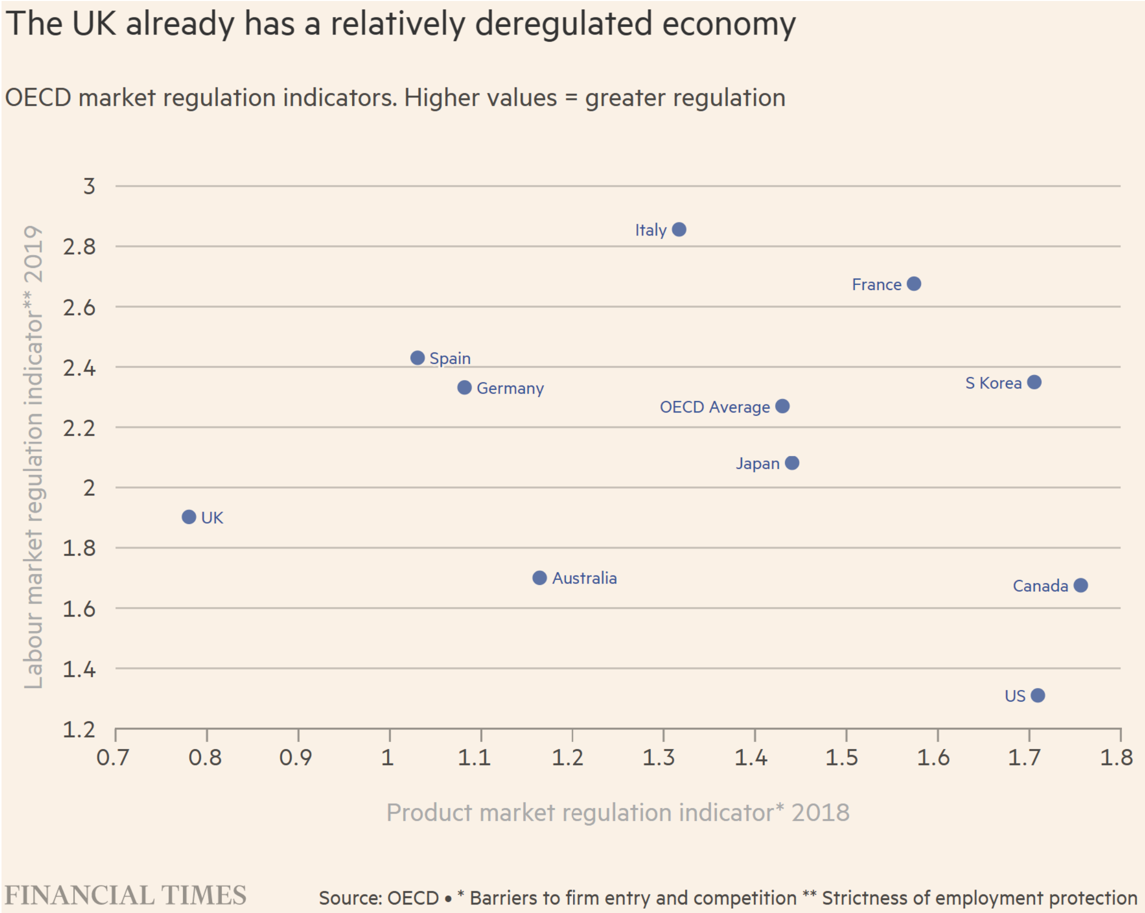

Figure 29: OECD product and labour market regulation indicators
Source: https://www.ft.com/content/a9be9db6-a91e-48e4-8d69-4bbfff7e0f5f

So the issue is whether productivity can be raised by having better regulation – not necessarily less regulation.

2.5.3 Taxation

Mitha (2019) argues that:

> *Taxation affects productivity by distorting the prices and allocation of the factors of production: land, labour and capital. It alters the rate of return expected from entrepreneurship and the incentive to undertake research and development. Corporate taxation influences private investment decisions by altering the net return from investing capital and the incentive to invest. High marginal rates of income tax reduce the incentive to supply labour. Taxation influences decisions by individuals about whether it is advantageous for them to enhance their human capital (their embodied education, training and marketable skills). Progressive taxation reduces the appetite for long-term investment, risk taking and entrepreneurial activity.*

Taxation is but one of a range of factors that influence investment, productivity, and growth. Many of Britain's trading rivals, such as Germany and France, enjoy higher levels of national income, productivity and growth, despite levying considerably higher corporate and personal tax rates. The reduction in corporate taxation and personal tax levels in Britain since 2010 have not led to increased investment and economic growth. They have simply increased share prices and exacerbated wealth inequality. The reduction in the government's own spending on capital investment that accompanied the tax cuts has damaged productivity and growth.

Figure 30 shows a stylised version of the Laffer curve which depicts the link between the tax revenue collected by a government and the tax rate. There is a rate that maximises the economy's growth rate and a much higher rate that maximises tax revenue. In a world of open capital flows, the corporate Laffer Curve rate for maximising tax revenue is around 22%.[113] If the tax rate is above this rate, tax revenue actually falls because the incentive to work is reduced. According to Arthur Laffer, 'lower tax rates have [a positive impact] on work, output, and employment – and thereby the tax base – by providing incentives to increase these activities'. This can lead to lower unemployment and higher incomes, resulting in reduced unemployment benefits. Further, top earners can end up paying a higher proportion of the total tax take. To illustrate:[114]

- In 1979, Chancellor Geoffrey Howe cut the top rate from 83% to 60%. Before the cut, the top 1 percent of UK taxpayers paid only 11% of the total income tax take. By 1988 they were paying 14% of income tax revenue.
- In 1988, Nigel Lawson cut top rates from 60% to 40% and receipts rose further. By 1997 the top 1% of earners paid 21% of the total tax bill.
- In April 2013, Chancellor Osbourne cut the additional rate of income from 50% to 45%. In the subsequent year £8bn more revenue was raised. The top 1% of taxpayers now pay 30% of income tax.

[113] Ambrose Evans-Pritchard (2022) The Autumn Statement does not offer a way out of Britain's low-growth trap, Daily Telegraph, 17 November; https://www.telegraph.co.uk/business/2022/11/17/hunt-has-spared-us-austerity-doom-loop-investment-revolution0/

[114] CIBUK Clear Water News Bulletin, 12 October 2022.

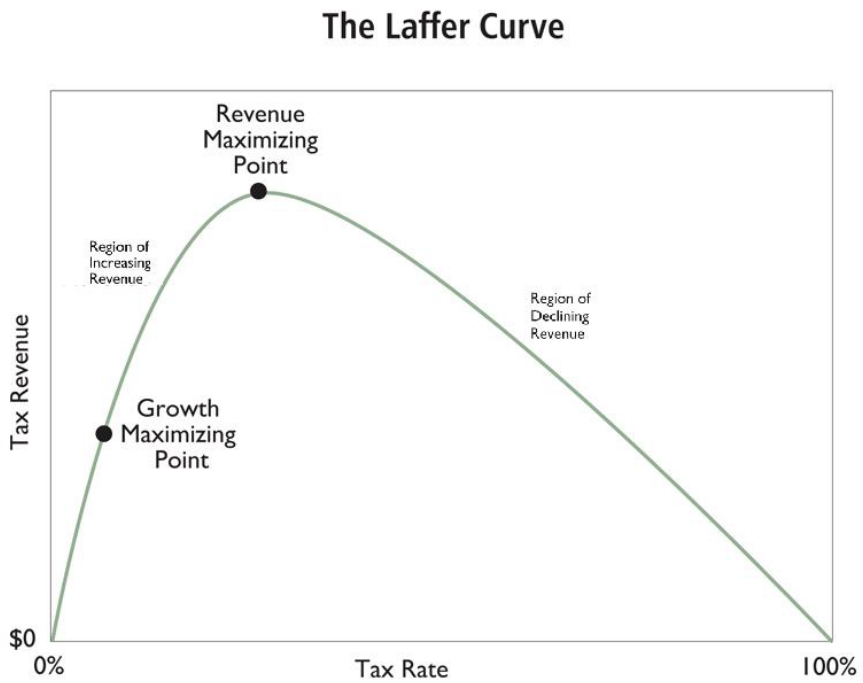

Figure 30: The Laffer curve

Source: Dan Mitchell (2012) The Laffer Curve Shows that Tax Increases Are a Very Bad Idea – even if They Generate More Tax Revenue; https://danieljmitchell.wordpress.com/2012/04/10/the-laffer-curve-shows-that-tax-increases-are-a-very-bad-idea-even-if-they-generate-more-tax-revenue/

Whalen and Fuss (2021)[115] examine the link between the structure and rates of taxation, on the one hand, and productivity, on the other. The three main taxes are personal income taxes, corporate taxes, and capital taxes. The authors point out that taxes impose economic costs by altering the behaviour of individuals and companies. Personal income taxes reduce after-tax wages which affects the willingness to work, while taxes on companies increase the prices of goods, services, and business inputs, which can distort efficient production decisions. By changing the incentives and resulting behaviour of individuals and companies, taxes can have adverse effects on private sector productivity by reducing savings, investment, the supply of labour, entrepreneurship, and innovation. Some studies show that taxes on capital (i.e., capital gains taxes) can be the most economically damaging in terms of growth. This is because they provide an incentive for investors to retain existing investments to avoid paying taxes when alternative and more productive investments may be available; this is particularly the case in periods of high inflation which create taxable notional not real capital gains. Further, capital gains taxes diminish the reward that entrepreneurs and investors expect to

[115115] Alex Whalen and Jake Fuss (2021) Increasing productivity through tax reform, Fraser Institute; https://www.fraserinstitute.org/sites/default/files/increasing-productivity-through-tax-reform-4day-week-essay.pdf

receive from the sale of businesses whose values have increased over time. By discouraging innovative entrepreneurship, capital gains taxes contribute to slower productivity growth. The least distortionary taxes are consumption and payroll taxes.

Gemmell et al. (2016)[116] find that higher corporate tax rates reduce the speed with which small firms (in 11 European countries) converge to the productivity or technological frontier because they lower the after-tax returns to productivity-enhancing investments. A similar finding is made by Arnold and Schwellnus (2008).[117] They estimate, for a sample of firms across OECD economies, that corporate taxes have a negative effect on productivity at the firm level and this holds across firms of different size and age classes except for small and young firms, which they argue may be attributable to the relatively low profitability of these firms. The negative effect is particularly pronounced for firms that are catching up with the frontier. These findings are reinforced by a study by Romero-Jordán and Sanz-Sanz (2019)[118] which shows that corporate taxes penalise productivity especially for small companies, because of the financial constraints they face (i.e., the amount of financial resources available from internally generated funds), which influence the timing of their investments and the types of assets they invest in. Vartia (2008),[119] using industry-level data from a set of OECD countries, finds that corporate and top personal income taxes have a negative effect on productivity, while tax incentives for research and development have a positive effect on productivity: these effects are stronger in those industries that are inherently more profitable, have more entrepreneurial activity and are more R&D intensive.

According to the Tax Reform Council, when the capital gains tax (CGT) rate was halved in Ireland, tax revenues doubled. When the US rate was cut in 2003 from 20% to 15% CGT revenues increased from $55 billion in 2002 to $110 billion in 2006. In every US case when the rate was cut revenues increased and vice versa, as Figure 31 shows. Some countries, such as Belgium, Holland, New Zealand, Malaysia and Singapore, have no capital gains tax at all. [120]

[116] Norman Gemmell, Richard Kneller, Danny McGowan, Ismael Sanz, and José F. Sanz-Sanze (2016) Corporate Taxation and Productivity Catch-Up: Evidence from European Firms, University of Nottingham Discussion Paper, 20 April; https://nottingham-repository.worktribe.com/index.php/OutputFile/800623

[117] Jens Arnold and Cyrille Schwellnus (2008) Do Corporate Taxes Reduce Productivity and Investment at the Firm Level? Cross-Country Evidence from the Amadeus Datatest, CEPII Discussion Paper 19, September; http://www.cepii.fr/PDF_PUB/wp/2008/wp2008-19.pdf

[118] Desiderio Romero-Jordán and José Félix Sanz-Sanz (2019) The effects of corporate tax on corporate productivity: Impact at the micro-level, Funcas SEFO Vol. 8, No. 4, July; https://www.funcas.es/wp-content/uploads/Migracion/Articulos/FUNCAS_SEFO/044art09.pdf

[119] Laura Vartia (2008) How do Taxes Affect Investment and Productivity?: An Industry-Level Analysis of OECD Countries', OECD Economics Department Working Papers, No. 656, OECD Publishing, Paris, https://doi.org/10.1787/230022721067.

[120] https://twitter.com/CutMyTaxUK/status/1588503256778493952

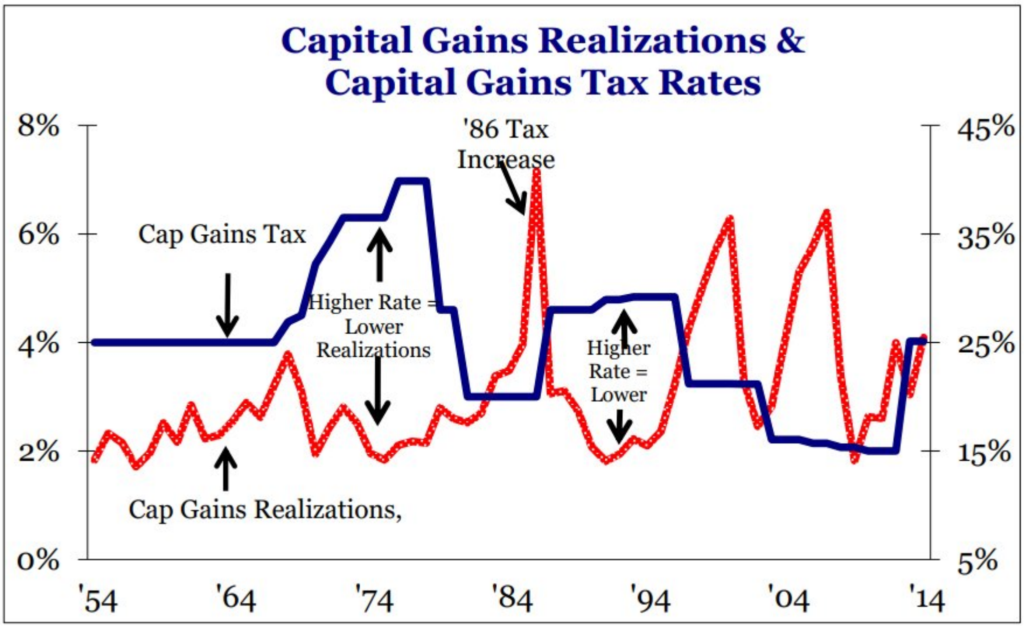

Figure 31: Capital gains realisations and capital gains tax rates in the US, 1954-2014
Source: https://twitter.com/CutMyTaxUK/status/1588503256778493952

An IMF study by Gaspar and Jaramillo (2017) [121] estimates that an appropriately designed tax and regulatory system – one that avoids 'tax incentives that depend on firm size or type of investment, weak tax enforcement, tariffs applied to particular goods, product market regulations that limit market access, [and] preferential loans granted to specific firms' – could raise productivity and lift annual real GDP growth rates by roughly 1 percentage point over 20 years.

Figure 32 shows that following the November 2022 Autumn Statement, the UK will have the highest tax burden since the 1980s – which would not appear to be good for productivity.

Yet Wolf (2020)[122] argues that 'it is surely a fantasy that further tax cuts … will transform performance'. He points to the following figures to support his case: Figure 33 suggests that cuts in the top rate of tax are unrepeatable (the Autumn Statement 2022 actually reduced the 45% rate threshold from £150,000 to £125,000 from April 2023); Figure 34 indicates that there is no obvious correlation between the tax burden and prosperity in high-income countries; while Figure 35 (from the Resolution Foundation) suggests that, despite the above studies, there appears to be little relationship between corporate tax and investment levels across OECD countries.

[121] Vitor Gaspar and Laura Jaramillo (2017) Designed for Growth: Taxation and Productivity, IMF, 13 April; https://www.imf.org/en/Blogs/Articles/2017/04/13/designed-for-growth-taxation-and-productivity
[122] Martin Wolf (2020) The economic consequences of Liz Truss: It is surely a fantasy that further tax cuts and deregulation will transform performance, Financial Times, 20 September; https://www.ft.com/content/a9be9db6-a91e-48e4-8d69-4bbfff7e0f5f

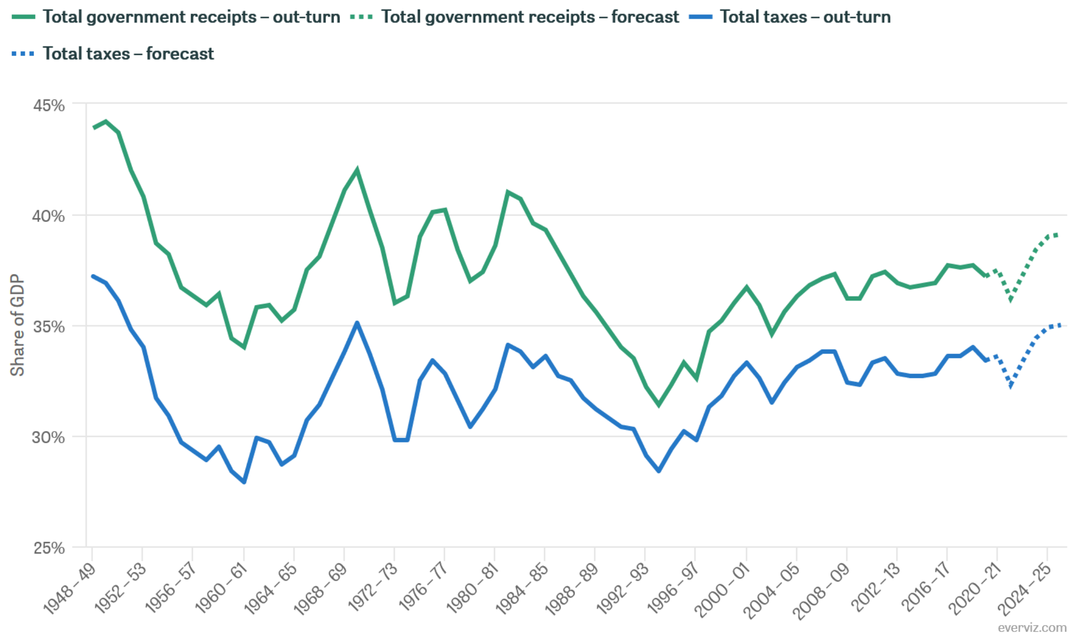

Figure 32: UK's tax revenue: % of GDP from March 1955 to June 2022

Source: https://ifs.org.uk/taxlab/taxlab-key-questions/how-have-government-revenues-changed-over-time

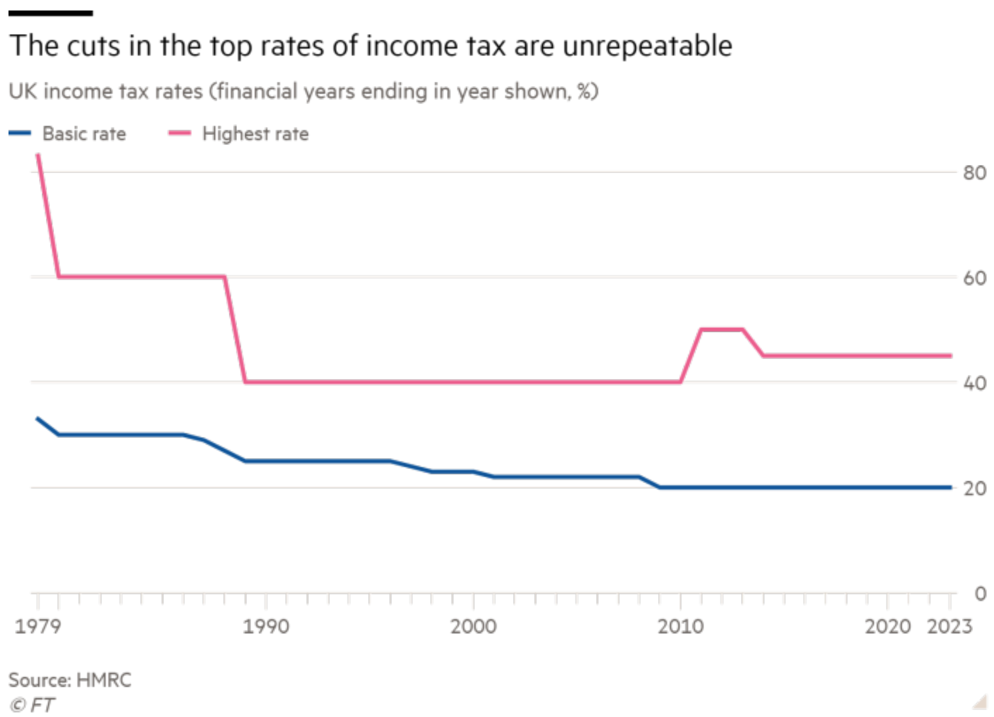

Figure 33: Higher rates of tax in the UK, 1979-2023

Source: https://www.ft.com/content/a9be9db6-a91e-48e4-8d69-4bbfff7e0f5f

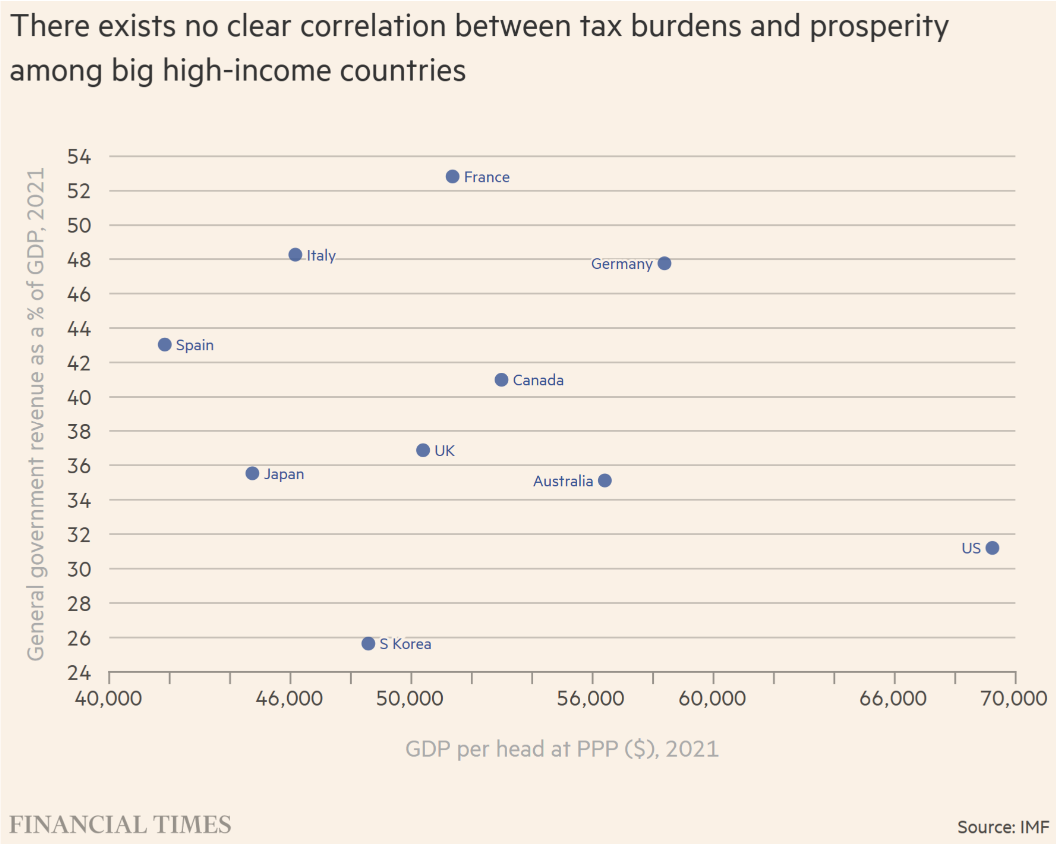

Figure 34: Correlation between tax revenue (as a % of GDP) and per capita GDP in selected countries, 2021

Source: https://www.ft.com/content/a9be9db6-a91e-48e4-8d69-4bbfff7e0f5f

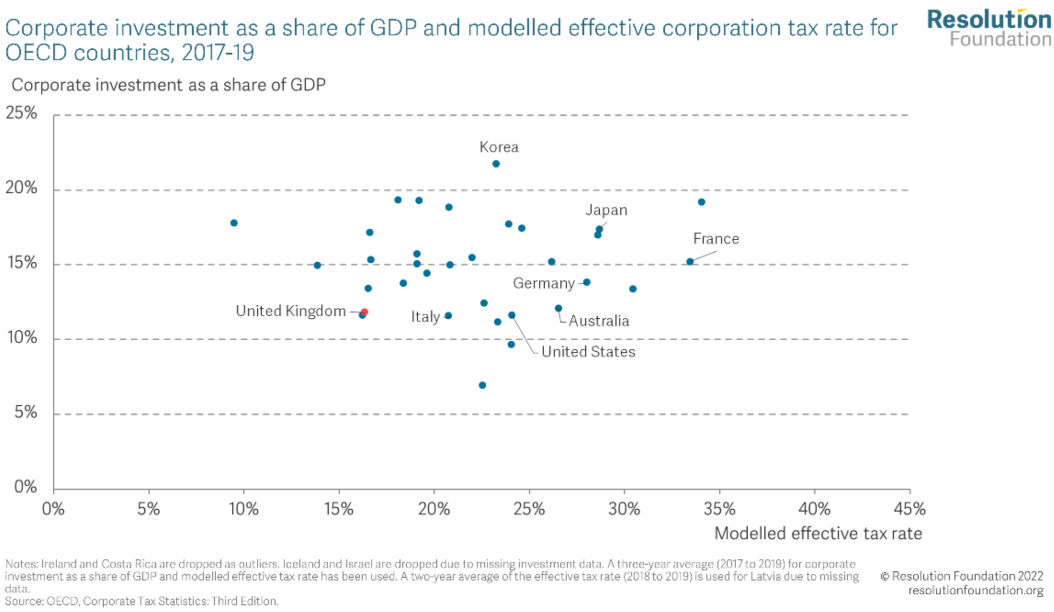

Figure 35: Correlation between the corporate tax rate and corporate investment (as a % of GDP) for OECD countries, 2017-19

Source: Resolution Foundation, 24 September 2022

However, Ben Philips (2022) has the following warning:[123]

> *There are surprisingly few higher rate taxpayers in the UK. In 2021-22 a mere 563,000 people paid the additional 45% rate, that is only 1.7% of all UK taxpayers and about 0.8% of the UK population. Despite making up such a small part of the population, the additional rate taxpayers are expected to pay 36% of all income tax in 2022-23, (£89.2 billion out of £251 billion). The economy relies on the tax contribution of this tiny proportion of the population. If they left the country, we would all have to pay a lot more tax or get used to much lower levels of public services. There is a lot of competition for high earning individuals.*
>
> *Other financial centres have much lower taxes. In the US someone earning $170,000 (£153,000) has a federal income tax rate of 32% while the top US rate of federal income tax is only 37% and only on income over $539,900 (£486,000). In Singapore income taxes are even lower. Someone earning over S$240,000 (£150,000) pays 19.5% income tax while in 2024 Singapore's top tax rate will be 24% on earnings over S$1 million (£624,000), with 19.9% paid on earnings below this level.*
>
> *Attracting more high-earning bankers away from New York and Singapore and back to London is important, not only do the top 1.7% of earners in the UK pay 36% of our income taxes, they cost the government very little. …Lowering taxes and attracting more high earners to Britain might help balance the books and would send a powerful signal that Britain is once again fully open for business.*

2.6 How can productivity be improved?

Having identified the sources of the UK's poor productivity record, we now ask how productivity can be improved. It is clearly possible to improve productivity – as most of our leading competitors have done. In this section, we consider how the productivity of workers and companies can be improved – and what the government needs to do to support the process. We begin by discussing what will not work and what, instead, can work.

2.6.1 What will not work

The reasons for the UK's low productivity are complex, long-standing and poorly understood by most people, so letting workers and companies sort this problem out by themselves – by assuming they are rational economic agents who are able to produce goods and services in

[123] CIBUK Clear Water News Bulletin, 12 October 2022

the most efficient way possible without any government interference – has not worked up until now and will not work in the future.

The government may well understand the problem and have sensible solutions, but a 'top-down' government-led approach in which people are harangued, cajoled, and threatened with losing welfare benefits, for example, has not worked up until now and will not work in the future. Neither will incentives – such as tax breaks for business investment – by themselves lead to an increase in productivity-enhancing investment if there are negative factors operating, e.g., resource constraints – such as shortages of skilled labour – or an uncertain market for a company's products or services, or regulations are too onerous (e.g., GDPR regulations[124]). Neither will the top-down imposition of solutions that do not engage or motivate those intended to benefit from them however sensible those solutions are. To illustrate, the 2021 Skills for Jobs White Paper[125] announced (p.3): 'we intend to prioritise the courses and qualifications that enable people to get great jobs and which will support our economy to compete with the world's best. This White Paper is a blueprint for the future. We will move on from previous underestimations of further and technical education and reinforce its pivotal role as a pathway to a bright future'. This is a perfectly sensible policy, but unless it is accompanied by a strategy for engaging the interest of those who will benefit from it and getting their sign-on, it will remain a blueprint that does not go very far.

So a different approach to implementing the solutions is needed.

2.6.2 What can work – a SMART plan for workers, companies and government

The key message of this report is to learn from behavioural psychology and behavioural economics.[126] This means that we need to take a 'bottom up' approach that begins from the viewpoint of the individual and accepts that individuals face behavioural barriers when it comes to making decisions. Individuals might well accept that they need to change their behaviour – once they become aware that a problem exists – but they then face hurdles which prevent them from making those changes. They then need suitably tailored support to help them over the hurdles. Incentives can also play an important role. As Steven E. Landsburg,

[124] General Data Protection Regulation; https://gdpr-info.eu/

[125] Skills for Jobs: Lifelong Learning for Opportunity and Growth, Department for Education, CP 338, January 2021, HMSO; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957810/Skills_for_jobs_lifelong_learning_for_opportunity_and_growth__print_version_.pdf

[126] The government is of course aware of the importance of behavioural psychology and set up the Behavioural Insights Team which published reports like *MINDSPACE*: *Influencing behaviour through public policy* https://www.instituteforgovernment.org.uk/sites/default/files/publications/MINDSPACE.pdf

professor of economics at the University of Rochester, points out: ‘Most of economics can be summarised in four words: “people respond to incentives”’.[127]

First, people – workers and company managers – need to be informed that their current working practices are not as efficient as they could be (measured against best practice in other countries) – and that this will have an adverse effect on their future real living standards and that of their families. It is necessary to understand that a problem exists before it can be solved – and very few people in this country understand how serious our productivity problem is. Most people who do work believe that they are already working very hard. Continuous and effective communication is therefore a key requirement.

Second, they need to become engaged and motivated – so they become willing to change their behaviour.

Third, they need to be guided, supported, and encouraged into changing and improving working practices that increase both worker and company productivity: many will need hand holding.

This will involve setting goals, providing incentives and reducing barriers. This will lead to a journey with three elements: (1) where people start from, (2) where they need to end up (the goals), and (3) the steps they need to take to reach these goals, with each step being short and manageable. All journeys begin with the first short step and, if they are successful, end when the destination is reached. But it is also necessary to recognise that success may require a sustained effort over a relatively long period of time: solving the UK’s productivity problem is not going to be a quick fix.

This approach has been used successfully in the UK. It is precisely how a big increase in pension savings was engineered in 2012 when auto-enrolment was introduced.[128] The approach adopted recognised that people try their best, but do not have the skills of the optimising agents in a rational economic model who are able work out for themselves how much they need to save for their retirement without the need for outside help. In the case of auto-enrolment, the government recognised that people could be made to understand the importance of saving for retirement and would only be willing to start saving for a pension if the initial amount was low and would not be missed when the next payslip arrived. Then gradually over time, the amount saved increased. Government support was essential and a legislative framework was needed to implement the auto-enrolment scheme. Also essential was cross-party political support for the scheme.

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[127] Quoted from Vitality (2022) The power of rewards. How to build an effective workplace-wellbeing strategy.

[128] Patrick Collinson (2019) Watchdog hails success of auto-enrolment pensions - Ten million more people now saving with big rises in private sector staff, the young and ethnic minorities, Guardian, 24 October; https://www.theguardian.com/money/2019/oct/24/watchdog-hails-success-of-auto-enrolment-pensions

When the auto-enrolment scheme began in 2012, the total amount saved was 2% (1% of qualifying earnings for the employee and 1% for the employer[129]). By 2018, the total amount saved had risen to 8% (4% of qualifying earnings for the employee, 3% for the employer, and 1% in tax relief[130]). But this is still regarded as too low, so NEST, the workplace pension scheme for workers whose companies do not have their own pension scheme,[131] is introducing the behavioural strategy of 'nudging' to help individuals increase their pension savings even more. It has worked with investment management company Invesco to create a strategy called 'Small Steps to a Better Future'.[132] This involves positive messaging to address three common behavioural barriers preventing increased contributions: affordability, a sense of being overwhelmed, and low confidence. The three messages to overcome these barriers are:

- 'You're already on your way to having a retirement income'. This helps to build confidence by emphasising what people have, including the State pension and any existing pension pots.
- 'Start from today and plan forwards'. This helps people work from what they know, to understand the gap they need to close.
- 'There are steps you can take'. This helps to break the problem down into manageable and meaningful actions and showing the difference each step could make to a retirement income.

Two key factors that help to make nudging successful are inertia and the importance of routine. Once people have been nudged into increasing contributions via a payroll deduction or a standing order if they are self-employed, they tend to forget about it – inertia keeps them in the scheme at the higher contribution rate. The same holds for the routine monthly deduction of contributions from the payslip or via the standing order.

We denote this approach SMART[133] planning. SMART plans show the benefits of:

- a national recognition of the problem and that a solution is urgently needed
- a sensible policy carefully designed with clear achievable goals, recognising the barriers that need to be surmounted en route
- goals need to be SMART: specific, measurable, actionable, relevant and time-bound
- careful and patient implementation of the policy
- engaging and motivating its target group – possibly using incentives and rewards

[129] https://www.theguardian.com/money/2012/oct/01/auto-enrolment-pensions-all-you-need-to-know
[130] https://www.nestpensions.org.uk/schemeweb/helpcentre/contributions/calculating-contributions/calculate-contributions-using-qualifying-earnings.html
[131] https://www.nestpensions.org.uk/schemeweb/memberhelpcentre/about-nest.html
[132] Invesco (2021) Small Steps to a Better Future; https://www.nestinsight.org.uk/wp-content/uploads/2021/10/Small-steps-to-a-better-future.pdf
[133] The term SMART originates with the Save More Tomorrow (SMarT) plan devised by Richard Thaler and Shlomo Benartzi to use behavioural economics and psychology to increase pension savings. SMarT plans became the most successful nudge in history after they were enshrined into law in the US Pension Protection Act of 2006; https://www.chicagobooth.edu/review/save-more-tomorrow; https://www.linkedin.com/feed/update/urn:li:ugcPost:7017983800810897408/

- then taking the target group from where they are, in small manageable steps, to where they need to be
- using suitably qualified mentors, allowing for the tailoring of solutions to meet the specific needs of individual members of the target group, with appropriate support and encouragement
- at each step, building confidence in the target group and avoiding a sense of being overwhelmed
- making use of suitable tools and traits, such as learning by doing,[134] nudging, inertia, and routine
- continuous and effective communication that emphasises progress towards reaching the desired goals
- a suitably targeted investment of resources
- all-party political support, and
- policy certainty (i.e., the policy is maintained without constant interference and changes).

A SMART plan acts as a commitment device – like a manifesto. Once you agree to a SMART plan, you agree to be committed to it. Political parties, once elected to government, continually look at their manifesto to ensure they are delivering on their promises, and are continually reminded by opposition parties when they fail to do so. The SMART plan has precisely the same purpose. But it also acts as a support device by containing mechanisms that help you keep your promises.

A similar approach with appropriate adjustments could be applied to improving worker and company productivity. It is important to get across the message that this does not mean more work, rather it means working more effectively.

The first task is to understand the nature of the problem that needs to be solved – including all its complexities. Take for example the relationship between skills and productivity. This is an important issue in the government's current 'levelling up' agenda.

A study by the Skills and Productivity Board[135] [136] reports the findings of business improvement organisation Be the Business (2021)[137] derived from a study it commissioned from McKinsey:

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[134] Learning by doing was introduced by John Dewey (1916) Democracy and Education: An Introduction to the Philosophy of Education, Macmillan, New York. Learning by doing can be used to build business skills, see, e.g., Leon Ho (ud) What Is Learning by Doing And Why Is It Effective?; https://www.lifehack.org/898427/learning-by-doing

[135] Ewart Keep (2022) What is the role of skills and the skills system in promoting productivity growth in areas of the country that are poorer performing economically?, Skills and Productivity Board, May 2022; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1078063/How_can_skills_and_the_skills_system_promote_productivity_growth.pdf

[136] The Skills and Productivity Board was dissolved in May 2022 and replaced by the Unit for Future Skills; https://www.gov.uk/government/groups/unit-for-future-skills

[137] Be the business (2021) Productive Business Index, Edition Three, Q3, London: Be the business.

[T]here are five interlocking factors that together produce high productivity organisations: management and leadership; technology adoption; training, development and human resources policies and practices; operational efficiency; and innovation and ideas. The Treasury's Build Back Better: A Plan for Growth (2021[138]) underlines the fact that the UK's record on some of these complementary factors, such as investment in technology, has been poor for a long period and that major improvements are required.

The government's recent White Paper on Levelling Up (HMG, 2022[139]) follows this line of argument and endorses the notion that there are a set of mutually-interlocking 'capitals' that act as the drivers of spatial inequality, of which skills forms but one:

1. Physical capital (infrastructure, plant and machinery and housing)

2. Human capital (the skills, health and experience of the workforce)

3. Intangible capital (innovation, patents and ideas)

4. Financial capital (the resources supporting the funding of companies according to the White Paper, but also arguably the capital that is available to support public policy interventions)

5. Social capital (the strength of communities, relationships and levels of trust)

6. Institutional capital (local leadership, capacity and capability)

As the government notes: "The engine of regional growth is a six-cylinder one" (HMG, 2022: 57). Figure 1.62 in the White Paper offers a concise representation of how some places can become caught in vicious cycles due to inter-related deficiencies in different forms of these capitals (HMG, 2022: 87).

[The] White Paper's authors conclude that: The six capitals are inextricably linked as part of a complex, adaptive economic ecosystem. Indeed, it is interdependence among the capitals that generates the forces the agglomeration, as strength in one capital cascades to the others in a cumulative, amplifying fashion. (HMG, 2022: 88)

…[Accordingly,] improving skill levels can only address part of the UK's productivity gap with overseas rivals, or indeed the productivity gaps between different localities within

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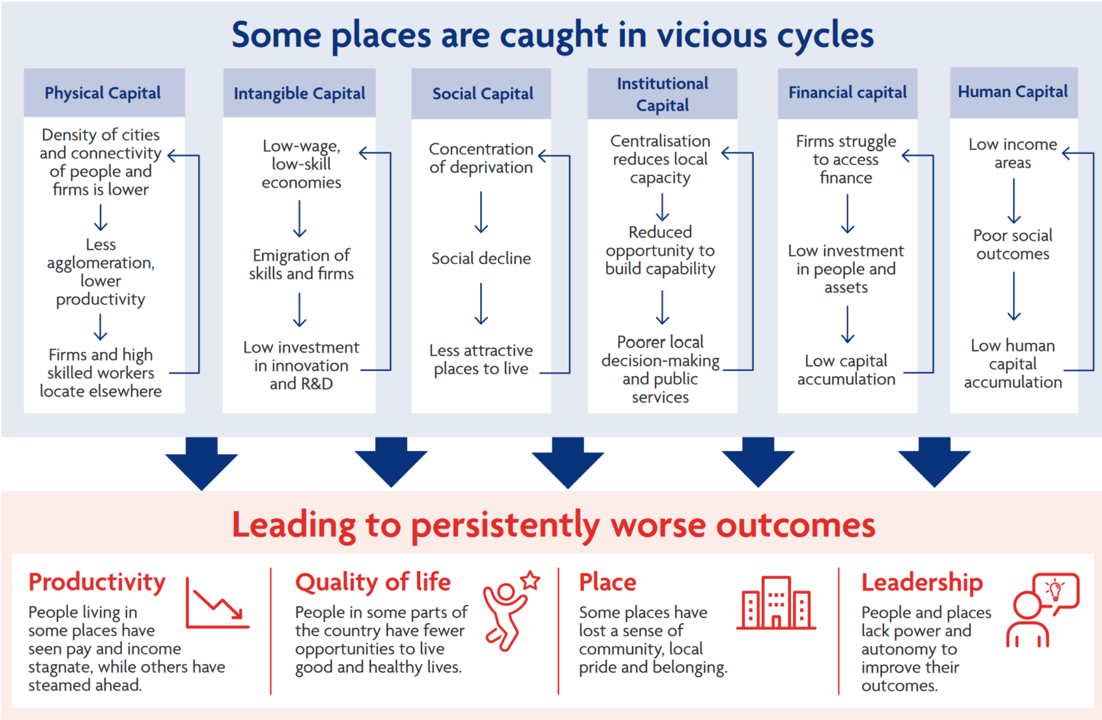
[138] H M Treasury (2021) Build Back Better: our plan for growth, CP 401, London: HMT; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/969275/PfG_Final_print_Plan_for_Growth_Print.pdf

[139] H M Government (2022) Levelling Up the United Kingdom, CP 604, London: HMSO; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052706/Levelling_Up_WP_HRES.pdf

the UK. The figure that is often quoted in policy documents is that as much as one fifth of our productivity gap with overseas competitors is down to relative deficiencies in skills, and the other four fifths is due to other causes (HMT, 2021).

Figure 1.62 Levelling Up Capitals Framework



…[For policies based around increased skills to yield the best results they need to be combined with other factors/inputs/policy frames, such as the intensity of R&D activity, investment in plant and equipment and forms of work organisation, and job design that can maximise the discretionary space for people to use their enhanced skills and capabilities. In other words, more skills are necessary but not sufficient to deliver improved economic performance].

…It is also the case that over time the results of evaluations of specific national government programmes have showed smaller or patchier impacts on productivity. Policies that have tried to use the supply push effect to influence employer demand for skills indicate that the effects are often much smaller and patchier than anticipated, and policies aimed at changing employer behaviour appear to require a sustained effort over relatively long periods of time. As a result, the observation that simply because skills have been created at public expense does not mean that they will be automatically deployed to maximum productive effect in the workplace has been recognised by at least some policy makers – although the full implications of this insight have been slow to gain much traction on UK policy development.

Levelling Up Missions	
Focus Area	**Mission**
Boost productivity, pay, jobs and living standards by growing the private sector, especially in those places where they are lagging	
Living Standards	By 2030, pay, employment and productivity will have risen in every area of the UK, with each containing a globally competitive city, and the gap between the top performing and other areas closing.
Research & Development (R&D)	By 2030, domestic public investment in R&D outside the Greater South East will increase by at least 40%, and over the Spending Review period by at least one third. This additional government funding will seek to leverage at least twice as much private sector investment over the long term to stimulate innovation and productivity growth.
Transport Infrastructure	By 2030, local public transport connectivity across the country will be significantly closer to the standards of London, with improved services, simpler fares and integrated ticketing.
Digital Connectivity	By 2030, the UK will have nationwide gigabit-capable broadband and 4G coverage, with 5G coverage for the majority of the population.
Spread opportunities and improve public services, especially in those places where they are weakest	
Education	By 2030, the number of primary school children achieving the expected standard in reading, writing and maths will have significantly increased. In England, this will mean 90% of children will achieve the expected standard, and the percentage of children meeting the expected standard in the worst performing areas will have increased by over a third.
Skills	By 2030, the number of people successfully completing high-quality skills training will have significantly increased in every area of the UK. In England, this will lead to 200,000 more people successfully completing high-quality skills training annually, driven by 80,000 more people completing courses in the lowest skilled areas.
Health	By 2030, the gap in Healthy Life Expectancy (HLE) between local areas where it is highest and lowest will have narrowed, and by 2035 HLE will rise by five years.
Well-being	By 2030, well-being will have improved in every area of the UK, with the gap between top performing and other areas closing.
Restore a sense of community, local pride and belonging, especially in those places where they have been lost	
Pride in Place	By 2030, pride in place, such as people's satisfaction with their town centre and engagement in local culture and community, will have risen in every area of the UK, with the gap between top performing and other areas closing.
Housing	By 2030, renters will have a secure path to ownership with the number of first-time buyers increasing in all areas; and the government's ambition is for the number of non-decent rented homes to have fallen by 50%, with the biggest improvements in the lowest performing areas.[1]
Crime	By 2030, homicide, serious violence and neighbourhood crime will have fallen, focused on the worst affected areas.
Empower local leaders and communities, especially in those places lacking local agency	
Local Leadership	By 2030, every part of England that wants one will have a devolution deal with powers at or approaching the highest level of devolution and a simplified, long-term funding settlement.

Figure 36 – Levelling up missions

These developments mean that at present the dominant research and international policy perspective argues for an approach to productivity enhancement that incorporates skills within a wider package of interventions – rather than seeing it as the 'silver bullet' that can on its own solve the policy challenge. To a considerable extent, the analytical framing adopted by the government's White Paper on Levelling Up (HMG, 2022)[140] follows this approach. As noted above, it sees skills or human capital as one of six interconnected forms of capital that determine local prosperity, and it positions education and skills as within a medium-term policy response that is structured around a framework that embraces 12 'missions' (living standards, research and development, transport infrastructure, digital connectivity, education, skills, health, wellbeing, pride in place, housing, crime, local leadership) – see Figure 36.[141]

It is clear from this that the issues – with all their complexities and nuances – are well understood by government and those advising government. The task is to design a SMART plan that helps to get the same degree of understanding at the level of individual companies and workers. And once that has been done, to get the required changes implemented – using behavioural tools, such as nudging and mentoring, that may have to remain in place for a sustained period of time.

2.7 Workers – how they can be supported to improve their productivity

In this section, we discuss the SMART plan for workers that can support them to increase their productivity – and the important role that companies and government can play to facilitate this.

2.7.1 Skilling up the workforce

2.7.1.1 Education in schools

There is some good news from schools: there has been significant growth in the number of students preparing for science, technology, engineering, and maths (STEM) subjects – such as computer science, artificial intelligence (AI), engineering, chemistry, physics and biology – at university. For example, acceptances onto computer science courses have risen by around 50%, from 20,420 in 2011 to 30,090 in 2020, while acceptances onto engineering courses rose by 21% from 25,995 in 2011 to 31,545 in 2020.

These results show the benefits arising from the Department for Education's investment in support of STEM teaching, such as Isaac Physics (an online platform materials designed to support students transition from GCSE through sixth form to university), a range of support for teacher continuous professional development (Science Learning Partnerships, Stimulating

[140] https://www.gov.uk/government/publications/levelling-up-the-united-kingdom
[141] Source: H M Government (2022) Levelling Up the United Kingdom, CP 604, London: HMSO (xvii-xviii)

Physics Network), an £84 million programme to improve computing teaching and participation, and the Teaching for Mastery programme in mathematics.[142]

The STEM initiative has received significant support from mentors known as STEM Ambassadors. These are STEM professionals – such as computer scientists, engineers, geologists and astrophysicists – who volunteer their time to support learning by helping young people to understand real world applications of STEM subjects. There are around 30,000 active volunteers giving 640,000 hours a year.[143] A component is learning by doing.[144]

This is another success story that is consistent with a SMART plan. It could be directly replicated in other areas of education where there are woeful inadequacies: a clear example would be financial education which would explain the benefits of saving, compound interest and pensions.

2.7.1.2 Investment in human capital

The SMART plan for workers needs to begin with an understanding of the relationship between the investment in human capital and productivity improvements.

The report for The Economy 2030 Inquiry discussed earlier argues that 'Investment in human capital is key for improving the productivity of workers and the firms they work in. More skilled workers are not only more productive themselves, but also generate spillovers for other workers and other firms. Skilled workers are a crucial input in the R&D process and in the generation of innovation, and aid the diffusion of new technologies and organisational practices, due to technology-skill complementarities'.[145]

This is confirmed by a study by Aznar et al. (2015)[146] which found that:

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[142] More young people are taking STEM subjects than ever before, Education Hub, 9 February 2021; https://educationhub.blog.gov.uk/2021/02/09/more-young-people-are-taking-stem-subjects-than-ever-before/

[143] David Wilkinson and Carrie Jackson (2021) The Impact of STEM Ambassadors, STEM Learning, February; https://assets.ctfassets.net/pc40tpn1u6ef/3hc3IMVJi1SvdUTYEsixrx/e010d35dc75d6c6adfd1e8f16f13b998/STEMAmbassadorsReport_21_06_FINAL.pdf

[144] https://www.the-learning-agency-lab.com/the-learning-curve/learning-by-doing/; https://link.springer.com/referenceworkentry/10.1007/978-1-4419-1428-6_544; https://opentextbc.ca/teachinginadigitalage/chapter/4-4-models-for-teaching-by-doing/

[145] Juliana Oliveira-Cunha, Jesse Kozler, Pablo Shah, Gregory Thwaites and Anna Valero (2021) Business time: How ready are UK firms for the decisive decade?, The Economy 2030 Inquiry, Resolution Foundation, November; https://economy2030.resolutionfoundation.org/wp-content/uploads/2021/11/Business-time.pdf

[146] Ana Rincón Aznar, John Forth, Geoff Mason, Mary O'Mahony, and Michele Bernini (2015) UK skills and productivity in an international context, BIS Research Paper No. 262, Department for Business, Innovation and Skills, December;

Education and skills are important drivers of productivity. Higher levels of educational attainment and skills raise productivity directly by expanding an individual's economic capabilities – enabling them to accomplish more difficult tasks and to address more complex problems.

But education and skills are also argued to raise productivity through indirect mechanisms – facilitating technological diffusion and innovation which may enable a nation to move to a higher growth path.

Growth accounting studies have found that changes in labour composition (i.e., skills improvements) have tended to directly account for around a fifth[147] *of the growth in average labour productivity in the UK over recent decades. For example, Holland et al. (2013)*[148] *found that a 1 per cent rise in the share of the workforce with a university education raises the level of productivity by 0.2-0.5 per cent in the long run.*

…Recent evidence has shown that economic success is determined by the availability of a broad set of skills developed at different levels, both in general and vocational education.

As information and communication technologies (ICT) become more widespread, vocational skills are increasingly more important for the effective use of these technologies (Mason et al., 2014).[149] *Vocational skills – deployed in conjunction with high-level skills – can also make useful contributions to absorptive capacity, which firms require to make effective use of knowledge, ideas and technologies generated outside their own organisations. However the contribution of this type of skills is not uniform across countries; vocational skills tend to play a more important role in countries with a stronger base of apprenticeship training.*

The UK performs relatively well in terms of higher skills (bachelor's degree and above), and there is ample evidence on the impact of higher skills. However, compared to other

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/486500/BIS-15-704-UK-skills-and-productivity-in-an-international_context.pdf

[147] The same figure was mentioned in the Skills and Productivity Board report discussed earlier: Ewart Keep (2022) What is the role of skills and the skills system in promoting productivity growth in areas of the country that are poorer performing economically?, Skills and Productivity Board, May 2022; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1078063/How_can_skills_and_the_skills_system_promote_productivity_growth.pdf

[148] Dawn Holland, Iana Liadze, Cinzia Rienzo and David Wilkinson (2013) The relationship between graduates and economic growth across countries, BIS Research Paper No. 110, Department for Business, Innovation and Skills, August; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/229492/bis-13-858-relationship-between-graduates-and-economic-growth-across-countries.pdf

[149] Mason, G., Holland, D., Liadze, I., O'Mahony, M., Riley, R., and A. Rincon-Aznar (2014), Macroeconomic benefits of vocational education and training, Cedefop Research Paper No. 40.

countries, the UK's intermediate (practical, technical and occupational) skills are of more concern.

….Key results to note are:

• Training has a sizeable and significant effect on labour productivity across the countries studied between 1995 and 2010. A 10% increase in the total amount of training variable per employee would increase productivity by 2%.

• The UK's inputs (capital, labour, training etc.) generally seem to make similar contributions to productivity and output growth as in the other countries studied, though hours worked seem to contribute less to output growth than in other countries and non-ICT capital provides a greater contribution.

• Industries with greater skill intensity benefit disproportionately from growth in training capital. This implies that training has a greater return in industries with a greater proportion of highly qualified workers. However, training also seems to enhance the productivity benefits in those industries or countries with a larger proportion of upper-intermediate workers.

• High-level academic skills have a larger positive influence on productivity in those industries where innovative property investment represents a higher share of output and those with higher ICT intensity. In these industries, upper-intermediate skills also make a positive contribution to productivity, but this is of lower magnitude than in the case of the high-skills, in line with expectations.

• The presence of upper-intermediate skills has a stronger influence on productivity in those sectors with a higher intensity of non-ICT capital and training capital.

• Taken together, these results imply that high-level and upper-intermediate skills have complementary functions in enhancing productivity – the former more important for industries with high ICT intensity, the latter more important for industries with high non-ICT intensity and where interacted with additional training investment.

Overall, the econometric results suggest that having a highly skilled workforce (either with high-level or upper intermediate qualifications) is important when combined with investment in intangible assets such as training and innovative property. This is consistent with the idea that the use of information technology, which increasingly is associated with complementary investments in intangible assets, is relatively skill-intensive.

Mitha (2019: Developing a skilled workforce) explains the type of skills training needed:

> *Britain will not be able to increase its productivity growth to its former level, let alone increase it until it ramps up skills training to equip its workers to meet the needs of a competitive modern economy. For example, England currently has a larger proportion of low-skilled young workers than most of the rest of the OECD. And worryingly, its younger workers tend to be no more skilled than the older ones. Workers with little or no skills, who are the most in need of training, are often resistant to acquiring workplace skills. (The most enthusiastic consumers of any training provided by employers tend to be employees who already possess higher or further educational qualifications.) ….If the government is serious about addressing low productivity, it should ensure that low skilled workers receive the training they need to become more productive.*

The Employer Skills Survey 2019 referenced earlier also looked at ways of addressing skills shortages:

> *Although transient factors (such as staff having been recruited who are not yet fully trained or experienced in their new role) regularly contributed to skills gaps (79%), they were rarely the exclusive cause of them (20%). Consequently, skills gaps were not exclusively caused by factors that would be expected to alleviate over time, and this was reflected in the fact that many employers actively took issues to address skills needs.*
>
> *Unsurprisingly, the key difference in terms of the way that establishments tried to address skill-shortage vacancies and skills gaps related to the direction that employers looked when trying to address them: generally action was directed externally to address skill-shortage vacancies, and internally to address skills gaps. Consequently, the most common actions taken to overcome skill-shortage vacancies was to utilise new recruitment methods or channels (37%) or to increase advertising or recruitment spend (37%). Contrastingly, establishments tried to overcome skills gaps in their workforce most often by increasing training activity (64%), supervising staff more (55%), conducting more appraisals (46%) or implementing a mentoring scheme (45%).*
>
> *New analysis for 2019 shows employers with skill-shortage vacancies tended to place more emphasis on each factor that they considered when recruiting staff than those that did not have skill-shortage vacancies, and were also more likely to utilise each different recruitment method and strategy during their recruitment process. Similarly, employers with skills needs were more likely to indicate that they had engaged with national skills policy initiatives, including taking on apprentices, trainees, expressing interest in offering work placements through the T-Levels scheme.*

The survey also looked at future skills requirements:

> *Around two-thirds of employers anticipated the requirement to develop the skills of their workforce in the coming year (64%). The most common reasons for expecting to need to upskill their staff were in response to new legislative or regulatory requirements (42%), because of the introduction of new technologies or equipment (41%), the development of new products and services (35%) and the introduction of new working practices (35%).*
>
> *The profile of skills that employers anticipated needing to develop was broadly similar to the profile of skills lacking among applicants and the current workforce. One key difference however was digital skills: these skills were more prominently a part of employers' anticipation of upskilling requirements, perhaps reflecting the pace of change of digital skills requirements. The most common skills that were identified by employers as requiring upskilling were grouped as operational skills (52%), specialist skills or knowledge (50%), self-management skills (49%), management or leadership skills (48%) and digital skills (47%).*[150]

The 2021 Skills for Jobs White Paper[151] proclaimed (p.3):

> *To give ourselves the best chance of success we must make sure everyone has the skills which will allow them to get good jobs, both now and in the future.*
>
> *To deliver this, the Prime Minister has introduced a Lifetime Skills Guarantee to allow everyone to access the education and training they need throughout their lives. It is our mission to make sure that opportunity is there for everyone, wherever they live, to level up every inch of the country.*
>
> *These are the skills that further education is perfectly placed to provide but we have historically not always made the best use of it. Unlike many of our OECD peers, this country has not always shown further education the esteem it deserves, with too many people – and too many employers - wrongly believing that studying for a degree at university is the only worthwhile marker of success. Although our universities are world-class, it is not the only choice: in many cases, a college course or apprenticeship can offer better outcomes.*

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[150] Mark Winterbotham, Genna Kik, Sam Selner, Rebecca Menys, Sam Stroud and Sam Whittaker (2020) Employer Skills Survey 2019: Skills Needs, Department for Education, November; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936488/ESS_2019_Summary_Report_Nov2020.pdf

[151] Skills for Jobs: Lifelong Learning for Opportunity and Growth, Department for Education, CP 338, January 2021, HMSO; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957810/Skills_for_jobs_lifelong_learning_for_opportunity_and_growth__print_version_.pdf

As a result we have a skills gap that is holding us back economically. We do not have enough technicians, engineers or health and social care professionals. Redressing this will be critical to improving our productivity and international competitiveness. This is why we intend to prioritise the courses and qualifications that enable people to get great jobs and which will support our economy to compete with the world's best.

This White Paper is a blueprint for the future. We will move on from previous underestimations of further and technical education and reinforce its pivotal role as a pathway to a bright future.

Sir James Dyson (2022) points to areas where future skills are needed: 'We need to foster a generation of people equipped with the skills to solve big problems using engineering and science. Yet the number of pupils taking design and technology GCSEs has fallen by over a quarter since 2018. The global economy, driven by new technologies, needs highly skilled and inventive engineers working in, for example, the fields of robotics, software and machine learning'.[152]

The Economist explains how the digitisation of everything, cloud computing and hybrid working is fuelling a boom in Indian IT consulting:

Start with digitisation. The pandemic has turbocharged efforts by companies of all stripes to make their businesses more agile, efficient and clever.

Combined, digitisation and the cloud make it possible for companies to untether from their physical headquarters not just peripheral functions but parts of their ever more digital core business. Many have done just that during the pandemic, thanks to remote work. This opens up the third opportunity for India's IT consultants. They could assume some of the core corporate roles from white-collar workers in the rich world. Wages for new hires in India can be as little as $5,000 annually, less than a tenth of the going rate in rich countries. Even factoring in other costs, Indian projects are at least 20% cheaper than the same endeavours in the West, estimates Peter Bendor-Samuel, boss of the Everest Group, a consultancy.

A ballooning Indian "talent cloud", as TCS [Tata Consulting Services] calls it, is the biggest opportunity of all. It is also the most uncertain. Some Western companies are having second thoughts about hybrid work (which requires at least partial presence in the office), let alone the fully remote sort.[153]

[152] Tom Rees (2022) Working from home is a productivity disaster, warns Sir James Dyson, Daily Telegraph, 4 March; https://www.telegraph.co.uk/business/2022/03/04/working-home-productivity-disaster-warns-sir-james-dyson/

[153] A half-a-trillion-dollar bet on revolutionising white-collar work, The Economist, 15 October 2022; https://www.economist.com/business/a-half-a-trillion-dollar-bet-on-revolutionising-white-collar-work/21808453

Companies need to develop a digital adoption strategy[154] which overcomes the problems experienced on traditional training programmes:

- *Significant knowledge loss: Classroom learners forget an average of 90% of what they have learned within the first seven days, according to the Ebbinghaus Forgetting Curve. This results in a need for repeat training sessions, adding further expense for the business and consuming significant amounts of employee time.*
- *Failure to cater to different learning styles: The traditional approach to training is one-size-fits-all. However, employee learning styles vary widely – as do their role-specific requirements – even within a single team.*
- *Limitations of hybrid working: New ways of working also present obstacles to classroom learning. Video calls, meanwhile, run into the issue of "Zoom fatigue," and generally have lower engagement than in-person sessions.*
- *Inability to keep up with a rapidly developing landscape: Between software updates and the constantly shifting world of sales and marketing,… training is often out of date.*

An appropriate digital adoption strategy would:

- *Focus on employee experience: If [employees] are encountering regular frustration or aren't satisfied in their roles, this has a direct impact on the organisation's outcomes. Decision makers must dedicate themselves to delivering a streamlined, frustration-free experience to every employee.*
- *Avoid a one-size-fits-all solution: Everyone learns differently, and an organisation's training policy should reflect this. Rather than offering a single solution, provide a range of options and give employees the autonomy to select the resources and approaches that work best for them.*
- *Don't forget the TCO: Training is a major contributor to software's total cost of ownership (TCO). Most businesses are currently paying for software with features that employees don't know how to use and losing money on regularly retraining employees. By spending a little more on continuous learning, organisations can save money and boost business value from their technology investments in the long run.*
- *Get leadership buy-in: Successful digital transformation depends on collaboration between all parts of an organisation. Decision makers from across the business need to work together to ensure that everyone has the skills required to make the most of software. Without a proactive approach to employee learning, a digital transformation cannot succeed.*
- *Measure and improve: There's no such thing as a perfect solution - there will always be opportunities for an organisation to improve its approach. Doing so effectively*

[154] The CRM manager's guide to digital adoption, Userlane, www.userlane.com

depends on robust data. Organisations must choose digital adoption metrics carefully – effective software use is measured in terms of goals achieved, not time spent.

There are some green shoots in the UK. For example, Rolls-Royce Submarines has recently announced the opening of the Nuclear Skills Academy, taking on 200 new apprentices. The apprentices will be taught by industry and education experts from the Nuclear Advanced Manufacturing Research Centre, the National College for Nuclear, the University of Derby and Derby City Council. This ensures new apprentices have access to the best courses and mentors throughout their apprenticeship.[155]

However, it is no good having all these great top-down initiatives if they do not engage with or meet the needs and wishes of employees. The clear evidence that they are failing is that younger workers are no more skilled than the older ones. The Lifetime Skills Guarantee is an excellent idea, but to get the take-up required, it needs to be carefully incorporated into a SMART plan, with suitable measures put in place to overcome the resistance of low-skilled workers to upskill.

High performance organisations (HPOs) support the upskilling of their employees using SMART plans that take into account the preferences of their employees – to the benefit of both employees and the organisation.

A report by the Cornerstone People Research Lab found that 74% of employees want tailored career guidance. Companies themselves believe they can develop their people and provide the relevant skills training needed to be successful, but employees do not share that same confidence. There is a 'skills confidence gap': 90% of employers were confident in their organisation's ability to develop employees' skills, whereas only 60% of employees believe this – a gap of 30%. However, the gap is only 11% in high-performance organisations (HPOs) – much lower than the 48% in low-performance organisations. Within HPOs, 95% of employees say their HPO helps them develop their career, 97% utilise multiple forms of learning and development, and 95% prioritise creating guided, personalised career paths.

The report outlined five steps that a company could make to become a HPO, all of which are consistent with SMART planning:[156]

[155] Rolls-Royce Submarines opens Nuclear Skills Academy, 26 September 2022; https://www.rolls-royce.com/media/press-releases/2022/26-09-2022-rr-submarines-opens-nuclear-skills-academy.aspx

[156] Cornerstone (2022) Addressing the global skills shortage; https://www.cornerstoneondemand.com/uk/resources/article/addressing-the-global-skills-shortage/

1. Focus on the future

Work with other talent teams and other functions to find ways of predicting what skills are most important or growing in importance for the future, identify gaps and close them. Our research found that 82% of employees at high-performance organisations felt their company had insight into the gaps between current skills and those needed in the future.

2. Integrate skill building with other career development tools

We found that 74% of employees worldwide want to be provided more tailored, comprehensive career guidance. Integrating that skill and career guidance makes it easy for employees to chart their desired career path by seeing an integrated view of the skills needed and how it translates to internal mobility.

3. Create a culture of skill-building and growth

Ninety-five percent of employees at HPOs say their company shows a sense of responsibility to its employees and helps them develop their careers. Getting leaders on board, integrating skills into talent discussions and creating a dedicated skill-building resource are critical ways organisations can show employees that they are creating a path for growth.

4. Provide more relevant, modern, and personalised content to your skill seekers

First and foremost, you should think of your organisation as a Skill Builder. Why? The first stop for 40% of employees looking for information about skill development and growth inside of organisations is their skills and development platform.

In High Performing Organisations, that percentage is even larger. And, employees – or Skill Seekers – are making it clear that they want even more learning content from their employers. Nearly 80% said they want more. There is a major opportunity for organisations to rethink and revamp their learning content strategies. They should be focused on expanding access to high-quality, fresh content in a variety of modalities, languages and topics.

Being able to broaden your organisation's content library, align that content directly to your skills efforts and personalise the content as it is surfaced to individual employees will increase time-to-skill development and ensure Skill Seekers are growing with your organisation as business needs evolve.

5. Adopt an internal hiring commitment

For HPOs, developing internal talent was the number one way they plan to fill skills gaps while laggards planned to hire externally over the next three years. A hiring commitment encourages employees to take the leap into developing new skills and *knowing that the organisation values and rewards employees with positions inside the company.*

HPOs also recognise that the world is changing rapidly and this will affect their SMART planning in a way that continues to match the personal aspirations of employees with the organisation's ambitions.

Human resource (HR) consultants, the Fosway Group, argue that companies need to adopt an 'agile model' in order to respond quickly to new developments, as explained in their report 'Enabling organisational agility through Talent & People Success'.[157] They find that:

> *The organisations that are thriving today are the ones that can accelerate through change. They are nimble and adapt quickest to their environment. They have an engaged, expert, and energised workforce and they can embrace the future at speed, because they have the culture, skills, flexibility, and intelligence to perform at the highest levels even as the world changes around them. For many this is not something they have stumbled into because of the pandemic. Their organisational DNA had already put agility and people success at the centre of their HR strategy.*
>
> *… In the modern economy, being able to execute brilliantly in new and unexpected ways, and quickly, is often the difference between success and failure. … Business Agility [is] one of [the] top three business challenges for the past five years. But it took the pandemic to throw the practical importance of AGILITY into sharp focus. McKinsey's research[158] adds to the weight of anecdotal evidence on this topic. Its research during the pandemic indicates that business units that adopted an 'agile model' were 93% more likely to report better customer satisfaction, 76% more likely to report better employee engagement, and 93% more likely to report better operational performance – compared to non-agile business units.*
>
> *Skills were already a critical issue, but the need to realign both organisation and operating model has magnified this further. But, in the wake of the Great Resignation, European organisations are struggling to attract and retain workers. … With it becoming increasingly difficult to hire great people, the onus is on organisations to develop their own. This approach enables employers to retain workers and grow the skills they need now, but also to build the irresistible and magnetic reputation that*

[157] Enabling organisational agility through Talent & People Success, Fosway Group, January 2022; https://www.cornerstoneondemand.com/uk/resources/article/fosway-group-enabling-organisational-agility-through-talent-and-people-success/

[158] Christopher Handscomb, Deepak Mahadevan, Lars Schor, Marcus Sieberer, Euvin Naidoo and Suraj Srinivasan (2020) An operating model for the next normal: Lessons from agile organizations in the crisis, McKinsey, 25 June;
https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/an-operating-model-for-the-next-normal-lessons-from-agile-organizations-in-the-crisis

enables them to attract the best talent in the future. And with 75% reporting they have significant skills gaps in their organisation, the pressure to resolve skills gaps is intense.

The key to unleashing the full potential of the workforce, through work that matches personal aspirations and the organisation's ambitions, is skills intelligence. This intelligence enables organisations to identify, validate, match, and personalise the connection of people to work opportunities and therefore the opportunities for them to grow.

In the past this process was manual. It included defining skills, assessing who had those skills, and then matching them to work. Personal development often relied on human tenacity, chance and serendipity.

Advances in Artificial Intelligence and machine learning technologies are opening up new possibilities for powering an agile workforce through skills. No longer does it take months to define and classify skills libraries and skills ontologies. No longer does it take laborious manual intervention to match people to skills and skills to work. However, maturity in skills intelligence is low across organisations. According to Fosway's 2021 skills research:

- *Only 7% of organisations have a fully integrated approach to skills across the people experience*
- *Only 5% of companies believe they are effective at matching employees to new opportunities*
- *60% of organisations do not have consistent skills frameworks across their organisation*
- *Only 16% always use skills to support employee career progression.*

As a result, there is still significant room for improvement in delivering successful outcomes for employees, as well as for the organisation itself.

To deliver organisational agility, HR teams need to embrace a new wave of thinking that is much more empowering and energising for workers – based on 'people success'.

HR's approach to talent needs to release the potential of the entire workforce. Talent success includes everyone, is driven by transparency, harnesses intelligence, AI and machine learning and empowers people to connect with real opportunities in a much more fluid and inclusive way.

But, adopting the mindset of talent mobility does come with challenges, especially when managers are used to having control. To deliver mobility effectively, managers, *teams and individuals need to adopt a more democratic culture that enables an agile organisation. This requires trust, a growth mindset and an openness to rethink work.*

Talent mobility requires a culture shift in talent management. Empowering employees to make free decisions about which projects and gigs they get involved with is often at odds with the command and control management styles that still pervade many organisations today – see Figure 37. One of the main barriers to enabling greater talent mobility is resistance from managers who do not want to lose their best talent to other projects in the organisation. Therefore, it is essential to align and mobilise stakeholders behind the organisation's drivers and priorities for becoming a more agile organisation. It is potentially a huge change which needs to be managed tactfully and in collaboration with everyone, both in where and how it's introduced.

Figure 37: Old/foundational vs new differentiator management styles

Source: Fosway Group

An important part of the evolution to an agile organisation is not only the move to a more open and transparent mindset, but also extending the concept of work beyond the traditional roles and responsibilities approach. Breaking work down into more discrete projects, gigs and assignments increases access to that work for more flexible and part-time workers. Using talent marketplaces to then guide shorter bursts of career development aligned with rapidly evolving business needs enables organisations to practically build capabilities through learning on the job and mentoring. Evolving how work is designed and deployed (gigs, projects vs role-dependent work) is a crucial step in the journey to an agile organisation.

Emerging skills, work and roles are critical elements of an organisation's future strategy and therefore need to be the focus for investment.

Using skills intelligence to understand the scale of skills gaps or latent, underutilised people potential is a useful place to start. Even before activating talent mobility, understanding the skills profile of the organisation, and its implications for workforce planning, resourcing strategies and investment in upskilling or reskilling, is one of the defining strategic conversations you can have with your business leaders.

Having clear and transparent measures of success aligned to individuals, teams and the organisation is critical to understand impact, value and effectiveness. Whilst people measures, such as the growth of skills, the speed to resource projects, employee attrition, retention and engagement are strong metrics, the most powerful are those aligned to organisational performance.

So, the alignment of business intelligence to people intelligence should also be on your agenda. Especially when understanding speed to competency and speed to value for projects as these are significant measures of organisational agility.

SMART plans also need to take into account 'speed to competency' which underlies the 'new skilling' model used by HPOs: 'New skilling is an emerging approach to development that reduces the need to call on reactive and expensive interventions for addressing immediate skills needs. It leverages both partnerships and tools to forecast future skills needs, generate awareness of the need for new roles within the organisation, and extend opportunities for learning that simultaneously enhance current skill sets while introducing new and needed skills for the future'. [159] The new-skilling approach to learning and development has six components:

- Understand which skills are needed now – and in the future
- Anticipate skills gaps and identify skill adjacencies
- Target learning to both roles and individuals
- Make learning and development a shared effort
- Diversify learning modalities
- Leverage learning technology to uncover needs, monitor progress, and measure outcomes

[159] Human Capital Institute and the Cornerstone People Research Lab (2020) The Revolution is Now: New-Skill Your Workforce to Catalyze Change, 8 September; https://www.cornerstoneondemand.com/uk/resources/article/the-revolution-is-now-new-skill-your-workforce-to-catalyze-change/

AI has been mentioned above. It has a lot to offer HR professionals according to a 2021 report by Cornerstone:[160]

> *In companies of all sizes, the use cases for HR spans all aspects of their work – from streamlining recruitment processes (automatic screening, appointment scheduling, onboarding), to talent management (career counselling, professional training) and strategic decision making (skills mapping, expert search, reorganisation).*
>
> *…Data is a mandatory starting point when looking to build an AI solution. AI and the data science that supports it was developed for and remains better suited to handling quantitative data. …Data pertaining to an individual's career – such as job title, job description, skills, education, etc. – is expressed in a "natural" language. Natural language (the language with which we use to communicate every day) is ambiguous and organic. Full of imprecision, emotion and metaphor – and incredibly difficult to quantify as categorical data. Nonetheless, processing such textual data is possible, although it requires a specific set of scientific tools known as natural language processors (NPLs).*
>
> *…Turning qualitative career and employee data into interpretable, measurable and comparable data-points is Step 1 in the creation of an HR AI solution. Step 2 is the formulation of complex models that can make meaningful predictions on specific career-related situations or actions, based on this data. For example: employee X has had such-and-such job experiences. Based on this data: Is he/she a good match for job Y? Is this employee likely to leave the company? Is this employee likely to succeed in a career switch?*
>
> *…For example, with an HR AI solution, organisations can recommend learning opportunities to the individual, inspect common career trajectories, and map key skills to the requirements of the organisation.*

In summary, 'organisations must connect their people to more personalised learning, critical skills development, and give employees control over their career paths and opportunities for growth'[161] and they can do this via their SMART plans. But how many companies and their managements in the UK have adopted modern HR practices like the ones discussed above – and employ agile new skilling models that use skills profiling, skills intelligence, identification of skills gaps, digital adoption, AI and talent management and mobility in order to achieve 'people success'? Not nearly enough. Until they do, they will never become high performance organisations that maximise the productivity of their staff.

[160] Realizing the true potential of AI in HR, Cornerstone, 2021; https://www.cornerstoneondemand.com/uk/resources/article/realizing-the-true-potential-of-ai-in-hr/

[161] Cornerstone (2022) HR technology checklist for Supporting critical skills; https://www.cornerstoneondemand.com/uk/resources/article/hr-technology-checklist-for-supporting-critical-skills-uk/

Further, the *Financial Times* warns of the risks to education and skills from the government's new austerity programme to reign back the size of the national debt built up during Covid (reinforcing comments made earlier):[162]

> *The skills and education agenda could fall by the wayside. That would only further weaken the UK's productivity.*
>
> *Funding for training and education in England is already under extreme strain. There has been a decline in per-student spending across colleges and school sixth forms since 2010-11, according to Institute for Fiscal Studies research. Spending on adult education has also been squeezed. International observers might find it peculiar that while UK universities compete well globally, there are limited vocational and technical training options. UK business investment in training per employee is half the EU average too. The NHS also has huge doctor vacancies, in part because of stringent government caps on medical school places.*
>
> *A more effective system must focus on three key areas. First, it should ensure education curricula are preparing students for the evolving demands of work, including greater emphasis on digital and financial literacy. Second, with 80 per cent of the country's 2030 workforce already in work, improving on-the-job training will be vital. And lastly, developing an effective retraining system will be crucial as life-long learning becomes ever more critical.*
>
> *The 2021 Skills for Jobs White Paper[163] made some sensible recommendations. These included developing higher-level technical skills and a life-long loan entitlement, giving people a right to four years of post-18 education funding. Recommitting to these will be important, but not easy, as the government faces a tight budget and a cost of living crisis. As inflation eats into spending plans, [the Chancellor] will need to recognise that further slippage in skills and education funding now will only slash Britain's growth potential. After a decade of squeezes, the college system has been enfeebled.*
>
> *In England, the apprenticeship levy — a tax on businesses to fund their apprenticeship training — also needs rethinking. Businesses say it is not flexible enough, and want better access to shorter courses. But it is also failing to deliver training for the lower-skilled and young. Bandwidth to reform the levy will be limited, but training investment by UK employers is down more than a quarter since 2005. Improved tax incentives for training expenditure could be a more direct route to explore. Meanwhile, ensuring unspent levy funds are deployed to firms and regions with an actual need is crucial.*

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[162] Britain's skills agenda must not be overlooked: The UK needs a more agile training and education system, The editorial board, 2 November 2022; https://www.ft.com/content/30f98024-ab0a-41fd-a9cf-36f21c391512

[163] Skills for Jobs: Lifelong Learning for Opportunity and Growth, Department for Education, CP 338, January 2021, HMSO; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957810/Skills_for_jobs_lifelong_learning_for_opportunity_and_growth__print_version_.pdf

Much work is needed to ensure the UK's skills system can effectively respond to economic shifts, including the green transition and technological changes. With employers facing severe skills shortages, it is already well behind. Talking about the importance of skills is positive, but it is meaningless without action.

This reflects another perennial blight with UK governments – constant policy changes with no policy certainty or stability. Government must make productivity (and exports) an absolute priority and once relevant policies are in place – such as those relating to education and training – they must be ruthlessly followed through until their goals have been achieved.

2.7.2 Improving health and wellbeing

2.7.2.1 Health

Health is one of the key factors influencing both life expectancy and productivity. Earlier generations were caught in a nutritional trap: they were too weak to work to produce food and the shortage of food rendered them too weak to work. Economic historian Robert Fogel (1993,2004)[164] puts the huge increase in life expectancy in the second half of the twentieth century down to a 'techno-physio evolution' which improved both health and living standards. He argues that public health reform, improvements in nutrition and higher incomes which enabled greater leisure have done more to increase life expectancy than clinical medicine. He classifies nutrition and medical services as labour-enhancing technological factors that have hugely improved labour productivity.

Sarah O'Connor (2022)[165] argues 'that Britain is worn out after a tough decade. Public infrastructure is worn out; social infrastructure is worn out; people are worn out. Compared with the over-60s, those leaving the labour market in their 50s since the pandemic were less likely to leave work for retirement reasons and more likely to cite stress or mental health, according to the Office for National Statistics'.

The UK employment rate has fallen from 80% prior to the pandemic to 75.4%, due to early retirement, long-term sickness and a NHS with record backlogs of operations. The Learning and Work Institute estimates that returning employment rates to pre-Covid levels, with an additional 1.7m people joining the workforce, would boost average household incomes by £830 per year or by £23bn for the whole economy, generating an extra £8bn in tax. Stephen Evans, CEO of the LWI, said: 'Increasing the number of people in work can contribute to the new Prime Minister's goal of growing the economy. But only one in ten out-of-work disabled people and over-50s are getting help to find work now, so there's huge potential for rapid change. We need to see significant investment in joining up health and work support and

[164] Robert Fogel (1993) Economic growth, population theory and physiology, Nobel Prize Lecture for Economic Sciences; Robert Fogel (2004) The Escape from Hunger and Premature Death 1700-2100, Cambridge University Press.

[165] Sarah O'Connor (2022) Kwarteng's policies won't get inactive Britain working again, Financial Times, 27 September; https://www.ft.com/content/e52b5aea-61f0-4b5c-9367-16751c64a90f

finding new ways to link up employers with those wanting a job. To do it right, this could cost up to an extra £1bn per year to deliver but would ultimately save taxpayers money, grow our economy and help people and employers.[166]

In the Autumn Statement 2022, the Chancellor, Jeremy Hunt, announced that the NHS budget would increase by £3.3bn over the next two years to deal with the post-Covid backlog, although this is less than the £7bn requested. He also announced an increase in funding for the social care sector of £2.8bn next year and £4.7bn the year after 'to help free up some of the 13,500 hospital beds that are occupied by those who should be at home'. This would allow the social care system to help deliver 200,000 more care packages over the next two years.

This may help to reduce the backlog and get some people in a sufficiently good state that they can look for work. But they would also need support and mentoring to find jobs, particularly if they are not fully fit. In other words, they need their own dedicated SMART plan.

2.7.2.2 Wellbeing

Neville Koopowitz (2022),[167] CEO of Vitality, argues that employee wellbeing should be a board-level priority:

> *The "unhealthiness" of the UK population, and in turn our workforce, manifests itself in various ways, including how a business performs. Around 40% of UK productivity loss – equivalent to £39bn a year – is due to employees' unhealthy lifestyle behaviours and poor mental wellbeing. This knowledge, alongside findings from research with the Royal Society for Arts, Manufactures and Commerce (RSA) last year, led us to call for health and wellbeing to be prioritised at board level. Much in the same way that organisations plan for pandemics, climate change and market fluctuations, businesses must consider the health and wellbeing of their people as a key risk, given that they are the most vital asset to a business and its growth.*
>
> *…The results, set out in the report, show that an inflection point has been reached in the relationship between employee and employer. Individuals are expecting more than ever from their organisations regarding their health and wellbeing. More employers are facing up to this challenge, investing in workplace health and wellbeing as they recognise the strong links between good health, flexible working and improved productivity. The benefits to recruitment and retention in the current climate are clear. So is the business case, with one quarter of all business leaders listing poor mental health and wellbeing as an issue causing disruption to businesses currently.*

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[166] Tom Rees (2022) Reversing Britain's post-pandemic worker crisis would boost economy by £23bn, Daily Telegraph, 25 September; https://www.telegraph.co.uk/business/2022/09/25/reversing-britains-post-pandemic-worker-crisis-would-boost-economy

[167] Neville Koopowitz (2022) Why employee wellbeing must be board-level priority, REBA, 12 December, https://reba.global/resource/why-wellbeing-must-be-board-level-priority-productivity-balance-working-from-home.html

…The solution lies in better insight to understand an organisation's unique employee base better through data and responding appropriately.

One in four businesses admit they do not measure employee health and wellbeing, which is a missed opportunity. Businesses must move from policies that tick boxes to data-driven health and wellbeing programmes that work for all.

Shared value exists in getting hybrid working right. Employers benefit from a more engaged and productive workforce that leads to better business performance. In turn, employees are physically and mentally healthier as a result.

Only by understanding and personalising health and wellbeing support can we deliver meaningful change and build a healthier workforce in the UK.

This can be achieved using dedicated SMART plans.

The report referenced above ('Healthy Hybrid: A Blueprint for Business'[168]) set out 10 recommendations to help employers deliver inclusive productivity gains for their business alongside a healthier, happier workforce. It opened with the observation that remote working has become the new norm for many people and more than doubled in 2020:[169] 'There is no escaping that the pandemic has fundamentally changed homeworkers' expectations, as well as the role of employers in supporting the workplace wellbeing needs of employees going forward. … [T]he vast majority of homeworkers are determined to spend more time working from home in the future'. Around 85% of those canvassed said they would prefer to work at home for some or all of the week (48% wanted a hybrid approach to working, while 38% would opt for permanent home working). A similar number (80%) said they were looking for a better work-life balance, while 71% want work to allow for a fit and healthy lifestyle. However, around a third believe their employers will make them return to their workplace at some point in the future – indicating an expectation gap between employee and employer.

The 10 recommendations to employers to help build and embed Healthy Hybrid ways of working into organisations are:

1. Close the expectation gap

The report highlights the gap between employer and employee expectations – and their 'demand for different' – can be closed with mandates that are integrated into Company Risk Registers and prioritised at board level. Action must come from the top down. Adding to this, reporting on health and wellbeing outcomes should be integrated into the frameworks executive boards use to hold CEOs to account for their performance.

168 https://www.vitality.co.uk/media-online/pdf/pr/vitality-healthy-hybrid-a-blueprint-for-business-report-v3.pdf
169 https://www.ons.gov.uk/releases/homeworkingintheuklabourmarket2020

2. Senior leaders must normalise 'Healthy Hybrid' behaviours

As leadership expert Margie Warrel argued, "there is no more powerful way to demonstrate the priority you put on mental health and wellbeing than how you take care of yourself".[170] Senior leaders in particular must lead from the front by practising what they preach when it comes to wellbeing and normalising Healthy Hybrid behaviour.

3. Create 'Healthy Hybrid' feedback loops

According to senior leaders interviewed for the report, clear communication and shared safe spaces to discuss emerging issues have been a key part of their crisis management strategy, for both wellbeing and productivity purposes. Employee voice and representation can help provide employees with a shared space of their own to express concerns about management and unhealthy hybrid behaviour.

4. Promote inclusive productivity gains

Enhanced flexibility that allows for homeworking is clearly important for wellbeing and diversity and inclusion too. However it will take time for organisations to get it right. While there is no one-size-fits-all approach, it appears that a clear and quick win for senior leaders would be to draw up policies in collaboration with their teams, with clear guidelines that apply to all members of the team and therefore establish social norms.

5. Mandatory breaks and 'right to disconnect' policies are needed

Moves towards flexibility over time must be accompanied by greater protections against an unhealthy approach to work and productivity that can leave hybrid and homeworkers at a greater risk of burnout, warns the report. Research shows[171] that positive behaviour changes, such a taking breaks – even for five minutes – can make a big difference. Therefore, five-minute breaks between meetings should be mandatory for all employees, particularly those working in home or hybrid settings.

6. Health and wellbeing policies must be inclusive

The key to a 'Healthy Hybrid' approach is to make sure employee benefit packages are inclusive across the variety of different locations where employees may conduct work – the office or face-to-face workplace, home, co-working spaces, the local coffee shop and community. As such, senior leaders should rethink entitlements – focusing on workers non workplaces.

7. Schedule 30-minute movement breaks each day

The report discusses growing evidence that homeworking during the pandemic has created an 'ergonomic timebomb', with cramped and unsafe home offices driving poor musculoskeletal health. Managers and leaders should therefore look to draw up robust

[170] Warrel (2020) Mental Wellbeing: Leaders Must Prioritize Employee Mental Health – online - Forbes

[171] Microsoft (2021) Research Proves Your Brain Needs Breaks. WTI Pulse report.

new preventative strategies that promote good posture, health and safety when working at home. Just 30 minutes movement a day would help all full-time employees meet the recommended target of at least 150 minutes a week set by the UK chief medical officer.

8. Measure wellbeing effectively and consistently

Effective and consistent wellbeing measurement is needed to radically level up 'Healthy Hybrid' behaviours and culture. Accountability must go beyond CEOs and their formal reporting to boards, while technology today can capture a whole range of ways to measure wellbeing which can be aligned with performance management approaches.

9. Be accountable for health and wellbeing mandates

Organisational structures must make it clear who is accountable for health and wellbeing mandates, and this must be reflected in training. Senior leaders could help do this by creating a designated head of health and wellbeing, ideally in the senior leadership team.

10. Track and publish data on hybrid workers' pay and progression

It is vital that those who work from home and digitally dial in to meetings are not disadvantaged when it comes to promotion, pay and career progression. Any true 'Healthy Hybrid' approach must work in line with wider diversity and inclusion goals, whilst the potential for digital disadvantage should rank highly on any new risk register drawn up to secure a 'Healthy Hybrid' workplace culture.

2.7.3 The risks of gaming

It is clear from the above that health, wellbeing and work-life balance are important issues and HR departments over the last few years have been devoting significant resources to dealing with them in order to increase productivity. But it should also be clear that they can be abused by those wanting to game the system and the result is lower productivity.

An example that attracted prominence at the time of writing this report was this job description for a position in the NHS for a salary of £110-£115,000 per annum: 'An interpersonally talented and strategic bridge builder ... responsible for establishing and maintaining the highest levels of Lived Experience Practice and amplifying the voice of those using services within decision-making of all levels of the organisation'.

It was not made clear how this position would help to reduce the backlog of 7 million operations. However, it did prompt an article from Camilla Tominey (2022):[172]

[172] Camilla Tominey (2022) HR language is destroying Britain's work ethic: Words that once meant something, like 'burn-out' and 'wellbeing', are being hijacked by those looking to justify laziness,

Across the economy, fantastically pompous job descriptions are cropping up at break-neck speed, each one embracing the insidious language of "human resources".

As numerous TaxPayers' Alliance investigations have discovered, many local government employees are being paid in excess of £100,000 a year to be things like "Strategic Director for Place" and "Corporate Director: Community Wellbeing and Environment". Indeed, "Diversity, Inclusion and Equality" units are now so commonplace that they even have dedicated recruitment websites, such as "Diversity and Inclusion Leaders" and "D and I Jobs". One pointless industry produced by another – but nice work if you can get it.

It's the sort of thing one might have ignored a few years ago, but in these dire economic times, with the country's finances going to the dogs partly as a result of poor productivity, such virtue-signalling careerism has become insufferable.

…. [T]here is something rather serious happening in our workplaces which risks not just undermining the economy but destroying the spirit of hard work for which Britain has always been renowned. I'm talking about the growing proliferation of HR phraseology, that especially empty lingo which panders to the work-shy.

Terms such as "burn-out", which once had a specific and legitimate meaning, are now being used synonymously with "tired", or perhaps "can't be bothered". They do not mean the same thing, but referencing burn-out makes for a much more serious complaint than saying you're knackered and need an early night.

Genuine burn-out is the result of prolonged emotional, physical, and mental stress. I've known someone who had a breakdown because of it. It is an incredibly serious condition, which is precisely why it shouldn't be trivialised as the catch-all for anyone who has had a tough week.

Another example of this abuse of language is "wellbeing", a term that was once reserved for genuine concerns, perhaps where an intervention was required to boost a person's morale. But now it is being bandied about as a catch-all for convivial workplace relationships

….[T]he wellbeing pandemic sees corporate funds ploughed into employee "toolkits" telling staff to make sure to take their holiday and not to answer work emails until the morning, when what would really make their life easier is a pay rise and on-site crèche facilities.

Then there's the equally overused term "inclusion", which once spoke of a noble ambition to widen the career ladder and allow people of all backgrounds to succeed. It meant ensuring women had an equal right to a seat at the boardroom table and that rising stars would be promoted based on merit, not where they went to school or university. But these days the word can be casually cast about the office by any

Daily Telegraph, 16 December; https://www.telegraph.co.uk/news/2022/12/16/hr-language-destroying-britains-work-ethic/

disgruntled but underperforming employee who simply wants an undeserved pay rise, or to get away with doing no work.

All the words I have referenced matter. But only in their original meaning.

My problem is with the way these legitimate terms risk being hijacked by an anti-work culture, where an employee's feelings trump their employer's needs. That is a complete reversal of what work has traditionally meant to us.

We should work for the sake of our companies, or indeed our public services, and not expect them to work for us. In environments where we are paid to be service providers, we now demand to also be in receipt of service. That isn't sustainable.

…I'd go as far as to say that this mollycoddling HR culture is unfair to anyone trying to get ahead, especially young people who want to put in the hours and rapidly work their way up a company. Perversely, they might even be ignored by the hierarchy simply because they are not causing problems for management.

Yes, many work complaints are entirely legitimate. Those who genuinely need support should receive it. But the art of complaining – the language of HR – is quite different, and risks allowing pure laziness to be disguised under a veneer of progress.

2.7.4 Encouraging and supporting people on benefits to find jobs

It was mentioned earlier by Tony Wilson of the IES that most people are not getting the help they need to get back to work. This is precisely where a personalised SMART plan can help.

The government is trying the carrot and stick approach to encourage people on benefits to find jobs. Iain Duncan Smith, who, as Work and Pensions Secretary, introduced Universal Credit, said that that the key to making this work was rigorous sanctions: 'That's the stick. The carrot is actually you advance out of the hours, you get more income, and in due course, you take control of your life'. [173]

The Chancellor (then Kwasi Kwarteng) announced in his mini-Budget in September 2022 that he would reduce benefits for people who do not 'fulfil their job search commitments'. In particular, he said that 120,000 people would face UC cuts unless they seek more and better paid work. At the same time, he promised extra work coach support for people over 50s, after many left the labour market for early retirement. The subsequent Chancellor (Jeremy Hunt) announced in the Autumn Statement 2022 that 600,000 additional working Universal Credit claimants will be required to meet with a dedicated work coach to increase their hours or earnings.

[173] Tom Rees (2022) Reversing Britain's post-pandemic worker crisis would boost economy by £23bn, Daily Telegraph, 25 September; https://www.telegraph.co.uk/business/2022/09/25/reversing-britains-post-pandemic-worker-crisis-would-boost-economy/

A key issue to deal with is the cliff-edges where the reduction of benefits when people take jobs is equivalent to a very high marginal tax rate. For example, a report by the Centre for Social Justice identifies a cliff-edge in benefits whereby someone receiving disability payments can lose these when they start a new job. The report found that around 8.7 million working-age UK adults were receiving welfare benefits, including UC and employment and support allowance in February 2022 compared with 7.1 million in February 2019, before the pandemic. Further, the number of claimants who are under no obligation to take up work, often due to disabilities and complex health problems, has increased by 460,000 since the start of the pandemic.

The report comments: 'Since the onset of the pandemic, the number of people claiming working-age benefits has surged by 23 per cent to 8.7 million. Many of these, around 3.5 million, are not expected to look for work because of factors such as long-term sickness or mental health. However, many of these people in fact want to work – this is huge, untapped potential. …While many people will never be able to work for reasons of poor health, disability or caring responsibilities, it is a profound social injustice to effectively write off the many thousands who are on sickness benefits but want to participate in employment'. [174]

Iain Duncan Smith explained that 'At present, people on sickness benefit are not allowed to work more than 16 hours. However, such a cliff-edge leads in part to those wishing to work longer often ending up in the black economy. The majority of those on sickness benefit are there because they have mental health issues. Most suffer from anxiety or depression, both of which can be treated. The Department of Health recognises that work is a treatment for many with mental health problems. Official surveys show that at least one in five claimants in this group would like to work – at least 700,000 individuals. That's why getting the remaining sickness benefit recipients on to UC quickly is vital.[175] Once there, they can receive proper targeted help, including accelerated treatment enabling them to re-enter work or increase their hours. The same is true of the remaining tax credit recipients who have not yet been brought over onto UC. Again, once that has been done, they can receive targeted help to get them into work'.[176]

The CSJ also wants to see a revival and national rollout of Universal Support, the 'forgotten sister' of Universal Credit. This helps people with complex problems that made it difficult for them to find work, including disabilities and caring responsibilities. 'Through individualised, targeted support plans can help the most disadvantaged to overcome the barriers holding them back, and into jobs'.[177] Duncan Smith added: 'There's one further programme that

[174] Edward Malnick (2022) Working-age benefit claims surge by nearly a quarter since Covid pandemic, Daily Telegraph, 16 October; https://www.telegraph.co.uk/politics/2022/10/16/working-age-benefit-claims-surge-nearly-quarter-since-covid/

[175] It is remarkable that ten years after UC was introduced in 2013 not everyone has been transitioned to it.

[176] Iain Duncan Smith (2022) This is how to get the jobless back to work, Daily Telegraph, 17 November; https://www.telegraph.co.uk/news/2022/11/17/how-get-jobless-back-work

[177] Edward Malnick (2022) Working-age benefit claims surge by nearly a quarter since Covid pandemic, Daily Telegraph, 16 October; https://www.telegraph.co.uk/politics/2022/10/16/working-age-benefit-claims-surge-nearly-quarter-since-covid

should be rolled out alongside UC and that is Universal Support. Once the individual's problems had been identified, they would then be passed on to receive targeted specific help and thus quickly be able to move them back into work'.[178]

Some argue that the government was focusing on the wrong target. For example, Sarah O'Connor (2022),[179]points out that:

> *[H]aving identified the right problem ["We must get Britain working again"], Kwarteng announced two policies last week [in the mini-Budget of September 2022] that do not even attempt to tackle it. The first is to require people who receive Universal Credit while working up to 15 hours a week on minimum wage to "take active steps" to increase their earnings or face having their benefits cut. This is an expansion from the current threshold of 12 hours and will affect an extra 120,000 workers.*
>
> *The idea that you can chivvy people into switching jobs or asking their employers for more hours or more money isn't completely without evidence, but it's a lot of effort for not much impact. The government's trials of the policy found that people subject to this intervention earned about £5 more per week after a year than those people who were given minimal support.*
>
> *More fundamentally, you don't address a problem with worklessness by telling 0.4 per cent of the people who are working to work slightly longer hours. The share of workers who are part-time is lower than it was pre-pandemic already, while the share who are full-time is higher.*
>
> *Kwarteng's other policy was to give more job-hunting support to people on unemployment benefit who are over 50. Again, this is strangely off-target. The unemployment rate for 50 to 64-year-olds is just 2.6 per cent, the lowest on record.*
>
> *The inactivity rate for this age group is 27.7 per cent – and it's the people in this latter group we need to worry about. They aren't looking for jobs and many of them are not claiming any benefits at all. The government is applying its policy lever to a group that is small and shrinking, rather than to the group that is large and growing.*
>
> *….Kwarteng is right to focus on the labour market if he wants to boost growth. But last week's policies were small solutions to problems that don't exist, rather than big solutions to the problems that do.*

Instead, policy must deal with 'factors [such as barriers caused by disability, skills or adequate childcare; risk aversion, e.g., in respect of uncertainties over incomings and outgoings in the transition from benefits to working; poor transport options; or overloaded cognitive bandwidth in people's decision-making, that] play a huge and largely overlooked part in the

[178] Iain Duncan Smith (2022) This is how to get the jobless back to work, Daily Telegraph, 17 November; https://www.telegraph.co.uk/news/2022/11/17/how-get-jobless-back-work
[179] Sarah O'Connor (2022) Kwarteng's policies won't get inactive Britain working again: The labour force needs investment in health, social care and childcare, Financial Times, 27 September; https://www.ft.com/content/e52b5aea-61f0-4b5c-9367-16751c64a90f

way many people make decisions about their lives. Those decisions are not based on narrow calculations of marginal financial gains – as policy often implicitly assumes – but on complex weighing-up of the pros, cons and barriers that need to be overcome', as pointed out by Kayley Hignell (2023),[180] Head of Policy (Families, Welfare and Work) at Citizens Advice. Further, any policy by itself will not be sufficient: it needs to accompanied by greater investment in health, social care and childcare (discussed in more detail later). There also needs to be, as Sarah O'Connor (op cit) argues, a modern public employment service which can facilitate the move to better paid and more interesting jobs – as is available in other European countries.

The government has listened to some of these concerns. In the Spring Budget 2023 on 15 March, Chancellor Jeremy Hunt announced measures to encourage around 800,000 benefit claimants[181] to find jobs or increase hours worked to at least 18 hours a week (up from 12) using a combination of increased support and increased sanctions enforcement – as part of the social contract with the state. Support measures include: revamping Universal Support for disabled people and those with health conditions, with spending up to £4,000 per person to find them a suitable role and cater to their needs; a £406m plan to tackle the leading health causes keeping people out of work, with investment targeted at services for mental health, musculoskeletal conditions, and cardiovascular disease; and an assurance that claimants looking for work will not lose their financial support. Increased sanctions enforcement measures include: strengthening work search and work preparation requirements for around 700,000 lead carers of children aged 1-12 claiming Universal Credit; around 100,000 non-working or low-earning individuals will be asked to meet more regularly with their work coach for support to move into work or increase their earnings and work coaches will be provided with additional training to apply sanctions effectively, including for claimants who do not look for or take up employment; and fitness-to-work tests for those with medical conditions. Those who fail to attend job interviews or refuse to take up offers of employment will face automatic cuts in their benefits for three months or for up to six months if they have had a similar sanction in the previous year; this could help nudge 200,000 people back to work.[182]

At the time of the Budget, with more than a million job vacancies, there were 7 million people of working age who were economically inactive, 5.9 million of whom are on Universal Credit, an increase of 300,000 since the pandemic. There were 2.5 million classed as long-term sick or disabled.[183] The Chancellor estimates that only around one million people were genuinely unable to carry out any work, given developments in home working and technology. Mr Hunt said that the measures were part of a plan for 'breaking down barriers that stop people working. Independence is always better than dependence, which is why we believe those

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[180] Kayley Hignell (2023) Detached from reality: What's wrong with the way we design the welfare system, 1 March; https://medium.com/@kayley.hignell/detached-from-reality-72bba55961f1

[181] Predominantly people on Universal Credit with children and everyone in a couple (previously if one partner worked full time the other did not have to) to work. The target has increased to 800,000 up from 600,000 mentioned in the Autumn Statement 2022.

[182] https://www.gov.uk/government/news/chancellor-unveils-a-budget-for-growth

[183] https://www.dailymail.co.uk/news/article-11874611/DAILY-MAIL-COMMENT-jobs-galore-7million-work.html

who can work, should. So sanctions will be applied more rigorously to those who fail to meet strict work-search requirements or choose not to take up a reasonable job offer'.[184]

The government's carrot and stick policy for encouraging people back to work is certainly consistent with SMART planning – such as personal work coaches and helping people to make those important small steps one at a time.

Others want to see more stick applied. Fraser Nelson, for example, points out that: 'It's currently possible to get out of regular appointments with a work adviser if you do just nine hours of work a week [on the minimum wage]. [The government] wants to make this [18] hours – and in this, [it] deserves support from the rest of the Cabinet. If anything, they should be going further. In a country crying out for workers, this could easily be raised to 24 hours. This is the time for ambition – and for the return of a tough-love policy that Iain Duncan Smith delivered to such striking effect.[185] His reforms meant that, during the Cameron years, the incomes of those at the bottom increased far faster than those at the top. Work paid. More jobs were created than economists thought possible.[186] It was a progressive triumph – and an experiment that's ripe to be repeated. The logic is just as compelling now. Moving from welfare to even minimum-wage work makes someone about £6,000 a year better off: the best remedy to the cost-of-living crisis. Not to mention the great worker shortage crisis'.

Fraser, while recognising that the welfare state must provide a safety net, also asks how big should it be:

> *Britain now has one of the highest minimum wages in Europe and more job vacancies than at any time since records began. But still, a third of all households are claiming means-tested benefits. Was this intentional? Or have we just slid into this situation, because no one quite worked out what is going on?*
>
> *Nothing is more likely to help people move from welfare into work than actual face-to-face consultation, as studies show. So asking healthy people to see a work consultant if they're doing less than 24 hours a week is hardly onerous. Or, with so much help needed, unreasonable. The last decade dealt with the "idle Brit" myth: people were not inherently lazy or work-shy. When a bad system was replaced with a good one, things got better. They could get better again.*
>
> *Universal Credit was created by a principle: that welfare dependency is cruel. It is not compassionate to write cheques and abandon people in edge-of-town housing estates while growing the economy with imported labour. The main aim is to save lives, not money – and, this time, rebuild the economy after the devastation of lockdowns. The*

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[184] https://www.dailymail.co.uk/news/article-11874409/Benefit-claimants-refuse-jobs-offered-handouts-automatically-cut.html
[185] There are 989,000 more mothers are in employment, and 508,000 more mothers of children under 5 in employment, compared with 1997 (Resolution Foundation, 17 March 2023).
[186] The proof of this is the strong growth in labour force utilisation (LFUG) for the period 2011-19 in Table 1.

jobs are there. The workers are there. We just need a government with the courage and resolve to put the two together.[187]

Furthermore, things have changed since the pandemic in a number of ways. One is that with everyone in lockdown, and also often on furlough, momentum – one of the key drivers of routine and regular behaviour, such as getting out of bed and going to work or to look for work – was lost. Another is that everyone saw money being thrown around: huge sums were wasted, much of it due to fraud. A 'corrupt spiv economy' was created as Matthew Lynn (2022)[188] calls it: 'it created a something-for-nothing culture that has permeated the whole of society. …£5bn Bounce Back loans claimed were completely bogus. In some cases, the money was spent on luxury cars and expensive holidays for the directors of companies that soon afterwards couldn't pay back the loans because they were insolvent'. Both these factors will make it make it much more difficult for the government to get unemployed people into dull boring jobs on the minimum wage, such as picking vegetables in cold wet fields at 6 am.

In view of this, the stick no longer seems much of a threat, according to comments in the social media forums. One said: 'They will tell you to look for more hours and or another job. Doesn't matter. Just smile and wave'.[189] To deal with this, incentives in the form of tougher love might have to be applied. Elon Musk certainly recognised this when he declared an end to remote working at Tesla, with the announcement: 'If you don't show up, we will assume you have resigned'.[190] Getting the appropriate balance between carrot and stick is the key to any successful SMART plan.

2.7.5 Providing the right type of incentives to retain and promote workers

Companies have been changing the way they treat their employees and now recognise that having career ladders for their staff is important for company productivity. In other words, job mobility *within* a company is better for that particular company's productivity than job mobility *between* companies.[191]

In this section, we consider the issues of retention and promotion from the perspective of employees. What is it that employees now expect from the companies they work for? In a

[187] Fraser Nelson (2022) Benefits Britain is back – and it's condemning millions to dependency, Daily Telegraph, 2 June; https://www.telegraph.co.uk/news/2022/06/02/benefits-britain-back-condemning-millions-dependency/

[188] Matthew Lynn (2022) We need a reckoning on the Covid spiv economy, Daily Telegraph, 2 December; https://www.telegraph.co.uk/business/2022/12/02/need-reckoning-covid-spiv-economy/

[189] Britain's jobless crisis fuelled by benefits anomaly that encourages people to work just two days a week, Daily Telegraph, 9 December; https://www.telegraph.co.uk/news/2022/12/09/britains-jobless-crisis-fuelled-benefits-loophole-encourages/

[190] https://twitter.com/bbcworld/status/1532044561807179779

[191] Although as we saw earlier, job mobility between companies and regions helps to increase economy-wide productivity.

later section, we look at what employers can do to improve the working environment for employees.

Chester Avey (2022)[192] states that ‘employee retention is a company or organisation’s ability to prevent staff turnover, instead holding onto their talent rather than losing it to their rivals. Companies with better employee retention levels can enjoy sustained performance and an advantage in attracting key staff. With the initial cost of training new employees an expense most companies can do without, retaining staff helps to keep turnover and associated staff costs lower’. He continues: ‘Companies live or die by the success of their employees. Bringing in not only technically great people but also those who have the right mentality and attitude boosts organisational culture. But hiring great staff is only half the battle and companies must fight hard to retain their best staff to help their business keep growing’.

The world has changed since Covid and employers are going to have to accept this. Gerwyn House, education and skills director at ICS Learn, argues that ‘For the first time, people really do understand what a proper work-life balance is, because they have experienced it. Covid-19 removed a physical nine-to-five space and gave people the ability to work wherever they chose to. Now employers have given them that, they can’t take it away’.[193]

2.7.5.1 Improving employee retention and progression

What keeps employees willing to work for the same company?

Avey (2022) discusses five ways to improve the retention of employees:

1. Nailing recruitment and development

The best way to hire the right people is to hone and refine your recruitment process. Not only should the process be effective in helping you find the right candidates, but it must also not be too long or drawn out as this can make people look elsewhere.

It’s useful to glean from an interviewee more information about their career aspirations and, in particular, whether they’re looking to gain experience from your company to add a skill to their CV before hopping onto another job or if they are looking to grow with you. Consider partnering with a professional recruitment team with experience and expertise in your specific industry to help improve your hiring process.

But once staff are in the company it’s also essential to develop their skills and progress their careers. Businesses looking to reduce their turnover rate must help people not

[192] Chester Avey (2022) 5 Essential Business Upgrades to Improve Employee Retention, 21 November; https://www.insightsforprofessionals.com/en-us/hr/recruitment-and-onboarding/business-upgrades-to-improve-employee-retention

[193] As we will see later, some employers are beginning to have second thoughts on this.

only do their jobs better but feel a sense of development and achievement as the months and years pass.

A staff member who feels they have stagnated may be looking for an opportunity elsewhere to further test themselves if there are no such opportunities from within. Companies must invest in training and then implement the new skills into their processes to ensure this information is retained.

2. Fair compensation and attractive benefits

Modern employees are more concerned with finding a good fit for their job and company than before. Today, people are looking for a better work-life balance, attractive work benefits, and the companies they work for to be socially and environmentally responsible.

On top of this, many people are seeking jobs that provide a living wage, with over 11,000 companies in the UK already voluntarily implementing this. Upgrading your business by offering competitive pay and more attractive benefits can impact retention greatly.

Benefits like health insurance can go a long way to appeasing anxiety and stress that some staff may have about their wellbeing if they get sick. Perks like a breakout room that promotes gentle exercise help staff unwind and build relationships.

Flexible benefits may differ depending on your budget and smaller companies can't compete with large organisations. Instead, simple perks like remote working or scalable benefits based on company performance and targets can still make an impact. This creates a positive perception of your rewards package without becoming a millstone around your company's neck.

3. Creating employee wellness initiatives

Companies can develop a wellness programme for their staff to help people feel valued and a core part of the organisation they work for. Designed to encourage healthier lifestyle choices in the workplace and beyond, a company wellness program is the perfect business upgrade to promote retention and boost recruitment.

Statistics show that 28% of people say they've left a job in the last two years because of its impact on their mental health,[194] *so finding ways to reduce or eliminate it can stop staff from looking elsewhere. Successful company wellness programmes make staff feel like they can achieve their goals, feel cared for by their employer, and encourage acceptance in the workplace. In return, staff will be more productive, have better morale and teamwork will be improved.*

Examples of workplace wellness programmes include:

[194] https://studyfinds.org/mental-health-quit-job/

- *Financial counselling*
- *Healthy snack provision*
- *Wellness challenges*
- *Yoga or meditation classes*
- *Nutrition education*
- *Community service activities*
- *On-site childcare facilities*

4. Communication is key

It's easy to underestimate the importance of effective communication but in truth, it's one of the most critical aspects of employee retention. Companies should seek to upgrade their communication channels as quickly as possible to ensure that, more than anything, people understand what is expected from them.

Open lines of communication mean staff are more likely to feel comfortable asking questions if they aren't sure about something and are better prepared for their tasks. Consider a mentorship programme to further boost retention with just 8% of workers employed for 2 years or less quit[195] if they had a mentor compared to 26% for those without a mentor.

Communication is a two-way street and companies can look to improve the way they inform their staff through actionable feedback. For example, a manager may simply say to a member of their team that they expect them to perform better next quarter.

But this is a fairly ambiguous statement and a better way to communicate would be to set specific, related and measurable goals to define that improvement. Companies can also benefit from more direct communication from the high-level management team about how the business is performing and how their role is helping to contribute to overall success.

5. Management training programmes

Similar to improved communication, companies that develop management training programmes can help staff feel better supported and more likely to remain where they are. A lack of support and adequate leadership from managers is a big contributor to staff turnover. Investing in effective management training is a smart upgrade that not only boosts employee retention but also the soft skills of your senior staff.

Samantha Rupp (2022)[196] considers two more:

6. A collaborative office environment

[195] https://www.mentorcliq.com/blog/mentoring-at-work
[196] Samantha Rupp (2022) 9 Unique Work Benefits to Consider for Your Company, 17 March; https://www.insightsforprofessionals.com/en-us/hr/pay-and-benefits/unique-work-benefits

Nobody enjoys being stuck in a cubicle all day, and as businesses become more modern, they're noticing their employees need to collaborate now more than ever. So allow your employees to share space and use a flexible workspace to allow them to better work together and feel more connected to each other and the business.

Not only that, but you might consider getting rid of offices altogether. While some of your employees may be higher up on the totem pole than others, it doesn't mean your other employees don't deserve space of their own as well. Additionally, by giving everyone the same office environment, you allow a more open work environment that allows people to work with each other instead of separately.

7. Flexible work hours

Depending on the type of business you run, it might not be necessary for all of your employees to work a nine to five. For example, if you're running a marketing company, your graphic designers might not need to be available during working hours. Instead, they could work when they felt most productive and get more work done.

Allowing your employees to work flexible hours can help them better manage their work-life balance, enabling parents to take care of their children and reducing overall stress. But, of course, there are some situations when you'll need your employees to work during set hours. Before you start letting your employees choose their hours, consult HR and determine which employees can work different hours and if it's feasible for your business.

Workhuman (2022)[197] considers another:

8. Employee recognition

There are four reasons why employee recognition is vital for retention:

(1) Employee recognition strengthens connection to your company culture – while reducing burnout

A strong connection to company culture drives a sense of purpose and collaboration, reduces burnout and is strongly associated with decreased employee turnover intention. In short, when workers are thanked, they feel more connected and are more likely to stay with your organisation.

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[197] Workhuman (2022) Four Reasons Why Employee Recognition is Vital for Retention; https://response.insightsforprofessionals.co.uk/Transfer/jc3r41kfcjgiqsnsmfyictntq7fn6k4zka3do6doq78ig7dqkpbo/ptpgcc4dcwasspmkcteskiuwkfoinhtscjuu4xe

That's because appreciation strengthens the essential bonds of a culture that workers want to be a part of. When employees are more intentional about saying "thank you," they feel more connected to your organisational culture and community.

No thanks? People who've never been thanked at work are 2x as likely to look for a new job in the next 12 months.

A values-based employee recognition programme puts the power of gratitude to work, aligning your humans with your core values and your company culture.

And because a values-based employee recognition programme is designed with rewards that map to each of your company's values, it integrates those ideals into employees' everyday thoughts and actions. When employees feel more connected to your company culture, they are more likely to stay. And grow.

(2) Employee recognition supports and advances your diversity, equity and inclusion (DE&I) initiatives.

There's a strong business case for making DE&I central to your organisation's DNA, including its profound and very real power to attract and retain the best talent.

Because let's face it, knowing that an organisation is genuinely committed to DE&I is a key consideration for many – if not most – of your top talent. Both present and future.

(3) Employee recognition builds your work community by celebrating life events.

Why is community important? Bringing people together from across your organisation deepens social connections, gives them a sense of belonging and builds a culture that people want to be a part of. And stay a part of.

That's why a recognition programme that celebrates life events is an important tool in retaining valuable employees. And – as the report points out – it's even more important because many workers are either working remotely or in a hybrid arrangement.

39% of workers feel valued as individuals when their organisation acknowledges and celebrates a personal life event.

Remote workers employed at companies that commemorate life events feel more respected (78% vs. 58%) and appreciated (75% vs. 44%) overall than remote workers at companies that do not. Forging a stronger sense of community and connection makes your organisation a place where people want to work.

(4) Employee recognition creates a psychologically safe, connected work environment

Witnessing colleagues being thanked publicly is associated with employees feeling more grateful. And that translates into other benefits such as greater appreciation for their achievements and a stronger connection to colleagues and culture.

In addition, public appreciation creates a psychologically safe environment in which employees feel empowered to share opinions and ideas.

When employees witness moments of appreciation, they feel more respected at work and are more inclined to grade their manager more favourably.

Finally, witnessing public thanks is also associated with less burnout and stress. The more you can amplify and socialise recognition, the more impact it will have across your organisation.

Rupp concludes: 'Not all of these work benefits will make sense for your company. Depending on how many employees you have and their needs, some of these … benefits might not even be possible. Not only that, but it's important you find benefits that will help you attract and retain your top talent. Talk to your current employees to find out what types of benefits they'd like to make their work and home lives easier.

2.7.5.2 Providing support for workers with family commitments

Sarah O'Connor (2022) argues that 'Properly funding the NHS and social care would lift barriers to growth, by allowing people to get the care they need so they can work. The same goes for addressing the UK's expensive and inflexible childcare provision. People in their 50s and 60s, as well as increasingly suffering from ill health themselves, are often now called upon to help care for grandchildren and ageing parents as well'.[198]

Elizabeth Dunkley (2022)[199] points out that: 'Britain has the highest childcare costs in the developed world – a typical two-earner family in the UK spends around 30% of their household income on nurseries and childminders, twice as much as in France and three times higher than in Germany or Japan. This is despite the state subsidising childcare to the tune of £7.1 billion annually. Unaffordable childcare has disastrous social and economic consequences, as women leave the workforce to avoid extortionate childcare costs; this is a hammer blow to equality and national productivity'.

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[198] Sarah O'Connor (2022) Kwarteng's policies won't get inactive Britain working again- The labour force needs investment in health, social care and childcare, Financial Times, 27 September; https://www.ft.com/content/e52b5aea-61f0-4b5c-9367-16751c64a90f

[199] Elizabeth Dunkley (2022) Solving the Childcare Challenge, Centre for Policy Studies; https://cps.org.uk/research/solving-the-childcare-challenge/?cmid=b32ad89f-8059-4606-8101-1d3242f9a8d3; https://cps.org.uk/wp-content/uploads/2022/05/Solving-the-Childcare-Challenge-CPS.pdf

Figure 38 shows that nursery costs for children under the age of 2 eat up 63% (49%) of the median earnings of a female part-time (full-time) worker, while Figure 39 shows that the lack of affordable childcare is the biggest single reason holding back women from increasing their hours of work.

Childcare costs in Great Britain for children in nursery (per year)		Women's median earnings (per year)	% of earnings absorbed by childcare
< 2-year-olds (part-time)	£7,160	£11,324	63%
< 2-year-olds (full-time)	£13,718	£28,021	49%

Figure 38: Childcare costs for children in nursery in relation to women's median earnings

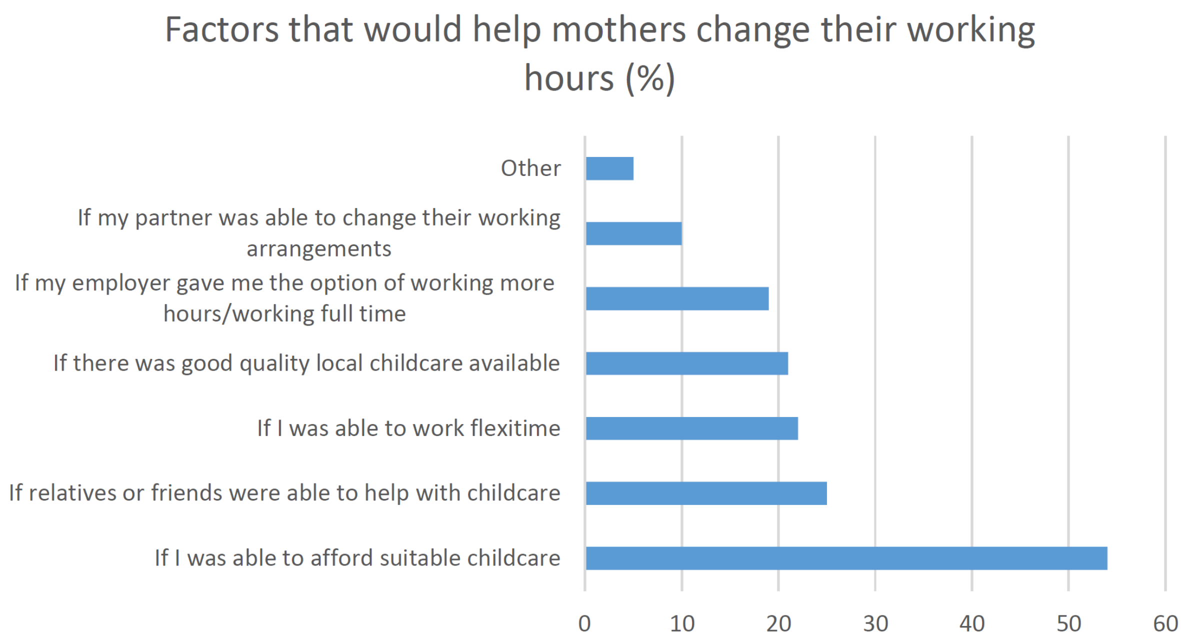

Figure 39: Factors that would help mothers change their working hours (%)

Dunkley proposes 'a threefold solution that would deliver for families and the economy while bringing the country in line with its European neighbours. The added bonus: implementing them would not burden the taxpayer with any additional cost:

> *First, the government must cut the excessive levels of red tape around early childcare years and relax ratios [of children per childminder]. England has the most stringent ratio regulations in the developed world, driving up costs for nurseries and thus parents. By simply relaxing child-staff ratios to French levels, we could cut childcare costs in half without undermining safety.*
>
> *Second, the government should reassess the compulsory nature of the Early Years Foundation Stage. The EYFS is unusual internationally for being mandated for children below the age of compulsory education. We should assess whether EYFS ought to be*

scrapped, made voluntary, or restricted in scope; parents ought to have the right to choose the type of childcare they want for their child.

Finally, it should seek to actively increase cheaper, informal childcare and childminders. The UK's unique amount of regulation on early years childcare has resulted in a rapid decline in the number of childminders – often a much cheaper alternative. Numbers have halved in the last decade from 103,000 in 1996 to 34,800 in 2019 and subsequently driven up costs. Reducing red tape in the sector and pushing these numbers back up would enable parents to return to work and allow nurseries to be more innovative and responsive in what they offer.

During a worsening cost of living crisis, minimising childcare costs could go a long way. Preventing the average cost of a full-time nursery from rising above the average monthly mortgage payment would go a long way with families struggling across the country.

The government has listened to these concerns and in the Spring Budget 2023, the Chancellor announced 30 hours of free childcare for every child over the age of 9 months, with support being phased in until every single eligible working parent of under 5s gets this support by September 2025. The government estimates this will save a family with a two-year-old child an average of £6,500 a year, assuming they use 35 hours of childcare every week, equivalent to a 60% cut in childcare costs. The government will also pay the childcare costs of parents on Universal Credit moving into work or increasing their hours upfront, rather than in arrears – removing a major barrier to work for those who are on benefits. To qualify, all parents in a household must work at least 16 hours a week at minimum wage. The maximum they can claim will also be boosted to £951 for one child and £1,630 for two children – an increase of around 50%. The government has also relaxed the ratio from 4 children per adult to 5. The package is worth £6.5bn overall.[200]

2.7.5.3 Retaining older workers in the workforce

With older employees, the risk is, not that they move jobs, but that they retire from the workforce altogether. Delphine Strauss (2022)[201] discusses a report by Demos which found that people can be nudged into taking early retirement by a combination of ill health, a poor workplace culture and lack of flexibility from managers: 'It's clear there are lots of people who are not choosing to leave work but feel they have to'.

To reduce early retirement, Demos recommends that the government work with employers to increase access to occupational health services, overcome ageist recruitment practices and redesign jobs to meet older workers' needs.

[200] https://www.gov.uk/government/news/chancellor-unveils-a-budget-for-growth
[201] Delphine Strauss (2022) Why are Britain's over-50s really leaving the labour market?, Financial Times, 2 November; https://www.ft.com/content/125df3f1-b0c0-4a5b-bf96-9bca0fc06404

Even more challenges are faced by older people who retired but later want to return to work. The IES's Tony Wilson argues that employment support services should be redesigned to assist them better. Employers need to make it easier for employees to work with long-term health conditions. But this is easier said than done: people with health problems might persuade an existing employer to give them the flexibility they need, but it would be difficult to do that with a new one. The IFS estimates that currently only 5-10 per cent of those who retire ever return to the labour force.

Matthew Lynn calls for increased financial incentives to encourage people to return to work: 'We could offer the over-55s a lower rate of National Insurance, for example, given that you already don't pay it over the state pension age. That might encourage a few to think again about retirement. We could offer a lower rate of tax for anyone coming off benefits'.[202] These suggestions caught the attention of the Treasury which in January 2023 was reported to be looking at tax incentives designed to discourage early retirement and to encourage those who have retired early to return to work.[203]

One specific proposal relates to the Lifetime Allowance (LA), the maximum value of an individual's pension pot before a higher tax rate (of 55%) applies to withdrawals. The LA was set at £1.8million in 2012, but was subsequently lowered to £1.07 million.[204] Many senior NHS doctors whose pension pots have reached the LA limit have decided to take early retirement to avoid the tax hit. A survey has indicated that 30% of doctors have reduced their hours, while a further 20% were considering early retirement.[205]

In the Spring Budget 2023, the Chancellor announced that the LA would be scrapped, and the Annual Allowance would be increased from £40,000 to £60,000. The aim is to 'incentivis[e] highly-skilled workers to remain in the labour market. As a result of the pensions tax measures announced today, an estimated 80% of NHS doctors will not receive a tax charge with respect to accruals under the 2015 NHS career average scheme'.[206] This problem has been known about for years, yet only now has the government decided to do anything about it. It will be much harder to get retired doctors back to work than stopping them retiring in the first place, since only 5-10 per cent of retired doctors are likely to be enticed back to work. It is another example of slow reactive policy making.

Other measures in the Budget include: a new 'returnerships' apprenticeship targeted at the over 50s which will refine existing skills programmes to make them more accessible to older workers, giving them the skills and support they need to find a recognisable path back into work; and a midlife MOT offer which will be expanded and improved to ensure people get the

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202 Matthew Lynn (2022) The dismal truth behind why so many Brits don't want to work: The list of barriers to work is getting so long it is hard to keep up, from easy benefits to absurd tax incentives, Daily Telegraph, 23 June; https://www.telegraph.co.uk/news/2022/06/23/dismal-truth-behind-why-many-brits-dont-want-work

203 https://www.dailymail.co.uk/news/article-11626757/Tax-breaks-going-job-sickness-benefits.html

204 https://www.dailymail.co.uk/news/article-11685685/Pension-reforms-50s-work-considered-Jeremy-Hunt-said-speech-economy.html?ico=related-replace

205 https://www.wesleyan.co.uk/insights/2022/09/doctors-leave-nhs

206 https://www.gov.uk/government/news/chancellor-unveils-a-budget-for-growth

best possible financial, health and career guidance well ahead of retirement. This is consistent with SMART planning.

2.7.5.4 Making sure productivity does genuinely increase

All the measures discussed above should, if they improve retention and the welfare of employees, also increase productivity. A well-designed SMART plan will consider all these factors – and modify them if necessary to suit both the preferences of each employee and the ethos of the company. Employers would need to conduct a cost-benefit analysis to assess whether there is a positive net gain from implementing each of them. That, in turn, would require them to introduce a metric for measuring improvements in productivity. The government also has an important role to play, e.g., in reducing the cost of childcare and encouraging older workers to remain in the workforce.

At the same time, we should be aware of the risk of gaming the system. There is growing evidence that some workers – especially younger ones from Generation Z – are abusing the new flexibilities. According to Ben Marlow (2023): 'a generation of younger workers appear to be growing up with a desperately workshy approach to life. Some view the office as an extension of their social life. In the most extreme circumstances, it isn't working too much that is seen as the problem but work full stop. … Thierry Delaporte, the boss of IT giant Wipro, [said] his senior leaders have to contact some staff on Instagram because many "don't read emails". … Many of the company perks that have become commonplace were introduced in an attempt to physically keep people at work. The first wave of Facebook employees understood that there was a trade-off involved. Now it seems that many just take it for granted and don't realise that such benefits come with expectations'. Companies are beginning to react to this according to Marlow: 'Even in the cosseted world of Silicon Valley, the pushback is already under way with super-heavyweights such as Google and Apple ordering staff back to the office and Elon Musk scrapping free [meals] for Twitter employees because there were "more people preparing breakfast than eating breakfast". …A round of vicious blood-letting is taking place too after investors called time on the tech industry's era of excess and now want to see real results. Wednesday's announcement of 10,000 job cuts at Microsoft is just the latest cull to reverberate through the industry'.[207]

Wall Street is taking a similar approach. The chief executives of JPMorgan, Morgan Stanley and Citigroup which adopted remote working to attract talent now point out its limitations: they said that bankers should be in the office most of the time and working from home has the potential to impact productivity. Jamie Dimon, CEO of JPMorgan, said 'It doesn't work for

[207] Ben Marlow (2023) Workshy Gen Z staff who can't be bothered to read their emails need a reality check, Daily Telegraph, 19 January; https://www.telegraph.co.uk/business/2023/01/19/weak-kneed-managers-enabling-workshy-gen-z-staff1

young kids or spontaneity or management. Research and technology jobs were among the only roles where it is reasonable to work from home'.[208]

In the UK, companies are also having second thoughts on WFH, with Tony Danker, Director General of the Confederation of British Industry, saying that the UK's economic recovery is being held back by the 'crazy WFH culture' and that most companies 'secretly want everyone to come back to the office'.[209]

This appears to confirm Dyson's claim that homeworking is damaging productivity and killing collaboration. So the SMART plan needs to recognise the trade-off involved and implement working arrangements that genuinely increase productivity.

2.7.6 The service sector

The Institute for Customer Service discusses six measures to improve service sector productivity which can 'reduce effort and generate value for both customers and the organisation':[210]

1. Make the case that focusing on customer service will improve productivity
    - *Elevate the productivity agenda from a narrow, transactional one by highlighting the "whole life" cost and value of customer engagement*
    - *Highlight the amount of time spent on dealing with problems for customers caused by your organisation or a supplier*
    - *Find evidence, from your organisation and other sources about the link between high levels of customer satisfaction and better financial performance*
2. Understand why and how customers interact with your organisation
    - *Identify customers' objectives and the extent to which they are achieved*
    - *Measure customers' perceptions of your quality of service*

[208] Paul Clarke (2023) Wall Street bank CEOs slam working from home-'This is not an employee choice', Financial News, 20 January; https://www.fnlondon.com/articles/wall-street-bank-ceos-slam-working-from-home-this-is-not-an-employee-choice-20230120
[209] https://www.mailplus.co.uk/edition/news/economy/253591/british-recovery-is-being-held-back-by-crazy-wfh-culture
[210] Top tips on Improving Service Productivity, Institute for Customer Service, 10 June 2020; https://www.instituteofcustomerservice.com/top-tips-on-improving-service-productivity/

- *Map the customer journey: where employees are spending time and effort; the impact of internal hand-offs and supplier relationships; and the extent of problems, repeat contacts and rework*

3. Identify opportunities to reduce customer effort

- *Activities that add no value*

- *Failures that cause problems or rework*

- *Activities that take longer than customer expectations to complete*

- *Measures that are misleading or unhelpful*

4. Automate and simplify processes

Harness artificial intelligence, automation and process review to improve efficiency of back office processes and routine customer interactions [this is known as Business Process Re-engineering (BPR)]. Examples could include:

- *Redesign bills to reduce queries*

- *Access to information that answers straightforward queries*

- *Equip employees with information to select the right tools for the job*

- *Enable customer self-serve [so the customer is more involved on the production and delivery of the service]*

- *Integrate customer data sources*

- *Multi-channel contact packages to increase call handling efficiency*

- *Speed up payment processes*

5. Engage, develop and empower employees

- *Ensure all employees have an appropriate understanding of the organisation's key purpose, values and objectives and how their role relates to them*

- *Recruit for an appropriate mix of attitude and technical competence and experience*

- *Develop employees' skills in emotional intelligence, customer relationship management, commercial awareness and judgement*

- *Ensure all employees have a personal development plan or pathway*

- *Equip line managers with the skills and capabilities to engage effectively with their team including coaching, decision-making and accountability and performance management*

- *Encourage employees to collaborate to solve problems and produce ideas to improve productivity and customer satisfaction*

- *Enable employees to spend more time dealing with complex issues and creating value for the customer and the organisation*

- *Conduct regular, relevant and authentic communication with employees*

- *Give recognition to employees' contributions in improving productivity and customer satisfaction*

6. Address potential barriers to improving productivity

- *Demonstrate fairness in pay and incentives for employees.*

  - *Although pay and benefits are generally not strong drivers of positive employee engagement, unsatisfactory compensation can undermine engagement. Employees – especially the most highly engaged and the lowest paid – see pay and incentives as the most significant barrier to their organisation improving its productivity.*

- *Align individual performance measures and the organisation's customer satisfaction and financial objectives to promote desired employee behaviours and competences*

  - *Be transparent about how the organisation measures customer satisfaction, productivity and business performance*

The following additional measure have also been proposed:[211]

7. Reducing service levels

- *Reducing service levels suggests that the service provider can reduce the quantity of service without affecting the quality of service. For example, a doctor may spend less time with each patient he is treating. However, in case of delivery of high levels of services, reducing service levels may adversely affect the prospects of the service organisations.*

[211] Steps or Guidelines for improving productivity in service industries; https://accountlearning.com/steps-or-guidelines-for-improving-productivity-in-service-industries/

8. Substituting products for services

- *Substituting a product for the service can well improve the productivity of services. For example, the telegram service has been replaced with a new data transfer technology.*

9. Introducing new services

- *An effective service may be designed in the place of a less effective service. For example, the offer of credit card by banks has reduced the need for an overdraft.*

10. Reducing the mismatch between supply and demand

- *In many service organisations, a mismatch exists between the supply of service and demand for the same. A service provider should always aim at striking a balance between these two factors. He may use spare capacity to cope up with the increasing demand. Where demand for the service is excessive, he may reduce the demand.*

Customer satisfaction is important to the reputation of service sector companies. To keep customers satisfied, they may need to build in some redundancy and have more staff on call than strictly necessary – even if it compromises productivity somewhat. Some companies do this by offering minimum service standards with penalties if they are not met. This helps to reduce the risk of dissatisfied customers broadcasting their complaints on social media. This is another way of striking a balance.

The Institute for Customer Service offers Figure 40 as an example template that can be adapted to different organisational contexts.

The above proposals were intended primarily to apply to large private-sector service providers. Indeed, many would not be relevant for small private-sector providers. For example, hair dressers might find it difficult improve productivity, since they might already be 'providing quality service while maximising efficiency by helping the highest number of clients [i.e, the unit of service] possible and keeping them satisfied at the same time'.[212]

Most of the above measures discuss what service sector companies themselves need to do to improve productivity. But a few relate to employees: engaging, developing and empowering employees; demonstrating fairness in pay and incentives for employees; and aligning individual performance measures and the organisation's customer satisfaction and financial objectives to promote desired employee behaviours and competences. These measures would be embedded in the SMART plan these companies design for their staff.

[212] Chron Contributor (2021) Reasons That Productivity Is Difficult to Improve in the Service Sector, Chron, 23 February; https://smallbusiness.chron.com/reasons-productivity-difficult-improve-service-sector-18834.html

Input measures of productivity

- Employee costs↓
- Capital and operational costs↓
- Employee engagement↑
- Volume and nature of customer contacts↑

Efficiency and effectiveness

- Volume of work completed↑
- Time to process work/resolve issues↓
- Issues outstanding↓
- Time to answer↓/abandoned contracts↓
- Quality of work↑/quality assurance↑
- Amount of rework↓/repeat contacts↓
- Volume of complaints↓
- Available hours worked↑
- Regulatory compliance↑/breaches↓
- Safety breaches↓

Quality of customer service

- Customer satisfaction↑
- Customer effort↓
- Right first time↑
- Skill and professionalism↑
- Sentiment↑
- Trust↑
- Reputation↑

Output measures of productivity

- Revenue↑
- Revenue per customer/customer segment↑
- Customer retention↑
- Lifetime customer value↑
- Profitability↑
- Return on capital employed↑
- Revenue per employee↑
- Regulatory compliance↑
- Social purpose↑

Figure 40: An example template for measuring productivity improvements in the service sector that can be adapted to different organisational contexts
Source: Institute for Customer Service. Note: the direction of the arrow indicates how productivity responds to an increase in the item

2.7.7 The public sector

The proposals in the previous section could, with suitable modifications, apply to public-sector organisations and help to increase the ‘output the public services produce per unit of input, after taking account of the materials consumed (for example, medicines in the health service) and the impact of the outputs on outcomes’.[213]

In terms of excess public sector jobs, in May 2022, the Prime Minister, Boris Johnson, tasked ministers with cutting 91,000 civil servants who had been appointed to help deal with the pandemic and the aftermath of Brexit. The reductions of around 20% would see the workforce return to 2016 numbers. Jacob Rees-Mogg, the Brexit Opportunities minister, said that there was a lot of duplication within government departments, e.g., in communications, and reducing numbers will mean that the remaining staff are being used ‘as efficiently as possible’. Dave Penman, General Secretary of the First Division Association of senior managers and professionals in public service said: ‘To govern is to choose and ultimately this government can decide to cut the civil service back to 2016 levels, but it will also then have to choose what the reduced civil service will no longer have the capacity to do. Will they affect passports, borders or health? Without an accompanying strategy, these cuts appear more like a continuation of the Government’s civil service culture wars, or even worse, ill-thought out, rushed job slashes that won’t lead to a more cost-effective government’. [214]

However, in October 2022, it was announced that the plans to fire 91,000 civil servants would be scrapped because of the high upfront cost of redundancies, which could have reached several billion pounds. Instead, the government announced it would restart the civil service fast-stream programme which appoints 1,500 university graduates a year. When this was suspended in May 2022 to reduce staffing numbers,[215] ministers were warned that the move ‘risks cutting off the supply of people who have the digital and project management skills to improve public services’. A government source said: ‘We’ll be guided by getting the best outcomes at the most efficient cost. That’s what business does and it’s the way we’ll deliver the best services for the British public’.[216]

It remains unclear how public-sector jobs with titles like Director of Lived Experience Practice contribute to ‘getting the best outcomes at the most efficient cost’.

[213] Richard Heys (2020) Productivity measurement – how to understand the data around the UK’s biggest economic issue, ONS, 13 March; https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/articles/productivitymeasurementhowtounderstandthedataaroundtheuksbiggesteconomicissue/2020-03-13

[214] https://www.standard.co.uk/news/politics/boris-johnson-civil-service-job-cuts-cabinet-cost-living-crisis-b999770.html

[215] https://www.bbc.co.uk/news/uk-61641930

[216] https://www.theguardian.com/politics/2022/oct/31/ministers-scrap-target-cutting-91000-civil-service-jobs

2.7.8 Immigration

The right type of immigration policy can, in principle, increase productivity because (1) it can provide workers with skills that are lacking amongst domestic workers, and (2) it can provide workers for particular sectors (for example, agriculture and hospitality) where there are significant shortages.

Skilled workers can already enter the country under the skilled worker visa programme. The problem with unskilled labour shortages could be resolved using temporary work visas as has been suggested by, for example, Roger Bootle (2022)[217] and Alan Manning, the former head of the government's Migration Advisory Committee.

The issue of immigration reflects the multi-dimensional nature of the productivity problem and the need for policy coordination and consistency, since one policy (increasing immigration) can reduce the effectiveness of and possibly negate another (getting welfare beneficiaries into work). We know from experience that easy immigration reduces the incentive for companies to train British workers or make the jobs more attractive.

However, our recent history has been one lacking in policy coordination and consistency. Bootle (op cit) discusses a current example:

> *Tony Danker, the Director General of the Confederation of British Industry, said last week that the government should allow more immigration to relieve shortages of labour in key sectors of the economy. …He is undoubtedly right that some industries are suffering from an acute shortage of labour, especially agriculture and hospitality. …Reduced numbers of people from Eastern Europe [following Brexit] have been offset by increased arrivals from the rest of the world. These people, however, are not a perfect substitute for those from Eastern Europe as they do not have the same skills, education or work experience.*[218]
>
> *This is about as far as Mr Danker's case can be sustained. The underlying assumption of his argument is that the needs of "business" trump everything else. …[But] business is there to serve society and not the other way round. And society has a legitimate concern about immigration. A large number of its members are very worried about it. …[I]n a small island with limited spare space, cramming in more people gives rise to congestion costs in everything from roads and public spaces to the provision of public*

[217] Roger Bootle (2022) Migration is not the economic cure-all that the business elite believes: An open-door policy would not be a sustainable solution to our economic challenges, Daily Telegraph, 27 November; https://www.telegraph.co.uk/business/2022/11/27/migration-not-economic-cure-all-business-elite-believes

[218] For example, Ukrainians professionals, allowed into the UK in response to the Russian Invasion, were often in low-paid jobs in hospitality and the food sector, because their English was not yet good enough or their qualifications not valid (Delphine Strauss (2022) How can Britain solve its post-Brexit labour shortage? Employers not main driver of latest surge in immigration — nor would loosening rules solve all workforce problems, Financial Times, 25 November; https://www.ft.com/content/89f0fc87-ebad-47fd-bdd4-748c42c49a1)

services. …The greatest pressure is felt in the housing market. Unless the supply of housing can be greatly increased – and we all know from bitter experience the barriers against this – a higher population will lead to increased real house prices and a lower quantity and quality of living accommodation. And then there are the wider, societal effects. There is a limit to the number of immigrants who can be successfully absorbed and integrated into the home country. This goes beyond mere economics and speaks to the essence of what holds a society together.

Manning adds that when migrants spend their earnings, they raise demand for labour as well as supply – so to see migration as 'a solution to a generalised labour shortage [is a] fallacy'.[219]

H M Treasury is relying on immigration to increase tax revenues and reduce the budget deficit. The Office for Budget Responsibility (OBR) is predicting that net migration will be around 250,000 p.a. over the next few years. Some of this increase covers migrant workers on both the 'skilled worker list' and the 'shortage occupation list', the latter of which was expanded in the Spring Budget 2023 to include bricklayers, roofers, carpenters, plasterers and construction workers – doing the very craft jobs that British workers no longer seem to want to do.[220] The extra tax raised is intended to offset the effect of the higher tax rates on existing workers and companies that were imposed in the Autumn Statement 2022 by Chancellor Jeremy Hunt which the OBR acknowledges have created 'growing disincentives' for workers to work and for companies to invest. The taxes raised on the new migrant workers will help to fund the inflation-protecting increase in working-age benefits and the state pension announced in the Autumn Statement. With working-age benefits protected in real terms and real wages falling, it seems unlikely that this will provide much incentive for beneficiaries to voluntarily seek work or increase their hours. So, in effect, the government plans to bring in new (both highly skilled and craft) workers from abroad so they can pay for the welfare benefits of British citizens who do not want to work or who cannot find suitable jobs on the basis of their graduate degrees.

However, some of the increase in net migration is accounted for by people who might not work as the OBR explains:[221]

Given the significant change in the composition of net migration since the new post-Brexit migration regime was introduced in 2021, there is considerable uncertainty about the participation rate of new migrants. Migrants into the UK have historically been skewed toward those of working age. In 2021, 70 per cent of UK residents born outside the UK were aged 26 to 64 whereas only 48 per cent of those born in the UK were in this age group. Our previous forecasts have therefore typically assumed that migrants have higher average participation rates than the resident population, given

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[219] Delphine Strauss (2022) How can Britain solve its post-Brexit labour shortage? Employers not main driver of latest surge in immigration — nor would loosening rules solve all workforce problems, Financial Times, 25 November; https://www.ft.com/content/89f0fc87-ebad-47fd-bdd4-748c42c49a15

[220] 15 March 2023; https://www.gov.uk/government/news/chancellor-unveils-a-budget-for-growth

[221] Para 2.26, Economic and fiscal outlook – March 2023, Office for Budget Responsibility; https://obr.uk/efo/economic-and-fiscal-outlook-march-2023/

their age profile. However, the latest visa data suggest that work visas made up just 20 per cent of the total visas issued in 2022, study visas 30 per cent, and non-work non-study visas – including dependent, Ukraine and British National Overseas[222] visas – 50 per cent. The latter group is the fastest growing category since the pandemic. It is therefore likely that the participation rate of migrants under the post-Brexit regime will be lower than in the past, so we have assumed they will have the same participation rate as the resident population [63.0 per cent].

It is not clear how aggregate productivity will increase under these circumstances. The Spring Budget was billed as the 'Budget for Growth', but the OBR predicts that GDP will contract by 0.2% in 2023. Some economists believe that the net effect will be to 'amplify the recession already underway'.[223] In other words, although over the next few years, working age population growth will be positive, this could be more than offset by negative growth in labour force productivity and labour force utilisation (see equation (1)).

An appropriate immigration policy must therefore take all these factors into account and provide a balance between the economic and social costs and benefits in a way that increases aggregate productivity across the whole economy. This in turn requires the government to provide the infrastructure – new homes, schools, hospitals, roads, reservoirs, power stations, etc – to meet the needs of a growing national population.

2.7.9 A comprehensive workforce strategy

The International Longevity Centre UK (ILCUK) calls for the introduction of a comprehensive workforce strategy across the whole economy, given the predicted future shortages of workers in the UK.[224]

The ILCUK predicts a shortfall of 2.6 million workers in the by 2030 as a result of population ageing, the Covid pandemic and Brexit. These shortfalls will affect the whole economy, with manufacturing, retail, construction, transport, health and social care among the sectors projected to be hardest hit. To plug these gaps, the government should introduce a comprehensive workforce strategy looking at:

- How to support people to stay in the workforce for longer, e.g., by supporting healthy workplaces, supporting carers and creating flexible conditions that suit people's needs.

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[222] Mainly from Hong Kong.
[223] Szu Ping Chan, Charles Hymas, and Tom Rees (2022) Why Jeremy Hunt is relying on a surge in migrants to boost Britain's flagging economy: New arrivals to the UK could help deliver much needed growth as tax burden hits new high, Daily Telegraph, 17 November 2022; https://www.telegraph.co.uk/business/2022/11/17/why-jeremy-hunt-relying-surge-migrants-boost-britains-flagging/
[224] International Longevity Centre (2022) Plugging the gap: Estimating the demand and supply of jobs by sector in 2030, 13 January; https://ilcuk.org.uk/plugging-the-gap/

- How to ameliorate childcare costs and reintegrate people into the workforce following timeout for caring or a health need
- The role of migration and automation in addressing major workforce gaps.

In particular, the strategy would be aimed at:

- Supporting longer and more productive working lives by: supporting physical and mental health at work, promoting skills and lifelong learning, addressing age discrimination at work, ensuring greater flexibility, including for carers and those re-entering the labour market
- Considering the role of migration in addressing vacancies and skill shortages, especially in sectors like health and social care, and professional and scientific jobs
- Utilising technology, innovation and automation to enhance productivity, support existing jobs and create new ones.

A comprehensive workforce strategy is something the government should introduce in order to increase productivity across the economy over the long term. Jeremy Hunt actually laid out ‘four pillars’ of such a strategy at a speech at Bloombergs UK headquarters in January 2023: ‘enterprise’ (incentivising innovation and hard work), ‘education’ (upskilling the workforce), ‘employment’ (getting people back to work and off welfare) and ‘everywhere’ (levelling up).[225]

2.8 Companies – how they can be supported to improve their productivity

In this section, we discuss how the productivity of companies can be increased. Companies need to design a SMART plan both for themselves and for each of their employees. Doing so is critical to them becoming high performance organisations.

2.8.1 Effective productivity management

The key to improving productivity in companies is effective productivity management.[226] This involves using modern human resource practices and will be particularly important in the new world of hybrid working: ‘Managers use goals, incentives, development, and communication strategies to enhance employee performance and help them increase their productivity. This productivity maximises the business’s gains either directly – through improved productivity and quality – or indirectly – by retaining the best talents, upskilling them, and providing

[225] https://www.proactiveinvestors.co.uk/companies/news/1004525/chancellor-jeremy-hunt-hits-out-at-declinism-as-he-unveils-four-pillars-for-growth-1004525.html
[226] Ishan Gaba (2022) What Is Productivity Management and Why Is It Important in 2023?, 29 November; https://www.simplilearn.com/tutorials/productivity/what-is-productivity-management

additional responsibilities. Well-managed teams come out with increased productivity. On the other hand, poor productivity management can be one of the biggest reasons for lacklustre employee performance and engagement'.

Companies also need to create 'a model for asynchronous [i.e., hybrid] work. Making work possible for employees to complete, regardless of where or when they're working, helps … people … become more adaptable. …[Companies also need to] structure work around projects, assignments and gigs'.[227]

Managers are key to the success of a productivity management system: 'Managers play a vital role in improving and maintaining productivity levels in their teams. A Gallup study points out that as much as 70% of the variance in employee engagement can be attributed to management. A good manager will have a clear understanding of the skill levels of each team member, their strengths and weaknesses, and work with them to ensure the best output from each of them.'. Managers, in turn, need to be trained effectively. Even if they have years of experience, productivity management strategies are always evolving, so training needs to be kept current.

A successful productivity management system involves the following:

- *Defining job/team responsibilities*

A clear definition of job/team responsibilities is essential, together with accurate measurement of the time and effort involved in completing tasks.

  - Quality
    Whether your employees produce tangible or intangible assets, align their work with performance metrics so that there's a distinct way to assess their work quality.

  - Impact on the organisation
    Some projects might not have any particular metrics; however, they produce intangible results that positively impact your company. These impacts can be an improvement in employee engagement, helping other employees work better, and improving public awareness of your company.

  - Insights gained

[227] Cornerstone Guidebook (2022) Identify the skills employees need to succeed; https://www.cornerstoneondemand.com/uk/resources/article/identify-the-skills-employees-need-to-succeed-uk/

Often, the failure of a project can yield unexpected insights that your team can utilise to make rectifications in their approach as they move ahead. These kinds of failures should be considered productive in helping your team reach its goal of producing innovative work.

- Types of errors made

Mistakes can deter progress. However, instead of being judgmental, you should assess whether the teammate made mistakes out of being careless or dealing with a complex task where they could not clearly figure out what was the right thing to do. Reprimand your employee if it is the former, especially if the mistake's repeated. But, if not, discuss the decision-making process with your team and help them come up with ideas to avoid similar situations in the future.[228]

- How independently they worked

Everyone's time in the organisation is valuable. If an employee keeps on asking questions and seeking detailed feedback before making any constructive effort to solve their problems themselves that can negatively affect others' productivity.

- *Create a performance evaluation sheet*

Consider each of these factors and other relevant ones to create a performance evaluation sheet of your teammates where you can assign a point value to each factor. Assign weights to each factor depending on its priority level. Find each employee's productivity score by applying the weight of the point for each metric; this will reflect your company objectives.

A successful productivity management system also requires regular catch-ups with staff to check progress and maintain strong working relationships.[229] Check-ins are important for the following reasons:

- A chance to ask questions

When your employees have questions on their minds, it's important that they have the confidence and the opportunity to come forward and ask them. This helps to ensure

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[228] Note that the evidence shows that it is much better to admit mistakes and learn from them, rather than trying to cover them up. See Matthew Syed (2015) Black Box Thinking, John Murray Publishers.

[229] Don't Underestimate the Power of Employee Check-Ins, HR Insights for Professionals, 9 November 2022; https://www.insightsforprofessionals.com/en-us/hr/talent-management/employee-check-ins-simplified-guide

that managers are always aware of any ongoing issues, concerns or priorities within their teams, which is essential to maintain high standards of performance and productivity.

People are much more likely to speak up and raise what could prove to be crucial points if they're actively encouraged to do so by their manager. Regular check-ins provide reassurance for employees that there will always be a time and place for them to ask questions that could otherwise be overlooked.

- Personal engagement

Whether it happens virtually or in person, employees should have regular, face-to-face engagement with their managers. One of the many reasons why this is so important is so individuals can establish the levels of trust required to feel confident, happy and well supported at work.

This is particularly relevant in the current era of telecommuting and hybrid working. Research has shown that loneliness is one of the most common struggles people face when working remotely, so managers should be making a conscious effort to maintain healthy, supportive connections with their team members.

Over time, this investment in personal contact and relationships will lay the foundations for a positive and productive workforce.

- Relevant, regular feedback

Regular feedback is crucial to workforce morale and productivity. Employees who are delivering good results deserve to be recognised for it, while those who are struggling need constructive guidance to develop and improve in their roles.

Frequent check-ins give you the opportunity to engage directly with individuals and have honest, detailed conversations about how they're performing. On the basis of these discussions, you can set relevant goals that motivate the employee and generate results for the business.

Furthermore, regular supervisor meetings offer people the chance to share their thoughts on how they're being managed, what works well for them and where they think positive changes could be made.

2.8.2 Improving the working environment for employees

A key component of effective productivity management is improving the working environment for employees – as we saw in Section 2.7.5.1 above.

According to a report by Cornerstone (2021),[230] 'Employees crave a work experience that's uniquely personal, and where growth and development is rapid and continuous. And yet historically, work design has centred on efficiency. The end result is rigid structures and workflows that don't meet employees' needs or flex with fast-changing conditions. Rebuilding work in a way that works for everyone requires a more human and holistic approach to people experience design. Where every individual has the chance to define their own path to growth and has an opportunity to solve problems, build skills, and grow on their own. Where the best interactions — personal, digital or a combination — create a sense of purpose and belonging, and support a productive, energised and diverse workforce. To provide this holistic people experience requires technology that can create individualised and self-driven experiences at scale. It must be self-learning, based on the individual preferences and goals, and it must show people what they need, right when they need it'. The report notes that 68% of employees in high-performing organisations say their employer understands their unique skills and interests compared to 26% in low-performing organisations.[231]

This implies that companies need to carefully select and then manage staff on the basis of their talent. Talented individuals have 'the ability to have an impact on a company, through strong performances within the workplace or with a development potential. They possess the skills and drive that, if nurtured, could make a difference within the organisation'.[232] Effective talent management involves five steps:

> 1. Monitor progress
>
> *Communicate a plan that the whole workforce will understand, demonstrating what the objectives are and how they are going to contribute to the driving force of the business. Make sure that all the employees understand what is expected of them within their roles, this will ensure clarity within the talent management scheme.*

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[230] Cornerstone (2021) Meet the Future Ready: A Guide for Talent Leaders; https://www.cornerstoneondemand.com/uk/resources/article/meet-the-future-ready-guide-for-talent-leaders/
[231] Mercer (2021) Win with empathy: 2021 Global Talent Trends Study.
[232] Top 5 Practices for Effective Talent Management, HR Insights for Professionals, 23 January 2017; https://www.insightsforprofessionals.com/en-us/hr/talent-management/top-practices-for-effective-talent-management

Training and support should be offered to the right people and their progress should be both measured and monitored.

2. Employment and business strategy

The business strategy should dictate the direction of the talent management, so that the right people with the necessary skills for future roles are considered. For example, Procter and Gamble believe that "Business decisions and talent decisions as one." By understanding the business needs, talent can be hired and matched to future development plans for the company.

3. Develop existing talent

Employees' proficiencies, personal traits, experience and knowledge should be taken into account when hiring too. If is from this information that you will be able to identify those with the most potential. More emphasis should be placed on growing existing employees into new roles and as there are now spending restrictions on most company's recruitment processes, it makes more sense to concentrate on utilising employees existing skillsets.

4. Placing people in the right jobs

…Clear career direction will allow companies to invest in the right people, and those employees will understand the path the company has set out for them, taking talent into consideration.

5. Invest

Focus the company's resources into individuals who are going to create value within the business. Too much time is wasted on trying to train up an entire workforce. Concentrate instead on what the employees will bring to the business, assess their potential and then capitalise on this asset.

Many organisations utilise the talents of their own staff instead of outsourcing certain skillsets. It is now not sufficient to attract employees without progression potential. Creating a strategy to develop, manage and retain the individuals within the organisation is of upmost importance. The investment in staff needs monitoring, by measuring the quality of employee output, it will be evident whether the asset is effectual.

One particular model for effective productivity management that is also consistent with improving the working environment is ROWE – a Results-Oriented Work Environment:[233]

[233] Results-Oriented Work Environment. Can a ROWE Workplace Ever Work?, 24 June 2022; https://www.insightsforprofessionals.com/en-us/hr/talent-management/can-results-oriented-work-environment-ever-work

> *In a ROWE workplace, you can come and go from your office as you please – there are no obligatory meetings and you aren't even required to come into the office at all if you don't fancy it.*
>
> *Instead, the system works by measuring the performance and output of employees, rather than the hours they work or their presence in the office. It's simple, really: employees have complete freedom when it comes to their projects and complete independence in meeting their targets.*
>
> *… When working hours aren't set in stone, there must still be ways of establishing targets. To ensure this is the case, goals should be SMART: specific, measurable, actionable, relevant and time-bound. Employees must know they're required to deliver a certain piece of work by a particular deadline before moving on to the next project.*
>
> *… [R]elationships between managers and employees are transformed to one which is based on trust, accountability and results.*
>
> *…By its very nature, ROWE is performance-related and regular check-ins are therefore essential to ensure results are being delivered as promised.*
>
> *… [R]esults-oriented work can increase productivity for 40% of workers, while 78% fewer sick days are taken when it's implemented in the workplace. However, turnover may be higher: 77% more workers are let go due to this working style because a lack of results is easy to spot.*

2.8.3 Investment

Critical to improving company productivity is the investment strategy. This is where a company's own SMART plan comes into play. The government also has an important role, not only in supporting UK companies to invest, but also in encouraging foreign direct investment which is a big contributor to increasing productivity.

2.8.3.1 Domestic investment

The SMART plan should begin with the research and development spend, as Mitha (2019) argues:

> *R&D activity stimulates productivity and economic growth. It promotes new technological innovations and encourages their diffusion throughout industry, and the production of new products, processes or services. The government provides substantial support for R&D spending by companies through the tax system (£3.7bn in 2015-16). It also supports spending on the development of new techniques and*

technologies as a customer, e.g., through defence procurement contracts, and by making grants to universities and research bodies.

R&D activity facilitates experimentation with new products and processes that tend to be a defining feature of commercial innovations. Such experimentation allows firms to assess the commercial prospects of new goods and services before they are brought to market. US data analysis suggests that firms only adopt between 30% and 50% of the new technologies they try, and that about a quarter of new consumer goods for sale are discontinued in the following year.

Wider benefits from R&D

The classical policy rationale for supporting private R&D is the need to address 'market failure' because knowledge creation has the characteristic of a public good. Firms cannot appropriate all the external benefits of their investment for themselves through the market because of the intangible nature of knowledge. Basic research would be underprovided in the absence of government support. It creates wide ranging spillover benefits and social benefits for others that are not captured by the market mechanism. Patents cannot fully inhibit the spillover benefits created by R&D activity.

Firms that aren't involved in the original research can imitate and improve upon the ideas and techniques discovered by the pioneers. For example, most of the technology used inside the Apple iPhone was originally created for the US defence department, including its internet connectivity, touch screen and GPS apps.

This again demonstrates the importance of learning by doing.

The Autumn Statement 2022 included the following on investment and innovation:

<u>Investment</u>

In addition to economic stability, policy certainty is fundamental to giving businesses the confidence to invest. The government remains committed to supporting businesses to invest and grow by:

- *keeping the UK's headline Corporation Tax Rate internationally competitive at 25% – the lowest in the G7 – and protecting 70% of trading companies at 19% with the Small Profit Rate*
- *setting the Annual Investment Allowance (AIA) at its highest ever permanent level of £1 million from 1 April 2023*
- *reducing the burden of business rates by providing £13.6 billion of support for businesses over the next five years*

The government is unlocking tens of billions of pounds for investment from UK insurers in long-term productive assets by publishing the final reforms to Solvency II.[234]

The government will refocus the Investment Zones programme. The government will use this programme to catalyse a limited number of the highest potential knowledge-intensive growth clusters, including through leveraging local research strengths. The Department for Levelling Up, Housing and Communities will work closely with mayors, devolved administrations, local authorities, businesses and other local partners to consider how best to identify and support these clusters, driving growth while maintaining high environmental standards, with the first clusters to be announced in the coming months.[235]

Innovation

Science and innovation are some of the UK's greatest strengths. With less than 1% of the world's population, the UK hosts 3 of the world's 10 best universities, has produced up to 13% of the world's most impactful research and has the second highest number of Nobel Laureates of any nation. The UK also ranks fourth in the Global Innovation Index. These remarkable achievements in R&D and innovation generate significant economic and social benefits for the whole of the UK and beyond.

Government spending on R&D plays a crucial role in stimulating private sector investment. Public spending on R&D will increase to £20 billion a year by 2024-25, a cash increase of around a third compared to 2021-22. This is the largest increase in R&D spend ever over a Spending Review period.

As part of this increase, Innovate UK programmes were allocated £2.6 billion across the Spending Review period, which will support the UK's most innovative companies and leverage in private sector investment. The government is also now confirming that funding for the UK's nine Catapults[236] *will increase by 35% compared to the last 5-year funding*

[234] Solvency II is a EU directive which 'sets out requirements applicable to insurance and reinsurance companies in the EU with the aim to ensure the adequate protection of policyholders and beneficiaries'; https://www.eiopa.europa.eu/browse/solvency-2_en

[235] The Spring Budget 2023 announced the creation of 12 new Investment Zones (similar to Canary Wharf in East London) across the UK. These will be in the West Midlands, Greater Manchester, the Northeast, South Yorkshire, West Yorkshire, East Midlands, Teesside and Liverpool, together with at least one each in Scotland, Wales and Northern Ireland.

[236] Mitha (2019) explains:

> *The government has taken a leaf out of Germany's book to create a new innovation infrastructure by establishing catapult centres. They are modelled on Germany's Fraunhofer Institutes, which support innovation and its diffusion to German companies. For example, the high value manufacturing catapult bridges the 'valley of death' between technology ideas and preparing products for the market ('commercialisation'). It delivers £15 for every £1 of government investment. There are currently ten catapults with a staff of 1,500 employees and an annual budget amounting to 0.01% of GDP. They support around 600 smaller companies each year.*

cycle. This £1.6 billion investment will allow Catapults to continue to support innovation and commercialisation by providing access to world-leading facilities, skills, and equipment across the UK. This includes the Compound Semiconductor Applications Catapult in Wales, the Digital Catapult centre in Northern Ireland and the Offshore Renewable Energy Catapult centre in Scotland.

The government will help more small and medium sized manufacturing firms boost their productivity through advanced digital technology by extending the Made Smarter Adoption programme to the East Midlands. This follows the positive feedback the Made Smarter Adoption programme has already received in the North East, West Midlands, North West, Yorkshire & the Humber.

As part of the ongoing review of R&D tax reliefs, the government is reforming the reliefs to ensure taxpayers' money is spent as effectively as possible. There is significant error and fraud in the small and medium-sized enterprises (SME) scheme, with the generosity of the relief making it a target for fraud. By contrast, the separate R&D expenditure credit is better value but has a rate that is less internationally competitive. The government is therefore rebalancing the rates of the reliefs.

The government is committed to ensuring cutting-edge innovative firms have access to finance to invest and grow. As previously announced, the government is increasing the generosity and availability of the Seed Enterprise Investment Scheme and Company Share Option Plan. The government remains supportive of the Enterprise Investment Scheme and Venture Capital Trusts and sees the value of extending them in the future. The government will also continue to champion institutional investment into innovation so that UK savers can benefit from the growth of high potential businesses.

Competition is fundamental for growth and productivity. The government will bring forward the Digital Markets, Competition and Consumer Bill in the third Parliamentary session to provide the Competition and Markets Authority with new powers to promote and tackle anti-competitive practice in digital markets. Opening these markets to greater competition will encourage new challenger firms, spur innovation, and provide consumers with higher quality products and greater choice.

One of the key phrases in the above is 'policy certainty is fundamental to giving businesses the confidence to invest'. Let's hope that this time, we do have policy certainty.

There is a strong case for a rapid and large increase in the number of catapult centres. Germany now has more than 70 Fraunhofer Institutes, employing almost 25,000 people and helping around 6,000 to 8,000 large and small companies each year. They have an annual budget of a little under 0.1% of German GDP. The government should also seek to emulate Germany's Steinbeis Enterpises. Created in 1971, it is a network of about 6,000 technical professional staff that operates through a thousand enterprises. Companies across Germany can draw on their knowledge, skills, experience and know-how.

Roger Bootle adds, in an article discussing the Autumn Statement 2022: ‘We need to stimulate business investment by reducing taxes on business and improving the tax treatment of investment. We need to reduce the overall burden of taxation on both businesses and people, thereby helping to persuade both of them to locate here and to remain here. The whole regulatory system needs to be reformed’.[237]

But even if all political parties could agree to deliver policy certainty in areas relating to investment, including tax and regulatory policy, this would not be sufficient to deal with a key point made earlier by Wolf (2020),[238] namely the ‘defects in corporate governance, which bias spending against investment’. Since the first Industrial Revolution, the owners of British companies have typically preferred solutions involving labour, rather than capital investment which involves more fund raising and risk taking – despite the brilliance of British inventiveness.

It is this behavioural bias – more than anything else – that needs to be overcome if corporate investment in the UK is to fulfil its critical role in improving UK productivity. Each company’s SMART plan must contain measures to overcome the UK’s corporate aversion to investment.

2.8.3.2 Foreign direct investment

Mitha (2019) notes the importance of foreign direct investment (FDI):

> *Foreign direct investment tends to boost productivity in the UK by importing capital, new technology, modern work practices and developing skilled managers. Foreign-owned firms tend to be twice as productive as domestic companies, despite using local staff and managers, and being subject to the same rules and regulations. The secret of their higher productivity lies in the fact that they tend to employ more physical and human capital per hour worked than domestic firms. If domestically owned firms increased their physical and human capital to the same level, it would eliminate Britain’s productivity gap.*

Clearly, FDI could provide a powerful stimulus that encourages domestic companies to raise their game. They would need to adopt similar capital investments in order to compete. So the government should do more to incentivise FDI.

FDI assets have been increasing by 11% p.a. since 2016, to reach 90% of GDP by 2021:[239]

- 2016 : £1,187.3 bn

[237] Roger Bootle (2022) This Government is too weak to fix Britain’s chronic growth problem, Daily Telegraph, 20 November; https://www.telegraph.co.uk/business/2022/11/20/government-weak-fix-britains-chronic-growth-problem

[238] Martin Wolf (2020) The economic consequences of Liz Truss: It is surely a fantasy that further tax cuts and deregulation will transform performance, Financial Times, 20 September; https://www.ft.com/content/a9be9db6-a91e-48e4-8d69-4bbfff7e0f5f

[239] Office for National Statistics, 23 January 2023; https://www.statista.com/statistics/281744/gdp-of-the-united-kingdom/

- 2017 : £1,392.5 bn
- 2018 : £1,572.8 bn
- 2019 : £1,640.6 bn
- 2020 : £1,919.2 bn
- 2021 : £2,002.4 bn

FDI can also be used when domestic companies do not have the expertise to undertake the investment programme. An example is investment in civil nuclear power. Despite building the world's first nuclear power station, the expertise was lost when various UK governments lost interest in nuclear in favour of renewables. When the government changed its mind and favoured a more mixed strategy, it had to rely on expertise and investment from France and China to restart the building of nuclear power stations.

However, that soon brought the strategy into conflict with another important government objective, namely national security. When it became clear that China had become a strategic threat to Western interests, the influence of China had to be removed from national infrastructure programmes when there was a potential threat to national security. This is another example of poor coordination between different government departments.

2.8.4 Automation

Automation is critical to improving productivity – especially of processes that people find boring to do. The UK is very poor at automating processes compared with Germany. Germany has ten times more robots than the UK. For the last 20 years, UK companies relied on abundant cheap labour from Eastern Europe and this reduced the incentive for these companies to automate.

Germany is the most automated economy in the EU.[240] Around 230,000 industrial robots are in use in Germany, mainly driven by export demand, according to the International Federation of Robotics, and this is increasing at the rate of 20,000 units per annum. Germany has a third of Europe's robots – which is three times more than Italy (78,200 units), five times more than France (44,800 units) and ten times more than the UK (23,000 units), not much more than Germany's annual increase. Germany ranks fifth after China, Japan, Korea and the U.S.

Robots are a key component of the fourth industrial revolution as Mitha (2019) points out:

> *The widespread diffusion of robots infused with artificial intelligence will offer businesses substantial scope for increasing productivity. Orders for industrial robots have increased three-fold over the past decade, and private equity invested in AI has doubled over the past year. Autonomous robots have a clear edge over human workers. They are stronger, cleverer, learn more quickly, and keep going longer. They*

[240] https://www.hannovermesse.de/en/news/news-articles/germany-is-the-most-automated-economy-in-the-eu

don't need pay, holidays, lunch breaks, tea breaks, and never go on strike or repeat mistakes. For example, the annual cost of operating a robot welder is about a third of what it would cost to hire a human welder.

Digital and AI-robotics are daily opening up productive opportunities and possibilities for advanced economies. The OECD has warned that the spread of AI infused robotic technology will transform economies and radically change people's jobs and careers. Some 14% of existing jobs could disappear in the next 15 to 20 years, and a further third will face a significant risk of change. This mass displacement of workers will occur unless human capital deploys and leverages the new technologies wisely, to create new and better quality jobs for workers.

Otherwise, the surge in productivity they create will exacerbate income and wealth inequality. The benefits will accrue to the small number of workers in productive industries that retain their jobs, and to the owners of the businesses that create or adopt the new technologies (or both).

There tends to be a lag between technological breakthroughs and surges in productivity, but practically every worker will face a technological challenge to their continued employment at some point in the future. The government, businesses and educational institutions need to work together to address the challenges facing the economy. In particular, to prepare workers and future members of the workforce by encouraging them to engage in lifelong learning to prevent the depreciation of their skills, facilitate movement between roles, and mitigate the risk of obsolescence.

Amazon is one of the most technologically advanced companies in the world and a pioneer in deploying AI-robotics. It has risen to the challenge posed by AI-robotics by recently announcing its intention to retrain a third of its US workforce to address the impact of automation. Some of the workforce will be retrained for higher-skilled work, but Amazon has made it clear that others will need to move into careers outside the company; they will no longer be required. While Amazon's profits and share price have rocketed, its workers have not benefitted to the same extent from the prosperity created by its transformational productivity growth: the median wages of its employees last year were a modest $28,836.

Roger Bootle (2019)[241] argues that, although it will take time, the world of employment will be transformed by AI. UK businesses must 'anticipate this and embrace it, not to ignore it and rely on an endless supply of labour from abroad. Of course, there will be some industries where it is still difficult to get sufficient workers and where AI will be of limited help. Hospitality is a leading example'.[242] Corporate SMART plans must therefore include a commitment to automation and AI.

[241] Roger Bootle (2019) The AI Economy, Nicholas Brealey Publishing

[242] Roger Bootle (2022) This Government is too weak to fix Britain's chronic growth problem, Daily Telegraph, 20 November; https://www.telegraph.co.uk/business/2022/11/20/government-weak-fix-britains-chronic-growth-problem

2.8.5 Trade associations, business consultants, institutional investors, academic institutions, and venture capital

Trade associations have an important role in supporting companies increase their productivity. For example, the manufacturers' organisation MakeUK 'from shop floor to boardroom [works] with businesses in all industries and all sizes' to improve their productivity.[243] Large firms might look to business consultants for advice.

Institutional investors, such as pension funds, can also have an important influence on increasing company productivity. Roel Beetsma (2022),[244] using Danish data, found that 'pension funds raise firms' productivity by investing in their equity. …We also find evidence to suggest that the increase in productivity tends to be larger the longer the duration and the larger the equity investment by pension funds'. This suggests that institutional investors should engage more with the directors of the companies in which they invest in order to help increase the productivity of these companies.

Academic institutions can provide useful research. One example is the Productivity Institute, based at Alliance Manchester Business School, which explores 'what productivity means for business, for workers and for communities – how it is measured and how it truly contributes to increased living standards and wellbeing'.[245] Another is the Centre for Productivity and Efficiency at Lancaster University.[246] UK companies tend to have much weaker links to academia than in other countries. By doing so, they are missing out on potentially helpful research output and advice that could help improve productivity.

Start-up companies need a different type of support. One promising source of support comes from venture capital in the form of business incubators, accelerators and seed funds,[247] combined with capability training. The idea is to address the funding and capability gaps that inexperienced entrepreneurs typically face. Research by Juanita González-Uribe and Santiago Reyes (2021)[248] indicates that business accelerators and seed funds generally succeed in increasing the average performance of participating businesses. However, the evidence also shows that the ventures that benefit the most from participation are those at more advanced stages of development (rather than at the ideas or minimum viable product (MVP) stage) and with more educated founders.

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[243] https://www.makeuk.org/services/productivity-improvement

[244] Roel Beetsma (2022) Do Pension Fund Investments Make a Difference? Effects on Firm Productivity, International Centre for Pension Management, 2 November

[245] https://www.productivity.ac.uk/

[246] https://www.lancaster.ac.uk/lums/research/areas-of-expertise/centre-for-productivity-and-efficiency/

[247] E.g., the Blue Lake Seed Fund in the UK.

[248] Juanita González-Uribe and Santiago Reyes (2021) Identifying and Boosting "Gazelles": Evidence from Business Accelerators, Journal of Financial Economics, 139(1): 260-287; https://doi.org/10.1016/j.jfineco.2020.07.012

Jonathan Bone et al. (2019)[249] point out that capability gaps constitute a significant obstacle for start-up businesses. Many entrepreneurs cannot turn their ideas into sustainable companies because they lack relevant capabilities, e.g., business know-how or business connections. Incubators, accelerators and seed funds can play an important role in filtering out the most promising candidates and helping them build the capabilities they need – by providing, say, workspace, mentoring and training – before these entrepreneurs seek more specialised financing from traditional venture capital.

Established company SMART plans should arrange discussions with trade associations, business consultants, institutional investors and academic institutions with the aim of learning how to improve productivity. Start-up company SMART plans should begin by estimating funding and capability needs and then arrange discussions with appropriate business incubators, accelerators and seed funds.

2.8.6 A comprehensive strategy for corporate investment and productivity improvement

The government must introduce a comprehensive strategy for corporate investment and productivity improvement – and that strategy needs to be sustained until its aims are achieved. This will involve the government supporting companies to develop their SMART plan to overcome their behavioural bias against investment.

Company boards should charge a specific board member with responsibility (1) for the company's R&D, investment and automation strategy and (2) for designing and implementing the company's productivity management strategy and for turning the company into a high performance organisation.

The government must also learn why similar strategies in the past have failed. An example is the new Industrial Strategy[250]introduced in 2017. The aim of this was to boost productivity and earning power across the country by focusing on 5 foundations: ideas, people, infrastructure, business environment, and places. According to Mitha (2019): 'At the heart of the strategy was increased expenditure on R&D, with a target for the government and private businesses to spend 2.4% of the GDP on R&D (the average level of spending by G7 nations) within a decade, an increase in spending by a total of some £7bn between 2017 and 2022. This represents a significant increase on the previous peak of R&D spending which was 1.69% of GDP. However, according to the CBI, on the trend of R&D expenditure over the past two years, Britain would not be able to meet its target until 2053'. This shows how a great strategy is failing because of poor implementation and resourcing. How many people – who are one

[249] Jonathan Bone, Juanita Gonzalez-Uribe, Christopher Haley and Henry Lahr (2019) The Impact of Business Accelerators and Incubators in the UK, Department of Business, Energy and industrial Strategy, Research Paper Number 2019/009; https://www.gov.uk/government/publications/the-impact-of-business-accelerators-and-incubators-in-the-uk

[250] https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future

of the five foundations of the strategy – were actually aware that the government had introduced a new Industrial Strategy in 2017 that focused on them?

2.9 Government – what it needs to do to increase productivity

When it comes to the issue of productivity, the government's position is considerably more complex than that of workers and companies for a number of reasons.

First, the government has many more responsibilities than workers and companies. These responsibilities can be divided into two broad categories: (1) the government has its own direct responsibilities for things like the national infrastructure, and (2) the government sets the framework – principally for regulation, taxes and subsidies – that then influence the economic behaviour of workers and companies.

Second, the government is responsible for planning for the long term (30 or 50 years ahead), but does not itself have a long-term existence. A particular government is elected for 5 years and rarely lasts more than 15 years. There are also frequent changes of government leaders even within the same government and its departments of state. Governments therefore have no natural sense of long-run continuity, despite being responsible for long-term planning and the implementation of those plans. The result is continual changes in long-term plans as governments are constantly being buffeted by short-term problems which they have to fire fight. The result is policy churn, whereas what is needed is long-term policy stability across many political business cycles. The behavioural biases of the government personnel that result in this policy churn must be recognised and factored into the government's own SMART plan for productivity – which the government must then stick to come hell or high water. To repeat, policy stability over an extended period of time must be at the heart of this plan.

This section considers what the government can do to increase productivity, looking in turn at the national infrastructure, automation, regulation, and taxes and subsidies.

2.9.1 National infrastructure

The government's 2020 National Infrastructure Strategy is intended to 'transform UK infrastructure [in particular, transport, digital, energy and utility networks] in order to level up the country, strengthen the Union and achieve net zero emissions by 2050'.[251] The government accepts that there are 'long-term issues that have held back UK infrastructure. These issues include "stop-start" public investment, insufficient funding for regions outside

[251] https://www.gov.uk/government/publications/national-infrastructure-strategy

of London, slow adoption of new technology, policy uncertainty that undermines private investment, and project delivery plagued by delays and cost overruns'.

The Strategy sets out how the government will address these issues and do things differently: how it will build back fairer, faster and greener. It describes how the government will:

- *Boost growth and productivity across the whole of the UK, levelling up and strengthening the Union: the government wants to level up communities and nations across the UK through investment in rural areas, towns and cities, from major national projects to local priorities;*

- *Put the UK on the path to meeting its net zero emissions target by 2050: bold action is needed to transform the UK's infrastructure to meet net zero and climate change commitments. The government will continue to decarbonise the UK's power, heat and transport networks – which together account for over two-thirds of UK emissions – and take steps to adapt to the risks posed by climate change;*

- *Support private investment: the UK has a proud record of attracting private investment into its infrastructure. But the government recognises investors have faced uncertainty in the past few years. This Strategy – and the Energy White Paper which will follow shortly – are aimed at providing investors with clarity over the government's plans, so they can look to the UK with confidence and help deliver the upgrades and projects needed across the country; and*

- *Accelerate and improve delivery: the government wants to transform the way infrastructure projects are delivered in the UK. This will be achieved through wide-ranging reforms from speeding up the planning system, to improving the way projects are chosen, procured and delivered, and greater use of cutting-edge construction technology.*

This approach is underpinned by high levels of government investment, with record levels of investment for the railways, strategic roads, broadband networks and flood defences.

This Strategy also puts innovation and new technology at the heart of the government's approach. Every infrastructure sector could face transformative technological change over the next twenty years. From electric vehicles, to hydrogen heating systems, to 5G and its successors, new technologies have enormous potential to improve the environment and the daily lives of people across the UK. This Strategy will ensure the UK is at the forefront of this technological revolution.

The whole of the UK will benefit from this Strategy. Where policy is reserved for the UK government, this Strategy includes measures which will benefit every nation, such as a radical improvement in mobile coverage in rural areas. Where policy sits with the devolved administrations, Scotland, Wales and Northern Ireland will receive commensurate funding through the Barnett formula.

Around half of all infrastructure spending is private, especially in energy, water and telecoms. As part of its aim of reducing policy uncertainty that holds back investment, the government is setting up a UK Infrastructure Bank, to co-invest alongside the private sector in infrastructure projects. The government recognises that private investment has made an important contribution to the national infrastructure and will be critical over the coming decades as the UK moves towards meeting net zero in 2050. The government is committed to supporting private investment and is taking action across the following areas:

- *The Infrastructure Bank will operate UK-wide, be based in the North of England – the home of the world's first industrial revolution – and support the government's ambitions on levelling up and net zero;*

- *The bank will also be able to lend to local and mayoral authorities for key infrastructure projects, and provide them with advice on developing and financing infrastructure;*

- *The government is committed to the model of independent economic regulation, but will refine it to ensure it provides a clear and enduring framework for investors and businesses and delivers the major investment needed in decades to come, while continuing to deliver fair outcomes for consumers;*

- *The government will produce an overarching policy paper on economic regulation,[252] which will consider regulator duties, how to inject more competition into strategic investments and the benefits of a cross-sectoral Strategic Policy Statement; and*

[252] Department of Business, Energy and Industrial Strategy (2022) Economic Regulation Policy Paper, January;https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1051261/economic-regulation-policy-paper.pdf

- *The government will continue to develop new revenue support models and consider how existing models – such as the Regulated Asset Base model and Contracts for Difference – can be applied in new areas, and remains open to new ideas from the market. The government will not reintroduce the private finance initiative model (PFI/PF2).*

In the Autumn Statement 2022,[253] the Chancellor highlighted the importance of infrastructure (along with energy and innovation) for growth and increasing productivity:

> *During this Parliament there has been a step change in public investment in infrastructure. The Autumn Statement protects the public capital budget at record levels, meaning government will invest over £600 billion over the next five years.*
>
> *Investing in high quality infrastructure is crucial for boosting economic growth and productivity. Infrastructure spreads opportunity and prosperity across communities by connecting people to new jobs through faster and more reliable routes. Infrastructure is also the foundation for securing our energy independence and transitioning to net zero.*
>
> *The government will seek to accelerate delivery of projects across its infrastructure portfolio, rather than focus on the list of projects that were flagged for acceleration in the Growth Plan. The government will continue to ensure that all infrastructure is delivered quickly through reforms to the planning system, including through updating National Policy Statements for transport, energy and water resources during 2023, and through sector-specific interventions.*
>
> *The government is placing the UK Infrastructure Bank on a statutory footing. This will cement its status as a key institution that will facilitate long-term investment in infrastructure to tackle climate change and support regional and local growth.*
>
> *The Autumn Statement recommits to the government's transformative growth plans for our railways. These include East West Rail, core Northern Powerhouse Rail, and High Speed 2 to Manchester. These will provide fast, more reliable services and connect people to new job opportunities.*
>
> *The government also remains committed to supporting digital infrastructure investment through Project Gigabit, with an ambition to reach at least 85% gigabit-capable broadband coverage by 2025 and nationwide coverage by 2030. This will*

[253] https://www.gov.uk/government/publications/autumn-statement-2022-documents/autumn-statement-2022-html

ensure that every corner of the UK can access fast and reliable gigabit-capable broadband, driving economic growth and productivity.

The government will continue to secure the UK's energy security through delivering new nuclear power, including Sizewell C (subject to final agreement), and the roll-out of cheap, clean renewables, including wind and solar. This will support the government's commitment to reduce emissions, decarbonise the power system by 2035 (subject to security of supply) and reach net zero by 2050.

The government remains committed to levelling up and spreading opportunity across all areas of the UK. To support this, the Autumn Statement confirms that the second round of the Levelling Up Fund will allocate at least £1.7 billion to priority local infrastructure projects. Successful bids will be announced before the end of the year.

The government also remains committed to giving more local areas greater power to drive local growth and tackle local challenges. This includes delivering the commitment to agree devolution deals with all areas in England that want one by 2030. …

The government will deliver the Levelling Up White Paper commitment to sign new 'trailblazer' devolution deals with Greater Manchester and the West Midlands Combined Authorities by early 2023. The government is in discussion with the mayors of these areas to devolve powers to deliver levelling up in areas such as skills, transport and housing. These 'trailblazer' deals will act as a blueprint for other areas to follow.

As part of negotiations on trailblazer deals, the government will explore with Greater Manchester Combined Authority and West Midlands Combined Authority the potential to provide single departmental-style settlements at the next Spending Review. This could give local partners more flexibility and accountability over key economic growth funds, moving away from competitive bidding processes. Subject to progress of these discussions, the government will consider the eligibility of other mayoral combined authorities for these settlements, noting the need to ensure appropriate accountability structures are in place.

Once again, we are getting all the right sentiments. However, Ambrose Evans-Pritchard (2022),[254] World Economy Editor of the *Daily Telegraph*, argues that the Autumn Statement will actually do little to increase investment and get the UK out of its low-growth trap. There are some positive aspects: 'Research spending is preserved and the target of 2.4pc of GDP remains. The capital budget for infrastructure projects will be sustained in cash terms through the Long Slump of the next two years, acting as a countercyclical buffer and blunting the impact of recession. The core Northern Powerhouse and the roll-out of 5G and gigabit

[254] Ambrose Evans-Pritchard (2022) The Autumn Statement does not offer a way out of Britain's low-growth trap, Daily Telegraph, 17 November; https://www.telegraph.co.uk/business/2022/11/17/hunt-has-spared-us-austerity-doom-loop-investment-revolution0/

broadband will go ahead. So will the push for energy independence expansion through offshore wind, nuclear power, and home insulation'. On the other hand, 'it freezes public investment after two years, saving £14bn in what amounts to an 8pc cut in the capital budget. This is national self-harm given that we know from global best practice that infrastructure projects have a multiplier of around 1.5 and therefore pay for themselves with interest. … The cure for low private investment is not to freeze public investment as well. Mr Hunt should be doing the opposite: he should increase the capital budget, in turn unlocking the excess savings of the corporate sector. That is how you set off the virtuous circle of a capex boom'. Larry Elliot (2022),[255] Economics Editor of the *Guardian*, called the Autumn Statement 'managed decline'. So once again, short-termism dominates government decision making.

Equally important will be the effectiveness of implementation and ensuring value for publicly-invested money. In this respect, we should bear in mind comments made earlier that the cumulative impact of several relatively small improvements (e.g., to the transport system) can often be at least as big as that of the large high-profile 'megaprojects'[256] – and that public investments in the UK cost 40% more than equivalent investments on the continent. As the old saying goes, 'a billion here, a billion there, and very soon you are talking serious money'.

This suggests that once projects reach a certain scale, the tendering procedure ceases to be that competitive – and only a small number of large companies with the resources to provide all the required information on health & safety, diversity, GDPR, modern slavery, and net-zero, etc, will put in tenders. Once a company gets the contract, the project becomes 'too big to fail' and then cost overruns become virtually inevitable. The way to avoid this is to break the large project into smaller units, make the tendering process easier and more competitive, and then have much better cost control mechanisms in place. This will, of course, create coordination problems – which a large company would resolve internally. The alternative is to find out how continental megaprojects cost 40% less than those in the UK.

In respect of the national infrastructure, the government's SMART plan should recognise that productivity improvements must be the government's key priority and must dominate all other considerations (except for equally important export improvements). This means that maintaining the public investment programme is critical. It should not have been frozen in the Autumn Statement 2022. If Switzerland, Sweden and Denmark can maintain their public investment at 4% of GDP throughout the recession that followed the GFC, so must the UK

[255] Larry Elliott (2022) We think of Britain as a world-beating economy. We would be better off thinking about Taiwan, Briefings for Britain, 21 October; https://www.briefingsforbritain.co.uk/we-think-of-britain-as-a-world-beating-economy-we-would-be-better-off-thinking-about-taiwan/
[256] Eddington, R. (2006) Transport's Role in Sustaining UK's Productivity and Competitiveness: The Case for Action, London: Department for Transport.

maintain its investment programme through difficult times. The investment programme must also be implemented effectively to ensure value for publicly-invested money.

2.9.2 Automation

Automation is highlighted separately given its future significance. The government should adopt as much automation for the national infrastructure as possible.

However, there are barriers that need to be overcome. An example is the NHS. Matt Oliver (2022)[257] argues that 'attempts to digitise the NHS have proven stubbornly difficult'. However, the government has promised to 'radically innovate' and use new technology to deliver healthcare reforms, such as in digital record keeping, appointment management and analysis of X-rays. The aim will be to free up staff time for more productive uses: 'At the moment, even simple tasks can be frustrating. Everything from how much fluid a patient has drunk to whether they have been turned in bed must be diligently entered into an electronic records system, but just logging on to sluggish hospital computers can sometimes take five to 10 minutes alone. Hospital computer systems are also usually not linked up to GP surgeries and social care providers, which often forces staff to manually request information be shared by email or phone. Worse still, it is not uncommon for patients to be transferred from one hospital to another with no electronic records at all. Instead, they arrive accompanied by a sheaf of papers that must be read through'.

In 2022, the government announced a national strategy for local NHS care systems to have integrated patient records by March 2025. The strategy also wants to use technology to improve patient care. A particularly important application will be diagnostics, such as the use of AI to analyse X-ray images and CT scans. Further, robots could be trained to suggest treatments, triage patients, deliver tests results, write letters, and schedule appointments.

Specific examples currently being trialled include (1) the automation of appointment reminders using text-messaging systems, which can reallocate cancelled appointments, resulting in reduced missed appointments and faster GP referrals, (2) the use of AI to analyse thousands of patient feedback forms in minutes, instead of several days, to produce reports on how to improve services, (3) wearable digital devices that monitor lung function, blood oxygen levels, weight, sleep and temperature, information that can then be analysed by a machine algorithm which can identify any worrying symptoms and deliver alerts to doctors at a hospital, (4) machines that can be trained to identify anomalies in scans and improve cancer diagnoses, and (5) robots that stitch wounds, bring patients meals and porter them around the hospital.

[257] Matt Oliver (2022) Dr Robot: How automation and tech could cure the crumbling NHS, Daily Telegraph, 24 November; https://www.telegraph.co.uk/business/2022/11/24/dr-robot-how-automation-tech-could-cure-crumbling-nhs/

However, Professor Sir John Bell, Oxford University regius professor of medicine, warns that medical staff can be resistant to new technology because it could go wrong and make things worse. Yet, if the crisis is big enough, as during Covid, then new innovations can be adopted. The result was that the UK had a more accurate analysis on the spread of the disease than almost any other country: 'People said we're in a hurry, we're going to get this stuff done quickly. I call it the burning platform mentality. …But now many barriers have reappeared and the speed at which stuff happens has become glacial again'.

Bell argues that automation could make an enormous difference, but the NHS lacks the in-house expertise to develop the powerful, scalable software that is needed: 'I think it requires serious collaboration with the tech companies. Apple or Microsoft, or Oracle – they really get this stuff, they've got terrific software capabilities and they can make stuff that works'.

The government's SMART plan for automation must put in place measures for dealing with the reluctance of people to adopt new technologies and provide the resources to develop and implement the required software.

2.9.3 Regulation

Regulation has become a contentious issue in recent years: should it be tighter or looser?, should it be aligned with that of another jurisdiction (such as the EU or US) or should it be aligned with global standards? The Retained EU Law (Revocation and Reform) Bill[258] proposes to remove 2,400 pieces of EU legislation from the UK statute book by the end of 2023.

The EU's regulatory system is principally prescriptive or rules based and follows 'rules that are precisely drafted, highly particularistic, and prescriptive; gives regulatees advance notice as to what actions they can and cannot engage in; and provides no or limited exceptions, and limited flexibility in any specific factual context'.[259] As Derrick Berthelsen points out: 'The big advantage of such rules based systems is that companies have a very clear and specific set of rules to follow in order to ensure their product/service is deemed by the regulator to be compliant'. However, 'the disadvantages can be considerable': lack of flexibility; rule overload; under-inclusive (i.e., fails to catch some actions that are inconsistent with the regulatory objective); over-inclusive (i.e., prohibits actions which do not impact the regulatory objective); box ticking exercises that fail to meet the real regulatory objective; ability to game the rules (by seeking out loopholes which allow technical compliance, but fail to meet the ultimate regulatory objective) which then leads to an 'ever expanding rule book' in order to close these loopholes; higher costs; creates barriers to entry; stifles innovation and

[258] https://bills.parliament.uk/bills/3340

[259] Christopher Decker (2018) Goals-Based and Rules-Based Approaches to Regulation, Department for Business, Energy and Industrial Strategy Research Paper Number 8, May; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/714185/regulation-goals-rules-based-approaches.pdf

technological development; regulatory capture (e.g., the Dieselgate scandal[260]); and obsolescence and regulatory gaps (rules and regulations can rapidly become obsolete as the market/industry/technology changes, resulting in regulatory gaps).[261]

Perhaps we should reconsider the primary purpose of regulation which is to provide adequate protection for consumers, without overly burdening producers. It should not be there to protect incumbent producers against legitimate competition from new producers. Further, it should not inhibit innovation.

We should also be aware that, while poor regulations can inhibit productivity-improving economic activity, regulations, even good ones, cannot force organisations to improve their productivity.

So what type of regulation can help?

2.9.3.1 Outcome-based smart adaptive regulation

Good regulation should be outcome-based (rather than rules based), be smart in its implementation, and be adaptive to allow for future innovations.

With outcome-based regulation, 'regulators have a very clear end goal or objective in mind, but leave the method used to achieve that outcome to companies who have the freedom to arrive at the goal using any method they see fit'. [262] Outcome-based regulation is used, for example, by the Canadian Food Inspection Agency[263] and the Australia New Zealand Food Standards Code.[264]

The main criticism of outcome-based regulation is uncertainty over whether goals have been met to the satisfaction of the regulator. This can be dealt with using smart regulation. Smart regulation[265] was designed to provide a third way between command-and-control regulation and unfettered free markets.

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[260] https://www.transportenvironment.org/discover/true-scandal-dieselgate-regulatory-capture-te-says/

[261] Derrick Berthelsen (2023) How to leave EU regulations behind – Without decreasing quality or elevating costs, The Critic, 23 February; https://thecritic.co.uk/how-to-leave-eu-regulations-behind/

[262] Derrick Berthelsen (2023) How to leave EU regulations behind – Without decreasing quality or elevating costs, The Critic, 23 February; https://thecritic.co.uk/how-to-leave-eu-regulations-behind/

[263] https://inspection.canada.ca/about-cfia/acts-and-regulations/safe-and-responsive-regulatory-framework/outcome-based-regulations/questions-and-answers/eng/1545935508937/1545935509234

[264] E.A. Szabo, W.R. Porter, and C.L. Sahlin (2008) Outcome based regulations and innovative food processes: An Australian perspective, Innovative Food Science & Emerging Technologies, 9(2), 249-254; https://www.sciencedirect.com/science/article/abs/pii/S1466856407001695

[265] Neil Gunningham, Peter N. Grabosky, and Darren Sinclair (1998) Smart Regulation: Designing Environmental Policy. Oxford: Oxford University Press.

As spelled out by Gunningham and Sinclair (2017, p.134-5),[266] smart regulation is based on a series of regulatory design principles:

> *• The desirability of preferring complementary instrument mixes over single instrument approaches, while avoiding the dangers of 'smorgasbordism' (that is, wrongly assuming that all complementary instruments should be used rather than the minimum number necessary to achieve the desired result).*
>
> *• The virtues of parsimony: why less interventionist measures should be preferred in the first instance and how to achieve such outcomes.*
>
> *• The benefits of an escalating response up an instrument pyramid (utilising not only government, but also business and third parties) to build in regulatory responsiveness, to increase dependability of outcomes through instrument sequencing and to provide early warning of instrument failure through the use of triggers.*[267]
>
> *• Empowering third parties (both commercial and non-commercial) to act as surrogate regulators, thereby achieving not only better [regulatory] outcomes at less cost but also freeing up scarce regulatory resources, which can be redeployed in circumstances where no alternatives to direct government intervention are available.*
>
> *• Maximising opportunities for win-win outcomes by expanding the boundaries within which such opportunities are available and encouraging business to go 'beyond compliance' within existing legal requirements.*

While initially designed for environmental regulation, smart regulation can be applied more generally. For example, it could be argued that the Basel framework for bank regulation[268] or the Solvency II framework for insurance regulation[269] with their three pillars of minimum capital requirements (Pillar 1), supervisory review (Pillar 2), and market discipline (Pillar 3) are consistent with some of the principles of smart regulation. However, while the purpose of these frameworks is to provide adequate protection for bank depositors and insurance policyholders by taking a risk-based approach that assesses the overall solvency of banks and insurance businesses, this can often be accompanied by 'gold plating' of regulations which amounts to over-regulation.

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[266] Neil Gunningham and Darren Sinclair (2017) Smart regulation, Chapter 8 in Peter Drahos (Ed) Regulatory Theory: Foundations and applications, ANU Press, Acton ACT 2601, Australia.

[267] There is a three-sided enforcement pyramid, with escalation of enforcement possible up each 'face' of the pyramid, including the second face (through self-regulation) or the third face (through a variety of actions by commercial or non-commercial third parties or both), in addition to the first face (government action).

[268] https://www.bis.org/bcbs/basel3/b3summarytable.pdf

[269] https://www.eiopa.europa.eu/browse/solvency-2_en

Finally, regulation should be adaptive to allow for future innovations. A study from the Center for Government Insights at Deloitte[270] set out five principles to guide the future of regulation:

1. Adaptive regulation. Shift from 'regulate and forget' to a responsive, iterative approach.

2. Regulatory sandboxes. Prototype and test new approaches by creating sandboxes and accelerators.

3. Outcome-based regulation. Focus on results and performance rather than form.

4. Risk-weighted regulation. Move from one-size-fits-all regulation to a data-driven, segmented approach.

5. Collaborative regulation. Align regulation nationally and internationally by engaging a broader set of players across the ecosystem.

The study argues that 'For technological innovation, regulation can be catalytic – or a hindrance. As emerging technologies evolve, regulators from around the world are rethinking their approaches, adopting models that are agile, iterative, and collaborative to face the challenges posed by emerging technologies and the fourth Industrial Revolution. To promote innovation, regulators are also moving toward creating outcome-based regulations and testing new models in sandboxes. The [five] principles …can help regulators balance consumer protection and innovation effectively'.

So we need to look for outcome-based smart regulation that is adaptive to allow for new technologies but avoids over-regulation. Sir James Dyson[271] makes the case: 'we have to ensure that regulation and the tax regime actively support companies who are taking risks. Now outside the European Union, we have the freedom to remove red tape to encourage innovation and risk, backing those who invest with their own money, free of bureaucratic strictures. We should be embracing this hard-won opportunity'. But he then provides a warning: 'I fear a lack of ambition in Whitehall. Civil servants seem more comfortable taking their lead from the EU than exploiting the freedoms of leaving it. The government thinks it can heap taxes on business and apply ever-more restrictive regulations with no repercussions. But the inevitable consequences are cutbacks in capital investment, jobs and R&D. If we do the right things – produce enough engineers and unleash entrepreneurial power – then Britain's economy will flourish in the 21st century. But change is needed now if the UK is to

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[270] William D. Eggers, Mike Turley and Pankaj Kamleshkumar Kishnani (2018) The future of regulation: Principles for regulating emerging technologies, Center for Government Insights at Deloitte, 19 June; https://www2.deloitte.com/us/en/insights/industry/public-sector/future-of-regulation/regulating-emerging-technology.html

[271] Sir James Dyson (2022) The right to work from home risks destroying British innovation, Daily Telegraph, 4 March; https://www.telegraph.co.uk/business/2022/03/04/working-home-productivity-disaster-warns-sir-james-dyson/

have any chance of becoming a science and technology superpower by 2030. Leave it any longer and it will be too late; our competitors will have pulled even further ahead, and we will have lost the precious and fleeting chance to create wealth, jobs and opportunity'. To illustrate Dyson's concerns, the government recently delayed the introduction of both the UKCA product safety mark (a replacement for the CE mark) and its new Medical Device Regulations.[272]

Regulation must not impede fair competition. In particular, it must prevent regulatory capture whereby incumbent firms ask for regulations which make it more difficult for new firms to enter the industry. As Jarsulic (2022)[273] argues: 'More vigorous antitrust enforcement could also make a difference. Evidence from this recession and recovery demonstrates that general supply shocks create novel opportunities for incumbent firms to exercise market power and raise margins, adding to price increases. Effective antitrust would increase entry of new competitors, increase effective supply, and reduce the market power of incumbent firms'.

We also need to look for regulation which avoids top-down impositions. This can be particularly challenging when there is a divergence between the social and private costs and benefits of regulation. Dr Graham Gudgin (2022)[274] highlights the problem: 'Reforms to planning regulations for major infrastructure and energy projects are long overdue and will certainly accelerate growth but the tension between environmental concerns and new housing or commercial development will remain strong. …The first new reservoir in England for three decades is currently meeting determined opposition in Lincolnshire. The next planned for Cambridgeshire will be lucky to escape the same fate'.[275]

Housing provides a particularly challenging example. Everyone agrees that the housing stock needs to increase, but people do not want any new houses built near them (nimbyism).

The government's Levelling Up and Regeneration Bill is designed to speed up housebuilding. A report by Hughes and Morton (2022)[276] argues that the government's target of building 300,000 homes per year could be made more difficult if 'top-down targets' – such as cutting housing targets on greenfield sites in favour of brownfield sites and giving councils the ability to assess their own housing needs – are weakened or abolished as the government is also proposing. The report accepts that top-down targets are resented and that the government should aim to deliver homes in more consensual ways. However, it warns that removing them

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[272] FT Europe Express Newsletter, 18 November 2022

[273] Marc Jarsulic (2022) Why the Fed can't touch some of inflation's root causes - Fortunately, we can adopt five supply policies to reduce inflation and save plenty of jobs, income and opportunities that rate hikes might destroy, Financial News, 27 September; https://www.fnlondon.com/articles/inflation-root-causes-fed-action-view-20220927

[274] Graham Gudgin (2022) The Chancellor's Budget fiasco. What now?, Briefings for Britain, 8 October; https://www.briefingsforbritain.co.uk/the-chancellors-budget-fiasco-what-now/

[275] It is possible to overcome local opposition. In March 2023, it was announced that Portsmouth Water would build the Havant Thicket Reservoir with a £50m investment from the Pensions Insurance Corporation; https://realassets.ipe.com/news/pic-joins-investors-in-portsmouth-waters-uk-reservoir-project/10065631.article

[276] Samuel Hughes and Alex Morton (2022) Giving Back Control, Centre for Policy Studies, November; https://cps.org.uk/research/giving-back-control/

without developing credible alternatives could lead to a 20% fall in housebuilding, with some estimates as high as 40%. A 20% slump could see as many as 800,000 job losses in construction and related sectors.

Instead, the report proposes a number of alternative options to help gather local support for developments:

- Street votes
- More control over design and layout to local people
- Supporting SME builders
- Ensuring faster build-out on sites
- Potentially limiting the required land supply to five or 10 years

The report recommends that 'Instead of scrapping top-down targets, the government should look at ways in which it can mitigate their inflexibility, as well as addressing other unpopular features of the housebuilding system. Whatever happens, the structure of any new system needs to be put in place before the existing system is torn down, else we could see fewer homes, job losses and a blow to SMEs just when the country can least afford it'.

In the Autumn statement 2022,[277] the Chancellor announced that five sectors with the greatest potential for growth – digital technology, life sciences, green industries, financial services and advanced manufacturing – will be supported through measures to reduce unnecessary regulation and boost innovation and growth. He also commissioned a report by Chief Scientific Adviser and National Technology Officer Sir Patrick Vallance on how to change regulation to 'better support safe and fast introduction of new emerging technologies'.

This announcement is very welcome, but it did not take long for accusations of government short-termism to once again emerge. Dame Kate Bingham, former head of the UK Vaccine Taskforce, writing in an article in the *Financial Times* in January 2023 entitled 'Britain is losing its chance to become a life sciences superpower' said: 'Despite the astonishing successes of our life sciences companies, the sector is still the object of suspicion and incomprehension within parts of government. The recent decision to cut R&D tax credits for small, innovative high-tech companies makes the point perfectly. These have played a major role in helping such companies flourish here… [T]he UK has incredible resources and an unmissable opportunity to establish itself as a superpower. But if we are not to sacrifice the wellbeing of our children and grandchildren, seizing that opportunity requires real expertise, genuine partnership and a remorseless focus on the long term'.[278]

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[277] https://www.gov.uk/government/publications/autumn-statement-2022-documents/autumn-statement-2022-html

[278] Kate Bingham (2023) Britain is losing its chance to become a life sciences superpower – Short-termism and suspicion in parts of government risk our valuable future in precision medicine, Financial Times, 24 January; https://www.ft.com/content/70e1733d-ecd9-4c8e-bd6a-54b31377ede3

The regulations for these five sectors should be outcome-based, smart and adaptive – and incorporated into the government's own SMART plan which, in turn, should build in a promise to remorselessly focus on the long term.

A good start was made in the Spring Budget 2022, when the Chancellor described the 'innovation economy' as 'a central area of national competitive advantage for the United Kingdom' and announced new reforms on the regulations for medicines and medical technologies, including 'near automatic' approvals for new technologies that have been approved by regulators in other countries. There would also be a new 'swift' approval process for cutting edge technologies. In addition, the Chancellor, noting that the UK hosted a third of all AI companies in Europe, announced that he had accepted all the digital technology recommendations made by Sir Patrick Vallance in his review of AI. The government would invest £900m in developing a new super computer for the UK and £2.5bn in research on quantum computing. It also launched a new 'AI sandbox'[279] to help companies bring products to market more quickly together with a new annual prize, called the Manchester Prize, of £1m for researchers generating the 'most ground-breaking' AI research.[280]

2.9.3.2 Financial services regulation

The UK's financial services industry is very important for the UK economy:[281]

- 1.08 million jobs in the UK are in financial services: 3.0% of all jobs.
- Exports of UK financial services were worth £61.3 billion in 2021 and imports were worth £16.6 billion, so there was a surplus in financial services trade of £44.7 billion.
- Taxes raised on the financial services industry raised £28.8bn in 2020-21, or over 4% of all taxes collected that year.[282]

The government is of course aware of the importance of a competitive financial services industry and has conducted a number of reviews to help determine the UK's post-Brexit framework for financial regulation, e.g., Lord Hill's Listing Review,[283] Ron Kalifa's Fintech Review,[284] and Mark Austin's Secondary Capital Raising Review.[285]

[279] Sandboxes allow businesses to test new products and services in a live environment with appropriate consumer safeguards.
[280] https://www.gov.uk/government/news/chancellor-unveils-a-budget-for-growth
[281] CIBUK Clear Water News Bulletin, 12 October 2022.
[282]See also: TheCityUK (2023) Key facts about the UK as an international financial centre 2022, January; https://www.thecityuk.com/media/wympuijs/key-facts-about-the-uk-as-an-international-financial-centre-2022.pdf
[283] https://www.gov.uk/government/publications/uk-listings-review
[284] https://www.gov.uk/government/publications/the-kalifa-review-of-uk-fintech
[285] https://www.gov.uk/government/publications/uk-secondary-capital-raising-review

Barnabas Reynolds (2022),[286] a partner at Shearman & Sterling, argues that the UK's current system of financial services legislation, has two main problems: 'First, it reflects the EU approach to law, itself marred by unnecessary and poorly-drafted rules. Second, it suffers from the practices of the UK regulators. Both create legal uncertainty. Both give undue power to our regulators. As matters stand after Brexit, the government intends to transfer most EU-inherited regulations to the rulebooks of UK financial regulators, for them to modify. The danger is that this will give the regulators even greater power. Furthermore, it is not expected that many alterations will be made to the EU-inherited rules, at least in the short term'.

Instead, Reynolds proposes a clear, slimmed down, outcome-based system, based on the following steps:

- A new approach to Financial Services Law
    - *Primary legislation and statutory instruments should be reviewed and redrafted, where necessary, to reflect the common law approach.*
    - *The EU's interpretative (purposive) approach as operated under EU (and civil) law should be ended, the Interpretation Act 1978 and the regulators' rules accordingly amended.*

- Regulatory Accountability
    - *The regulators should be required by statute to supervise and enforce predictably in accordance with their rules, ensuring their decisions are consistent between firms which operate businesses of a similar size and scope.*
    - *Formal decisions by the regulators should include sufficient explanation to serve as precedents and allow the application of relevant rules.*

- A Role for the Courts
    - *An appeal process should be available, for a short (defined) time period after the regulators have made significant supervisory or enforcement decisions in relation to their rules. The firm or individual would apply to court to review the merits of the decision, considering:*
        - *the meaning of the rule being invoked and confirming or rejecting the action in principle based on whether the conduct in question breached the rule, as properly interpreted in light of available guidance and precedent; and*
        - *whether the enforcement penalty is consistent with the regulator's decisions in similar cases, and whether it is proportionate to other decisions.*

[286] Barnabas Reynolds (2022) Rules for the Regulators: Regulating Financial Services after Brexit, Politeia, 29 June; https://www.politeia.co.uk/wp-content/Politeia%20Documents/2021/2022/Rules%20for%20the%20Regulators.pdf?_t=1656931791

- Ending EU regulation – quickly

    - *Reforming our regulatory method requires the removal of unnecessary EU-inherited regulations and re-writing those which remain, where appropriate, on common law lines.*
    - *The PRA [Prudential Regulation Authority] and FCA [Financial Conduct Authority] should set up working parties to revise existing regulations, with a deadline of 11 months for first tranche cuts (to make a significant difference), to come into operation by October 2023, with a deadline of a further 11 months for the remainder.*
    - *A Parliamentary Select Committee should oversee the process, ensuring it is sufficiently ambitious. This committee can call on independent experts to inform its assessment of what is being done.*

In short, the new regime should promote:

- *freedom under clear laws – removing all unnecessary elements of the inherited EU blanket of law and regulation, including its methods of control;*
- *predictability – applying the UK's court-based approach and reasoning, to achieve legal certainty; and*
- *ambition – introducing measures to make certain that UK regulators constantly strive to ensure that their rules are no more than those necessary to achieve a valid regulatory purpose under the operation of the law.*

In another article, Reynolds justifies the case for more deregulation:[287]

> *…the essential post-Brexit future for the UK involves creating a more competitive economy and driving growth. A core ingredient in this is deregulation. The legal and regulatory system we have inherited from the EU is uncompetitive and bloated.*
>
> *It contrasts sharply with the UK's traditional approach to law and regulation, which is much admired for its pragmatism and ability to achieve higher standards with fewer, clearly drafted rules.*
>
> *Regardless of political choices over any particular laws, our legal method itself makes us intrinsically more competitive than most other countries, and the EU. Recent economic research, particularly from the US, shows that the Anglo-American approach to law leads to greater economic growth over time.*

[287] Barnabas Reynolds (2022) A U-turn on ripping up EU red tape would be disastrous for Truss and Britain - Freeing the UK from Brussels bureaucracy is crucial for embattled Prime Minister's growth agenda, 15 October; https://www.telegraph.co.uk/business/2022/10/15/u-turn-ripping-eu-red-tape-would-disastrous-truss-britain/

…[The government] must now get on with cutting through the EU red tape still clogging up our statute books, political weather be damned.

A complete reformulation will, if it occurs, deliver a kick to our economy, powering business and providing new opportunities and sources of income. However, if we are to do this cleanly, we need to work hard now to map out the new regime, so that we can counter any concerns that might arise of "cliff edge" uncertainties created by the removal of specific elements of EU law.

If this analysis is left until nearer the deadline, the hurried context could lead to the opposite of the result intended, baking EU law into our system rather than removing it.

Shifting from the inherited EU system to one based on UK methods requires a re-think of approach and of what detail is actually necessary. Our technique makes greater use of our (highly regarded) courts to fill in gaps in the law as circumstances arise, on the basis of commonly accepted reasoning.

We also place reliance upon our expert regulators, who are best able to monitor the market and make new rules to address those risks which actually emerge.

In addition, we have a sophisticated ability to harness the discipline of the market, as well as industry standards and codes, when economic incentives mean that this leads to the best results.

The outcome ….will be a simpler, clearer and more "intuitive" – easy to grasp – regime, so long as we put in the work up front to identify and excise those rules and methods which are at odds with our system.

…To succeed, government departments, our regulators, businesses and consumer groups will need to embrace the opportunity and engage with it in the spirit of change. We need to work swiftly to strip out unnecessary red tape and produce a system which applies our techniques to the modern world.

Various arguments are raised which would, if accepted, slow down the process.

For a start, large industry tends to be fearful of significant change. In their sphere, consumer bodies are mistrustful that standards may be lowered.

However, the new regime should be more efficient, with fewer restrictions and less compliance expenditure, yet achieving the same or higher protections. All businesses should benefit, so long as they are well run; and consumers should benefit by having greater choice at lower prices.

There are also concerns that differences may arise between the UK's system and the EU and elsewhere. The worry is that divergences might create unnecessary costs. However, if we do the job well, we will become a favoured hub for businesses and entrepreneurs.

The necessity of complying with more restrictive rules when selling or dealing elsewhere should only serve to heighten the attractiveness of the UK as a place to invest and innovate.

There are worries that this project cannot be completed within the timeline proposed. It is said to be too ambitious and complex. However, we have the skills and necessary resources.

There are then those in international businesses who are worried at being seen to side with the UK in helping to optimise our regime, perhaps because they have become accustomed to the process of seeking consensus.

However, that consensus was imposed by EU governance, which is now removed. Furthermore, the overarching approach to EU lawmaking over the last 30 or so years meant that we had no means of ensuring legislation worked in favour of a competitive UK economy. The elimination of embedded EU law will allow us to make the UK genuinely competitive.

Competitiveness and growth go together, as does productivity. It is therefore essential that we press ahead if the Prime Minister is to realise her ambition to get Britain growing again.

Finally, it is sometimes asserted that our international standing depends on upholding inherited EU standards, but that is just absurd.

What we now need is a strong technocratic initiative, driven centrally, which overrides such fears and the accompanying groupthink which pulls towards a lack of ambition. Enticements and exhortations alone are insufficient to galvanise such a project.

But once the project gets going and draft legal texts start to be produced, industry will clamber on board and assist. In the meantime, we need a massive push, harnessing both the public sector and those parts of the private sector willing and able to get things started.

The benefits of higher growth and greater economic activity resulting from such steps can be obtained relatively cheaply. The Prime Minister is right to seize the moment to act. If the work starts now, we can begin to reap the full benefits of our traditional legal methods from the end of 2023.

Daniel Thomas (2022), *Financial Times* Chief UK Business Correspondent, argues that financial services can be an engine for growth but only if regulation is faster and more flexible, and fit for the digital age:[288]

[288] Daniel Thomas (2022) Britain after Brexit: What the City really wants, FT Britain after Brexit Newsletter, 13 October.

So what does the City want? Certainly not a regulatory revolution. ….But they want to see ambition — and in particular they use Brexit as an opportunity to take a hard look at all the rules that govern the City to make sure they are fit for modern digital markets.

The UK needs to make it cheaper and quicker to raise money through both primary and secondary listings, including reforms to the prospectus regime. Similarly, changes to MiFID II[289] *would help to encourage more analysts to cover smaller companies.*

Reforms to Solvency II are also needed — if only because the EU is already making its own changes that would leave the UK at risk of falling behind. Insurers would welcome the ability to invest more in infrastructure and growth companies.

But Solvency II, the reform of which is now held up as the panacea of post-Brexit financial services growth, serves neatly as an example of regulations once championed by the UK, and drawn up with the help of British regulators, but now dismissed as Brussels interference.

…Many bosses are appalled by the idea that the whole suite of insurance and banking rules can simply be "junked", if only because companies have spent a lot of time and money creating structures and teams to work within them.

Even the branding being used by ministers of a "big bang 2.0" does not sit well with those who remember the first one. Simon Gleeson, a financial services expert at Clifford Chance, says that the market reforms of 1986 were aimed at removing several specific areas, like the rules surrounding broking. They were then replaced by stacks of new rules to impose guardrails on the behaviour of the financial services industry. The effect was not deregulation, he says, but better regulation.

And better regulation is where the Brexit 'wins' can be found. In reality, the work that needs to be done will be in the weeds, creating British versions of laws such as Solvency II that will cover much of the same areas, but also allow for the UK's common law approach to underpin a more flexible and streamlined set of rules.

The UK needs to be seen as the host of a global market, setting minimum standards and rules for the next wave of innovation in finance.

This can potentially be better achieved outside the EU, which is also busy reforming its financial services framework but often with an idea of protecting markets rather than opening them up to the world.

Financial services rules need to be "simplified and clarified" under British law, according to Barney Reynolds, partner at Shearman & Sterling, who says that this now "needs to be done quickly and by people who understand the system".

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[289] MiFID II is a EU directive which 'strengthens investor protection and improves the functioning of financial markets making them more efficient, resilient and transparent'; https://www.esma.europa.eu/policy-rules/mifid-ii-and-mifir

As a result, companies should be able to adapt more quickly to changing markets, he says. "We will end up with a better system and a more dynamic City."

The real wins for the City will be in the creation of future rules that will make the UK the place to do business in new areas such as digital assets, fintech and green finance, according to Miles Celic, head of TheCityUK,[290] alongside the everyday work of equities and debt trading. The government should be careful of looking in the rear view mirror too much, he adds.

The rule changes also need to rely on investors making use of them — be it pension funds buying riskier, or illiquid assets, or UK funds taking advantage of listing reforms to invest in companies that might now be more attracted to the London market.

To a degree, this requires a longer term cultural change — and that needs to come from the top. The most common complaint in the City is not about EU red tape, but about how long it takes to get simple things approved by the regulators or intra-company transfers.

Basic organisational requests that should take weeks, instead take months, and make the UK look slow and poorly run to firms based overseas. Faster and more flexible regulators are needed, which the new financial services bill will address by giving the Financial Conduct Authority and the Prudential Regulation Authority new secondary objectives to advance international competitiveness and medium to long-term growth.

The [Truss] government wanted to make the City of London 'the most competitive place for financial services in the world' which would free up capital to 'be used across the UK to make every industry become more productive'. A number of measures were proposed in the September 2022 mini-Budget. One was to remove the bankers' bonus cap[291] which would 'reaffirm the UK's status as the world's financial services centre'. Another was to scrap the charge cap (of 0.75% p.a.) on workplace pensions schemes which would 'unlock pension fund investments into UK assets and into innovative, high-growth businesses', including infrastructure projects. Canadian pension funds can make such investments in the UK, but UK pension funds cannot.[292] The [Sunak] government subsequently confirmed that it would

[290] TheCityUK is a private-sector membership body and industry advocacy group promoting the financial and related professional services industry of the United Kingdom.
[291] The bankers' bonus cap was introduced after the 2007-09 GFC to end a bonus culture that encouraged risk taking in order to make short-term profits instead of long-term stable growth.
[292] Ben Marlow (2022) Billions of pounds remain tied up in EU red tape – six years after the Brexit vote, what's the hold-up? City of London reform will unlock an investment bonanza, but it's still not top of the agenda, Daily Telegraph, 24 September; https://www.telegraph.co.uk/business/2022/09/24/billions-pounds-remain-tied-eu-red-tape-six-years-brexit-vote/

remove the bankers' bonus cap[293] and allowed performance-based fees to be exempted from the charge cap.[294]

A third measure announced by the [Sunak] government in the Autumn Statement 2022 was Solvency UK, the revision to the Solvency II capital regime for insurance companies to enable them 'to invest tens of billions of pounds in long-term productive assets and …help to spur an internationally competitive insurance sector, while retaining high standards of policyholder protection'.[295] The government wanted a 'simpler, clearer, and much more tailored regime'. To achieve these aims, the government proposed a 65% cut in the 'risk margin'[296] for long-term life insurance business[297] and investment flexibility would be increased by amending the eligibility rules for the 'matching adjustments'[298] to allow the inclusion of assets with highly predictable cashflows (in addition to those with certain cash flows).

These revisions were welcomed by the insurance industry. Association of British Insurers (ABI) director general Hannah Gurga said: 'We strongly welcome these changes to the Solvency II regime which will allow the UK insurance and long-term savings sector to play an even greater role in supporting the levelling up agenda and the transition to net zero. Meaningful reform of the rules creates the potential for the industry to invest over £100bn in the next ten years in productive finance, such as UK social infrastructure and green energy supply, whilst ensuring very high levels of protection for policyholders remain in place. More broadly, it will encourage a thriving and competitive industry which will ultimately benefit the UK economy, the environment and customers. This meets the objectives that HM Treasury set out to achieve and which the industry has supported throughout'. ABI president and Royal London Group chief executive Barry O'Dwyer said: 'We all want to see an insurance sector that maintains the highest standards of policyholder protection and also contributes significant

[293] https://www.bbc.co.uk/news/business-63290169
[294] https://www.gov.uk/government/consultations/broadening-the-investment-opportunities-of-defined-contribution-pension-schemes/draft-statutory-guidance-disclose-and-explain-asset-allocation-reporting-and-performance-based-fees-and-the-charge-cap
[295] https://www.gov.uk/government/consultations/solvency-ii-review-consultation
[296] The 'risk margin' is an amount added to the best estimate liabilities (BEL) so that the total technical provisions represent a transfer value – the amount for which the liabilities could be transferred to a willing third party; https://www.bankofengland.co.uk/prudential-regulation/publication/2022/april/potential-reforms-to-risk-margin-and-matching-adjustment-within-solvency-ii
[297] 30% for non-life insurers.
[298] The 'matching adjustment' (MA) is a mechanism that allows insurers to recognise upfront as capital resources a proportion of the spread (in excess of the risk-free rate) they project to earn over the future lifetime on the assets matching their MA liabilities (i.e., the liquidity premium); https://www.bankofengland.co.uk/prudential-regulation/publication/2022/april/potential-reforms-to-risk-margin-and-matching-adjustment-within-solvency-ii

investment into UK assets and infrastructure that will benefit our customers, the environment and wider society'.[299]

The financial services industry itself eventually responded to the new Brexit freedoms. In July 2022, the London Stock Exchange established a UK Capital Markets Industry Taskforce to help develop UK capital markets and maximise the impact of the various financial service reform undertaken by the UK government. Its first chair was the London Stock Exchange's Chief Executive, Julia Hoggett. She said: 'Strengthening our financial ecosystem and thereby improving the competitiveness of the UK capital markets is a continuous task. It is vital to ensure the UK capital markets continue to provide efficient access to capital, which enables businesses to start, grow, scale and stay here'.[300]

The biggest measure so far introduced by the government is the Financial Services and Markets Bill[301] which will give financial regulators an obligation to take into account the 'international competitiveness' of the industry, when setting regulations. The Bill originally contained a 'call-in' power which required regulators to reconsider rules if the government considers them insufficiently competitive.

However, regulators were opposed to this. For example, Sam Woods, Chief Executive of the Prudential Regulation Authority, warned that the power would represent 'a significant shift away from a model of independent regulation', since UK regulatory independence is 'the basis for our international credibility. Some might think that such a power would boost competitiveness. My view is that through time it would do precisely the opposite, by undermining our international credibility and creating a system in which financial regulation blew much more with the political wind – weaker regulation under some governments, harsher regulation under others.[302]

In November 2022, the government withdrew the 'call-in' power. Jacob Rees-Mogg, a former Business Secretary, said: 'This is a loss of democratic accountability. The power exists to override the Bank of England in extremis and it is a sensible emergency provision to deal with over mighty regulators, I am surprised the government has backed down'. In 2021, the Australian government introduced a 'directions by ministers' clause which permits the

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[299] Quoted in Jonathan Stapleton (2022) Government sets out Solvency II reform package, Professional Pensions, 17 November; https://www.professionalpensions.com/news/4060387/government-sets-solvency-ii-reform-package

[300] Jeremy Chan (2022) LSE boss to chair new capital markets taskforce for companies 'to start, grow, scale and stay here' - Taskforce will aim to 'maximise' gains from regulatory changes, Financial News, 19 July; https://www.fnlondon.com/articles/capital-markets-taskforce-lse-julia-hoggett-20220719

[301] A Bill to make provision about the regulation of financial services and markets; https://bills.parliament.uk/bills/3326

[302] https://www.investmentweek.co.uk/news/4060268/charles-randell-warns-financial-services-%E2%80%98risks-regulators-independence

government to give the regulator 'direction about policies it should pursue, or priorities it should follow, in performing or exercising any of its functions or powers'.[303]

Other aspects of the Bill did attract City support. For example, David Postings, CEO of UK Finance,[304] said: 'The Bill represents a once in a generation opportunity to improve regulation, enhance consumer protection and create a more competitive financial services sector. A new secondary competitiveness objective for regulators will signal to the world that the UK is open for business'.[305]

Despite this, some question whether financial deregulation would do much to increase growth. According to David Wighton (2022): 'it is not obvious that a lack of home-grown funds prepared to invest in infrastructure and venture capital is a serious problem for the economy… The head of one big insurer says while reforms to Solvency II will help its business, it will not result in it investing more in infrastructure. And lifting the charge cap for pension funds will not lead to greater investment in higher-risk assets unless pension scheme trustees approve'.[306] This confirms the point made earlier that relaxing regulations will not automatically lead to an increase in investment. Additional nudges are needed and have to be built into SMART plans.

For those keen to retain EU legislation, this would require perpetual dynamic alignment. Yet Insurance & Pension Denmark (IPD), the industry association of Danish pension and insurance providers, is already complaining that the amount of financial regulation being generated by the European Union has now reached a point where the rule-making seems out of control.[307] IPD said EU regulation accounted for more than 90% of all new regulation of financial companies in Denmark, and comprises around 3,500 pages for insurance and pension companies alone. It will shortly rise to 6,000 pages. Further, EU regulation was increasingly taking place via EU authorities, and therefore had no political mandate. IPD wanted regulation that was more targeted than the rules that were being presented:

- New EU regulation must always be based on impact analyses
- Fewer, but better rules
- Openness about EU regulation – regardless of where it takes place
- Stop detailed European regulation without a political mandate

[303] https://www.telegraph.co.uk/business/2022/11/23/sunak-abandons-plans-overrule-city-regulators-bank-england-backlash/

[304] UK Finance is a trade association for the UK banking and financial services sector.

[305] David Postings (2022) Why Truss must focus on the City to rescue the economy, Financial News, 22 September; https://www.fnlondon.com/articles/david-postings-uk-finance-liz-truss-policies-finance-city-20220922

[306] David Wighton (2022) Government finds there is no free lunch on growth-boosting City reforms - The holy grail of a low-cost change that gives an instant economic hike may be fantasy, Financial News, 3 October; https://www.fnlondon.com/articles/government-finds-there-is-no-free-lunch-on-growth-boosting-city-reforms-20221003?

[307] Rachel Fixsen (2022) Volume of EU financial regulation seems out of control, says Danish lobby, IPE, 24 November; https://www.ipe.com/news/volume-of-eu-financial-regulation-seems-out-of-control-says-danish-lobby/10063615.article

- A strong Danish imprint on European financial supervision

One of the key reasons for leaving the EU was to remove the unnecessary red tape affecting the UK financial services industry and to allow it to contribute to UK growth. There have been some initiatives, such as the UK Financial Conduct Authority's pioneering Project Innovate[308] and the launching of the first fintech regulatory sandbox in 2016, the FMI (financial market infrastructures[309]) sandbox and accelerated settlement taskforce, and the consultation on the digital pound and proposals to regulate crypto assets. But apart from this, little has been done to introduce the type of outcome-based, smart and adaptive regulation in financial services (and other sectors) that can help to increase productivity, such as that which would enable the 'harnessing [of] transformative tools specific to empowering financial services, such as distributed ledger technology'.[310]

Jacob Rees-Mogg (2023)[311] puts this slowness down civil servants who opposed Brexit, do not want UK regulations to deviate too much from those of the EU, and are not cooperating with government over the Retained EU Law (Revocation and Reform) Bill to replace 'burdensome, anti-competitive, innovation-destroying rules [that] serve only to keep sluggish incumbent corporations out of the insolvency courts'. He said the Bill 'establishes a mechanism for the removal and reform of these regulations with far greater scrutiny than they received when originally introduced'. He also criticised the UK for gold-plating regulations, making them even more costly, giving the example of the EU's Emissions Trading Scheme which with UK gold-plating has rendered 'steel firms virtually unviable, like other energy-intensive industries on which many of our regions depend. The result is that the government needs to bail them out through subsidy …[and forces] us to import from more polluting economies'. He recommends introducing regulatory budgeting which would consider the economic consequences of regulations. This is consistent with the principles of outcome-based, smart and adaptive regulation.

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[308] https://www.fca.org.uk/firms/innovation

[309] Financial market infrastructures (FMIs) allow the clearing, settlement, and recording of financial transactions. The Bank of England supervises certain types of FMIs: payment systems recognised by HM Treasury, central securities depositories, and central counterparties (CCPs); https://www.bankofengland.co.uk/financial-stability/financial-market-infrastructure-supervision

[310] Alisa DiCaprio, Chief Economist at R3 and former Chair of the FinTech Committee at the US Department of Commerce quoted in Spring Budget 2023: What does it mean for the tech sector?, Fintech Finance News, 15 March 2023; https://ffnews.com/newsarticle/spring-budget-2023-what-does-it-mean-for-the-tech-sector/

[311] Jacob Rees-Mogg (2023) Brexit is being surrendered to the declinist Europhile establishment - Despite having all the tools to supercharge the UK economy, Whitehall appears to have genuflected again before EU laws and regulations, Daily Telegraph, 6 January; https://www.telegraph.co.uk/news/2023/01/06/brexit-surrendered-declinist-europhile-establishment/

2.9.3.3 The regulation of public utilities

Public utilities are monopolies or near monopolies and they need to be regulated in a different way from companies operating in a competitive market.

In 2011, the government set out the following Principles for Economic Regulation for the regulated sectors, such as telecoms, water, energy and rail, recognising that the aim of economic regulation is 'to promote effective competition where this is possible, and to provide a proxy for competition, with protection of consumers' interests at its heart, where it is not meaningful to introduce competition':[312]

- Accountability – ensuring regulation takes place within a framework set by government, and that respective roles and responsibilities are enacted by the body that has the appropriate legitimacy, expertise and capability and are scrutinised accordingly.
- Focus – ensuring economic regulators have clearly defined, articulated, and prioritised responsibilities, but adequate discretion to choose the appropriate means to best achieve desired outcomes.
- Predictability – ensuring the framework for economic regulation is stable, allowing long-term investment to be supported with confidence and receive a reasonable return, subject to the normal risks inherent in markets.
- Coherence – ensuring the framework for economic regulation forms a logical part of the government's broader policy context, enabling cross-sector delivery of policy goals where appropriate.
- Adaptability – ensuring the framework for economic regulation has the capacity to evolve to respond to changing circumstances and continue to be relevant and effective over time.
- Efficiency – ensuring policy interventions are proportionate and cost-effective, whilst decision making is timely and robust.

In 2022, the UK's regulatory framework was updated to deal with net zero, protecting and enhancing the environment, and digitalisation.[313]

Although these principles appear to be reasonable, they have not stopped public utilities providing poor service to customers. For example, British Gas has been described as 'incompetent' for leaving customers cold over the winter and keeping them waiting until

[312] Department for Business, Innovation and Skills (2011), The Principles for Economic Regulation, April; https://www.gov.uk/government/publications/principles-for-economic-regulation
[313] Department of Business, Energy and Industrial Strategy (2022) Economic Regulation Policy Paper, January;https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1051261/economic-regulation-policy-paper.pdf

January to get their boilers fixed, despite them paying £28 a month for HomeCare insurance.[314] Some customers have found it easier to get British Gas to respond by publicising their complaints on social media.

So it is all very well having a fine set of high level principles, but regulations will only be effective if they can deal with realities on the ground and take into account the behavioural traits of the regulator, the regulated and the government itself. The government must resist the urge to gold-plate regulations, for example. All this needs to be incorporated into the government's SMART plan for regulation.

2.9.4 Taxation and subsidies

Low taxes by themselves do not automatically increase investment and growth. Figure 35 above showed that there is very little relationship between the level of corporate investment and the level of corporate tax. The UK has one of the lowest corporate tax rates and also one of the lowest corporate investment/GDP ratios. This implies that lowering the corporate tax rate is unlikely by itself to increase corporate investment.[315] Instead, companies invest if they can see a profitable market for the products or services produced as a result of the investment – and if there are not cheaper alternatives like relying on low-cost overseas workers.

Further, even if lower taxes do increase investment, they will not necessarily increase growth. This is because the increase in investment will increase the capital stock and lead to a one-off increase in GDP but not to an increase in the growth rate of GDP. As Professor Michael Devereux (2022)[316] points out: 'The economy can only continually grow in the long term if there are continual increases in productivity. Tinkering with investment incentives may provide a useful short-term, or one-off, stimulus, but it is very unlikely to affect the long-term growth rate. Of course, raising productivity is by no means straightforward. It is likely to require long-term support for education and training of the workforce, and long-term support for research and development. To significantly affect the long-term growth rate, such policies would need to be introduced at large scale. By comparison, cutting (or not raising) corporation tax is a quick fix, which is very unlikely to significantly impact long-run growth'.

On the other hand, subsidies in the form of tax credits can be very effective in increasing investment.

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[314] Ewan Somerville (2022) British Gas bosses 'should give up bonuses after leaving customers in the cold' - 'Incompetent' energy giant under fire for telling families and pensioners to wait until January to get their boilers fixed, Daily Telegraph, 21 December; https://www.telegraph.co.uk/news/2022/12/21/british-gas-bosses-should-give-bonuses-leaving-customers-cold/

[315] A lower tax rate also reduces the value of deductions against tax which partly counters the effect of the tax reduction, so lowering the net reduction in the cost of capital.

[316] Michael Devereux (2022) Will corporation tax cuts stimulate long-term economic growth?, 23 September, https://www.sbs.ox.ac.uk/oxford-answers/will-corporation-tax-cuts-stimulate-long-term-economic-growth

In this section, we consider how a smart regime for taxes and subsidies can be most effectively used to increase productivity.

2.9.4.1 Taxation

Dr Graham Gudgin (2022)[317] argues that low taxes can have an indirect effect on increasing productivity by encouraging foreign direct investment, but have only a modest influence on domestic private-sector investment: 'In a long-term context, the main evidence for sustainable faster growth relates to low company taxation which attracts foreign direct investment as companies relocate to avoid high taxes administrations.[318] Most countries prefer to avoid tax-haven status and keep their corporation tax rates close to an international average of around 25-28%. …The UK government's decision [in the mini-Budget of September 2022] to maintain UK corporation tax rates at 19% rather than the previously planned 25% would, on my model-based calculations, raise company investment by a useful 1% per a year. This would increase companies' total stock of capital by 2% over a decade, including an extra 60,000 jobs in new foreign-owned greenfield investments. Even though useful, this change would only increase the size of the total economy by an estimated extra 1% over an entire decade, well short of the Kwarteng target of more like 10-15%.... When Professor Chuck Brown was asked by Mrs. Thatcher to write a report on the gains from the government's reductions in income taxes he concluded that "there is little evidence to suggest that there will be any increase in short-run labour supply as a result of the cut in tax allowances or the cut in the basic rate of tax"'.[319]

Devereux (op cit) also highlights the importance of FDI: 'there is plenty of evidence that the corporation tax rate plays an important role in determining whether multinationals locate their activities in the UK.[320] It … plays a smaller role in determining the size of investment of businesses that are located in the UK. It is very plausible then that keeping the UK corporation tax rate down to 19% will prevent a tax-induced reduction in investment'.

While low taxes might not lead to higher investment, higher taxes can certainly reduce investment, as Ambrose Evans-Pritchard (2022)[321] points out in his commentary on the

[317] Graham Gudgin (2022) The Chancellor's Budget fiasco. What now?, Briefings for Britain, 8 October; https://www.briefingsforbritain.co.uk/the-chancellors-budget-fiasco-what-now/
[318] Empirical evidence shows that location decisions are sensitive to the corporation tax rate, see, e.g., Lars P. Feld and Jost H. Heckemeyer (2011) FDI and taxation: a meta-study, Journal of Economic Surveys 25.2, 233–272.
[319] Chuck Brown (1988) Will the 1988 Income Tax Cuts Either Increase Work Incentives or Raise More Revenue? Fiscal Studies, Vol. 9, No. 4, pp. 93-107.
[320] Feld, Lars P. and Jost H. Heckemeyer (2011) "FDI and taxation: a meta-study", Journal of Economic Surveys 25.2, 233–272.
[321] Ambrose Evans-Pritchard (2022) The Autumn Statement does not offer a way out of Britain's low-growth trap, Daily Telegraph, 17 November;

Autumn Statement 2022: ‘the Chancellor is [raising] corporation tax to 25%, a level that catapults the UK to the upper end of the global league just as it is trying to attract capital for the post-EU transition. The average is 19.6% in Asia, 19.8% in Europe, and 23% in the OECD. The UK’s rate is already beyond the tipping point of the corporate Laffer Curve in a world of open capital flows, now thought to be around 22%. …But the tax-take will rise to the highest share of GDP since total mobilisation during the Second World War. Britain has missed its chance for an investment revolution that smashes through the productivity barrier. We will be an ordinary country with an ordinary government’. This is another example of constant policy changes and short sightedness.

2.9.4.2 Subsidies

There is evidence that subsidies can contribute to improving productivity by helping to increase company investment (in particular, R&D investment[322]) and human capital. We look at some examples and consider whether they will be effective.

For R&D, Mitha (2019) argues that tax credits are potentially effective route for increasing spending:

> *Government support for R&D raises the productivity of private and human capital and economic growth, whether the aid is provided through tax relief or direct grants. The introduction of R&D tax credits has resulted in a large increase in R&D spending by businesses. It is estimated that for every £1 of tax forgone as relief, there is an increase of up to £2.35 in R&D spending by businesses. The main advantage of R&D tax credits over grants or subsidies (assuming they are permissible under the EU’s state aid rules) is that they do not involve the government becoming directly or indirectly involved in picking winners. Authoritative studies using data for US manufacturing of the long-run growth effects of public support for R&D have concluded that increasing R&D tax credits increases the growth rate of labour productivity.*

The government is, of course, aware of the importance of R&D and with investment more generally and, since Covid, has become increasingly generous with the tax incentives it has offered. It has introduced ‘research and development expenditure credits’ (RDECs) and

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https://www.telegraph.co.uk/business/2022/11/17/hunt-has-spared-us-austerity-doom-loop-investment-revolution0/

[322] Griliches, Zvi (1998), R&D and Productivity: The Econometric Evidence, Chicago, IL: The University of Chicago Press.

Beom Cheol Cin, YoungJun Kim, and Nicholas S. Vonortas (2013) The Impact of Government R&D Subsidy on Firm Performance: Evidence from Korean SMEs, Asian Research Policy Symposium 2013, “Asian Model of Innovation: Innovation and Creative Economy,” Seoul, Korea; https://www.oecd.org/sti/inno/5_3_Cin-Kim-Vonortas_Final.pdf

Mingyang Li, Man Jin, and Subal C. Kumbhakar (2022) Do subsidies increase firm productivity? Evidence from Chinese manufacturing enterprises, European Journal of Operational Research, Volume 303, Issue 1, Pages 388-400; https://doi.org/10.1016/j.ejor.2022.02.029.

£7.4bn in R&D tax relief was claimed in 2019-20 tax year.[323] In addition, when he was Chancellor, Rishi Sunak introduced 100% tax relief on qualifying investments (up to £1 million) in the year of spend via the Annual Investment Allowance.[324]

However, Mitha questions whether the level of tax credits being offered by the government will be adequate. In terms of the government's 2017 Industrial Strategy of increasing R&D spend by government and private businesses to 2.4% of the GDP (up from 1.69%) within a decade, Mitha (2019) comments:

> *There is no prospect of the government being able to meet its target without a substantial increase in the level of R&D tax credits to stimulate private sector R&D spending. The government also needs to increase its support for research undertaken by universities, public institutes, and on its behalf by businesses under procurement contracts. The increased support would have to be on a sufficient scale to be effective. It would be necessary to have safeguards to ensure good value for money. Ministers would need to accept that there is a potential risk of failure with all R&D activity. But this would be the most productive and least controversial form of public expenditure.*
>
> *There is also a powerful case for the introduction of a tax break for encouraging increasing business investment in intangible capital. It could be modelled, for example, on the Singapore government's productivity and innovation tax credit. This covers expenditure not just on R&D activities, but also on design, automation of processes, training and the acquisition and development of intangible assets.*

In terms of investment zones and other supply-side measures, Gudgin (2022)[325] questions whether some of the tax breaks announced in the Autumn Statement 2022 will be big enough:

> *[T]he Chancellor announced a range of supply-side measures, which are useful but too limited to make a big difference. The long-awaited announcement of tax concessions in investment zones will also be useful. There are currently 40 of these being negotiated within England with further zones to come in the devolved regions, in addition to the eight freeports already announced. Investment zones will have no business rates, stamp duty or employer's National Insurance Contributions for new developments. Light touch planning controls will speed up development and the entire package will*

[323] James Hurley (2023) R&D tax credits revamp proposed, The Times, 14 January; https://www.thetimes.co.uk/article/research-and-development-tax-credits-revamp-proposed-sljvtpx0w

[324] In the Spring Budget 2023, the Chancellor confirmed that annual 'full expensing' of qualifying investments (up to £1 million) against taxable profits would be permitted for the next three years and this would cover 99% of businesses (mainly SMEs). The UK will be Europe's only country with full expensing. It would be made permanent once the government is 'responsibly able' to afford it. The OBR predicts it will increase business investment by 3% every year and represents an effective £9bn a year corporation tax cut for UK businesses.

[325] Graham Gudgin (2022) The Chancellor's Budget fiasco. What now?, Briefings for Britain, 8 October; https://www.briefingsforbritain.co.uk/the-chancellors-budget-fiasco-what-now/

certainly be attractive to firms. When similar 'enterprise zones' were developed in the 1980s some benefits such as the absence of stamp duty were captured by existing landowners. Also, around half of the jobs created resulted from local moves rather than from foreign firms, or from domestic business which would not have otherwise existed or not at the same size. Although numerous, the new zones are likely to be too localised to be of macro-economic importance, but if they did work better than before they could be scaled up.

An extra £0.5 billion for innovation and technology start-ups is useful but relatively small scale. Our diminished manufacturing base provides relatively little to build on but this is of course a move in the right direction and along with existing schemes should be studied for potential scale-up. Similarly, extensions to the scope or time-periods for investment allowances, the Enterprise and Seed Enterprise Investment Schemes and Venture Capital Trusts all help and send signals about the government's intention to help entrepreneurs to succeed. Other countries do take similar measures so it is important for the UK to match competitors, but to accelerate growth in a context of low growth in international trade, measures are needed to get ahead of competitors and not just to keep up.

For training for human capital development, Mitha (2019) argues for student bursaries/grants and tax breaks for employers:

[The government] should begin by restoring the budgets of institutions of further education (IFE). IFEs provide the vocational and skills training that businesses need to grow. The government should encourage national and local employers to work with IFEs in designing and delivering skills training by seconding professional staff. It should raise the profile of vocational qualifications by offering bursaries, grants and subsidised fees for those attending courses in the subjects most in demand by employers.

There is also a case for offering tax incentives to employers [and to tweak the tax and benefit systems to] encourage [more school leavers and workers] who currently have low education or training to acquire practical *skills and qualifications through sandwich courses and national diplomas, such as higher national diplomas (HND) and higher national certificates (HNC).*

But he is also concerned about the current misallocation of educational resources with too much going into 'Micky Mouse' degrees and too little into vocational qualifications. Nevertheless, 'designing and delivering skills training by seconding professional staff' is precisely what a good SMART plan involves.

The government introduced a new business subsidies regulation framework in January 2023 with the aim of 'providing a major boost for businesses and further impetus behind the government's plans to supercharge economic growth'. According to Elliot Griffiths (2022):[326]

> *Under the new rules outlined, the [devolved] administrations and local authorities will be able to deliver subsidies that are tailored to local needs, afforded flexibility from the new regime that will ensure the support is fast tracked to where it is needed most.*
>
> *Public authorities will now be able to support viable businesses across their region with efficiency and simplicity, delivering strong value on the British taxpayer's contribution whilst also ensuring Britain's businesses can help deliver economic growth. This marks a significant step away from the prescriptive EU aid regime, removing the potential stymies that elected governments in Belfast, Cardiff and Edinburgh from delivering funds to businesses that need it.*
>
> *Business Minister Dean Russell said: "Our subsidy control regime is built to meet the needs of modern Britain, freeing UK authorities from the restrictive shackles of European bureaucracy and long-winded approval processes. Our new rules are robust yet flexible, empowering public authorities to deliver money quickly, fairly and simply, to businesses that need it the most."*
>
> *All subsidies, except for those under a specific 'Block Exemption Regulation', under the EU system are required to undergo a lengthy bureaucratic process of being notified to and approved by the European Commission in advance. This causes serious delays to vital funds reaching the practical businesses in an appropriate time frame. The innovative new system comes with extensive consultation on the proposed approach, gathering key views from stakeholders across the UK to ensure it operates for maximised support.*
>
> *These new rules will be integral to aiding the government bolster plans to support a free market economy, through banning the unlimited government guarantees to businesses and subsidies granted to 'ailing or insolvent' enterprises where there is no credible restructuring plan.*
>
> *The UK's new regime will also contribute to meeting the UK's international commitments on subsidy control, including its international commitments at the World Trade Organization (WTO) and in Free Trade Agreements.*

The government's SMART plan for its tax and subsidy regime should recognise that (1) lower taxes do not automatically increase domestic investment and growth, although lower taxes can encourage foreign direct investment, (2) higher taxes can reduce investment, (3) subsidies are very helpful in increasing investment, R&D spend and intangible capital – but they have to be sufficiently large as in the case of the 100% deductions against tax for new investments

[326] Elliot Griffiths (2022) Subsidy support system to bolster UK economy, 20 October; https://www.publicsectorexecutive.com/articles/subsidy-support-system-bolster-uk-economy

(i.e., the Annual Investment Allowance to cover new investment up to £1 million), and (4) subsidies in the form of student bursaries/grants, tax breaks for employers, and tweaks to the tax and benefit systems can encourage more school leavers and workers who currently have low education or training to acquire *practical* skills and qualifications through sandwich courses and national diplomas.

2.9.5 A comprehensive strategy for long-term government policy

As mentioned earlier, the UK Productivity Commission[327] was very critical of past government policy which was characterised by 'over-centralisation, weak and ineffective institutions and policy churn, institutional and policy silos, as well as short-termism and poor policy coordination'. A simple sign of policy churn and policy uncertainty is that government departments are constantly changing their names to reflect their constantly changing purposes. For example, the Board of Trade which had the same name for over 200 years (1786-1970) subsequently became the Department of Trade and Industry, the Department for Productivity, Energy and Industry (for less than a week), the Department for Innovation, Universities and Skill, the Department for Business, Enterprise and Regulatory Reform, the Department for Business, Innovation & Skills, the Department for Business, Energy & Industrial Strategy, and, most recently, the Department for Business and Trade.[328] We will see later that there is a proposal to again change the name to the Department for International Investment, Business, Trade and Enterprise.

The government therefore needs a SMART plan to implement a strategy on long-term government policy covering (1) a comprehensive workforce strategy, (2) a comprehensive strategy for corporate investment and productivity improvement, (3) a comprehensive strategy for the national infrastructure, automation, regulation, and taxes and subsidies, and (4) a national resilience strategy.

This strategy must avoid the weaknesses in previous policy outlined above by the UK Productivity Commission. There therefore needs to be a national consensus about this. The health of the economy can no longer tolerate each new government reversing the policies of the previous government. The strategy must hold across many political business cycles.

Roger Bootle (2022)[329] has a proposal:

> *The key requirements of a successful economic policy are not difficult to fathom. Governments cannot create prosperity but their actions can inhibit it. Their attempts*

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[327] Productivity in the UK: An Evidence Review, 24 June 2022; https://www.productivity.ac.uk/news/first-productivity-commission-report-launched/

[328] https://en.wikipedia.org/wiki/Department_of_Trade_and_Industry_(United_Kingdom)

[329] Roger Bootle (2022) This Government is too weak to fix Britain's chronic growth problem, Daily Telegraph, 20 November; https://www.telegraph.co.uk/business/2022/11/20/government-weak-fix-britains-chronic-growth-problem

at radical improvement should begin close to home. We must reduce the size of the public sector, encompassing major reductions in payrolls combined with substantial efficiencies and including a re-examination of the legitimate scope of government. The NHS needs to be radically reformed, rather than being regularly stuffed with yet more taxpayers' money.

We need to stimulate business investment by reducing taxes on business and improving the tax treatment of investment. We need to reduce the overall burden of taxation on both businesses and people, thereby helping to persuade both of them to locate here and to remain here. The whole regulatory system needs to be reformed.

Is this a proposal that all political parties could support? If not in full, then how much? If none of it, then what consensus policies would they propose instead?

In terms of national resilience, Sherelle Jacobs (2022)[330] argues that the UK has no serious plans to improve its resilience and is heading for systems collapse:

Covid and the Ukraine war were supposed to trigger a shift towards greater resilience. They haven't.

…Far from being jolted into responding to these changes, however, the system is seizing up. The NHS potentially faces a graver crisis now than it did in the depths of Covid, with A&E bedlam, bed shortages, and extraordinary ambulance delays. Top scientific advisers, meanwhile, warn that, having bafflingly dismantled its preparedness infrastructure, the UK is no more ready for a pandemic today than it was in 2020. It is down to the pure luck of somewhat warmer weather this winter that we have so far staved off the threat of blackouts. Amid the chaos, the government has delayed the publication of its promised national resilience strategy, 18 months after launching an official review.

Covid and the war in Ukraine were supposed to trigger a paradigm shift in our society. The zeal for "efficiency" in public services (embodied by the NHS running close to full capacity even in good times) was meant to give way to a renewed focus on resilience, perhaps informed by insights from ecology, psychology and engineering about how systems can both survive and thrive in an unstable world. Blockages in supply chains were meant to result in more political interest in food security and home-grown production in strategic industries.

We're already paying the cost for our previously deficient approach, after all. Taxes are rising to a post-war high in large part because the bill for the Covid lockdowns and the energy price guarantee have come due. The former was justified on the basis that the NHS was not sufficiently robust to the shock of a novel respiratory virus. The latter

[330] Sherelle Jacobs (2022) With no plan to improve its resilience, Britain is heading for systems collapse, Daily Telegraph, 5 December; https://www.telegraph.co.uk/news/2022/12/05/fear-nobody-can-save-britain-inevitable-catastrophic-collapse

was the inevitable result of an energy sector left vulnerable to international price swings.

Yet, a radical change in thinking has not materialised. …[P]erhaps the biggest obstacle is the simple fact that resilience thinking is downright tricky. It means tackling knotty false economies. We are especially vulnerable to lockdowns, for example, because we have stingily capped the number of training places for new doctors and nurses. Furlough was so expensive because UK households have higher levels of debt than other European countries.

One of the reasons the state is under pressure to spend eye-watering sums on social and childcare is because so many young adults move away from their depressed home towns, and thus their parents, to find work. Because it is expensive, resilience thinking also demands politicians confront politically thorny issues, such as the sustainability of the health service's financial model, our irrational risk aversion to new technologies, and how the scourge of selfish middle-class nimbyism is blocking vital infrastructure.

…[T]he difficult questions can no longer be avoided: the current complacency is downright insane. Covid and Putin's invasion were not bolts from the blue. Globalisation has left us permanently more vulnerable to pandemics; Putin's war has likely ruptured global energy supplies for a generation. As the West weans itself off Russia, we can surely expect other oil and gas states to manipulate resource flows to throw their diplomatic weight around themselves.

And yet our leaders seem to have decided that it is far easier to carry on plodding through the chaos, until something finally gives way. If what we need is a total revolution, it may only come from the ashes of [a] total systems collapse.

It is critical that a national resilience strategy becomes a key component of the SMART plan for implementing long-term government policy on productivity. There will not be much productivity in the ashes of a total systems collapse.

2.10 Productivity – summary of the problems and solutions

Productivity is the amount of goods and services produced for the amount of labour and capital used to produce those goods and services. Productivity is the most important factor determining economic growth and hence real living standards. Productivity in the UK has barely grown since the Global Financial Crisis and neither have real incomes. Productivity growth in the UK is low because of factors that affect workers, companies and the government.

2.10.1 Workers – their contribution to the UK's poor productivity record

In terms of workers, the following factors are key:

- Skills shortages amongst workers
- An increase in economic inactivity due to early retirement and long-term ill-health following the Covid 19 pandemic
- A welfare benefit system that discourages work-seeking post-Covid
- Low levels of job mobility (within companies, between companies and between regions) is holding back the careers of younger workers
- The service sector dominates the economy (accounting for 80% of GDP). However, it is difficult to measure productivity in services and an increase in quantity can reduce quality
- Working from home has also made it more difficult to measure productivity – some arguing it reduces productivity because of quiet quitting and reduced collaboration; others argue that productivity has not fallen, since some of the reduced commuting time has been used for work and there is an overall improvement in work-life balance which is itself valuable
- It is very difficult to measure productivity in the public sector. Further, the public sector workforce increased by 200,000 to deal with the Covid pandemic and the aftermath of Brexit and these workers are no longer usefully employed
- There is low productivity amongst the (more than 4m) self-employed and part-time workers)
- There are demographic challenges caused by an ageing population and declining fertility (a baby bust) which increase the dependency ratio and lead to higher taxes on the relatively smaller working population to pay for the pensions and long-term care of the retired population – and this will have the effect of reducing productivity.

2.10.2 Companies – their contribution to the UK's poor productivity record

In terms of companies, the following factors are key:

- UK productivity is dragged down by the underperformance of a 'long tail' of inefficient (zombie) companies that are poorly managed and so fail to get the most out of their workers.
- UK companies are not spending on R&D or investing in capital to the same extent as other leading economies.
- UK companies have become reliant on migrant workers, many of whom came from Eastern Europe beginning in the early 2000s. Plentiful cheap labour means that companies do not need to invest in productivity-enhancing capital and, without this, real wages will not grow. The UK is stuck in a low-skill, low-productivity, low-wage trap.

2.10.3 Government – its contribution to the UK's poor productivity record

In terms of the government, the following factors are key:

- Persistent underinvestment in the UK's national infrastructure over many years has led to significant degradation, resulting in, e.g., shortages of front-line medical staff, water shortages, high energy costs and food insecurity.
- Infrastructure investments are up to 60% more expensive than in parts of the continent.
- UK economic policy has been plagued for decades by short-termism, short-sightedness and complacency. Government policy has also been reactive rather than proactive and anticipatory. This has led to policy uncertainty with frequent changes of policy, e.g., sudden cuts in planned public investment spending.
- Failure to set regulations to increase productivity.
- Failure to set tax rates and subsidies to increase productivity.

2.10.4 How can productivity be improved? A SMART plan for workers, companies and government

It is clearly possible to improve productivity, but certain approaches are likely to be less effective than others. The reasons for the UK's low productivity are complex, long-standing and poorly understood by most people, so letting workers and companies sort this problem out by themselves – by assuming they are rational economic agents who are able to produce goods and services in the most efficient way possible without any government interference – has not worked up until now and will not work in the future.

A top-down government-led approach in which people are harangued, cajoled, and threatened with losing welfare benefits, for example, has not worked up until now and will not work in the future. Neither will incentives – such as tax breaks for business investment – by themselves lead to an increase in productivity-enhancing investment if there are negative factors operating, e.g., resource constraints – such as shortages of skilled labour – or an uncertain market for a company's products or services.

What can work? The key message of this report is to learn from behavioural psychology and behavioural economics. This means that we need to take a 'bottom up' approach that begins from the viewpoint of the individual and accepts that individuals face behavioural barriers when it comes to making decisions. Individuals might well accept that they need to change their behaviour – once they become aware that a problem exists – but they then face hurdles which prevent them from making those changes. They then need suitably tailored support to help them over the hurdles. Incentives and rewards might also play a role.

First, people – workers and company managers – need to be informed that their current working practices are not as efficient as they could be (measured against best practice in other countries) – and that this will have an adverse effect on their future real living standards and that of their families. It is necessary to understand that a problem exists before it can be solved – and very few people in this country understand how serious our productivity problem is. Most people who do work believe that they are already working very hard. Continuous and effective communication is therefore a key requirement.

Second, they need to become engaged and motivated – so they become willing to change their behaviour.

Third, they need to be guided, supported, and encouraged into changing and improving working practices that increase both worker and company productivity: in short many will need hand holding.

This will involve setting goals, providing incentives and reducing barriers or hurdles. This will lead to a journey with three elements: (1) where people start from, (2) where they need to end up (the goals), and (3) the steps they need to take to reach these goals, with each step being short and manageable. All journeys begin with the first short step and end, if they are successful, when the destination is reached. But it is also necessary to recognise that success may require a sustained effort over a relatively long period of time: solving the UK's productivity problem is not going to be a quick fix.

This approach has been used successfully in the UK to increase pension savings when auto-enrolment was introduced in 2012. The approach adopted recognised that people try their best, but are not able work out for themselves how much they need to save for their retirement without outside help. Instead, the government recognised that people could be made to understand the importance of saving for retirement and would only be willing to start saving for a pension if the initial amount was low and would not be missed when the next payslip arrived.

The behavioural strategy of 'nudging' is now being used to help individuals increase their contributions. This involves positive messaging to address three common behavioural barriers preventing increased contributions: affordability ('you're already on your way to having a retirement income'), a sense of being overwhelmed ('start from today and plan forwards'), and low confidence ('there are steps you can take').

Two key factors that help to make nudging successful are inertia and the importance of routine. Once people have been nudged into increasing contributions via payroll deduction or standing order if they are self-employed, they tend to forget about it – inertia keeps them in the scheme at the higher contribution rate. The same holds for the routine monthly deduction of contributions from the payslip or standing order.

We denote this approach SMART planning. SMART plans show the benefits of:

- a national recognition of the problem and that a solution is urgently needed
- a sensible policy carefully designed with clear achievable goals, recognising the barriers that need to be surmounted en route
- goals need to be SMART: specific, measurable, actionable, relevant and time-bound.
- careful and patient implementation of the policy
- engaging and motivating its target group – possibly using incentives and rewards

- then taking the target group from where they are, in small manageable steps, to where they need to be
- using suitably qualified mentors, allowing for the tailoring of solutions to meet the specific needs of individual members of the target group, with appropriate support and encouragement
- at each step, building confidence in the target group and avoiding a sense of being overwhelmed
- making use of suitable tools and traits, such as learning by doing, nudging, inertia, and routine
- continuous and effective communication that emphasises progress towards reaching the desired goals
- a suitably targeted investment of resources
- all-party political support, and
- policy certainty (i.e., the policy is maintained without constant interference and changes).

A SMART plan acts as a commitment device – like a manifesto. Once you agree to a SMART plan, you agree to be committed to it. Political parties, once elected to government, continually look at their manifesto to ensure they are delivering on their promises, and are continually reminded by opposition parties when they fail to do so. The SMART plan has precisely the same purpose. But it also acts as a support device by containing mechanisms that help you keep your promises.

SMART plans are also being used to increase the number of students preparing for science, technology, engineering, and maths (STEM) subjects at university.

Suitably designed SMART plans could be applied to improving worker and company productivity. It is important to get across the message that this does not mean more work, rather it means working more effectively. The government also needs to change its behaviour and introduce policy certainty. Government must make productivity an absolute priority and once relevant policies are in place – such as those relating to education and training – they must be ruthlessly followed through until their goals have been achieved.

2.10.5 Workers – how they can be supported to improve their productivity

The following measures need to be incorporated into the SMART plan for workers in order to support them to improve their productivity, recognising the important role that companies and government can play to facilitate this:

- Skilling up the workforce:
    - The SMART plan for workers needs to begin with an understanding of the relationship between the investment in human capital and productivity improvements.
    - Increased training increases labour productivity (if it is combined with other factors, such as R&D spending, investment in plant and equipment, and forms of work organisation and job design that allows people to use their enhanced skills and capabilities)
    - Higher level academic skills (university degrees) increase productivity principally in industries where innovative property investment represents a higher share of output and those with higher ICT (information and communication technology) intensity (e.g., robotics, software and machine learning).
    - Intermediate (practical, technical and occupational) skills (acquired through institutions of further education and apprenticeships) are needed to increase productivity in vocational jobs (ideally funded through bursaries, grants and subsidised fees)
    - As ICT becomes more widespread, vocational skills are increasingly important for the effective use of these technologies (and companies need to develop a digital adoption strategy which focuses on employee experience)
    - Skilled workers are a crucial input in the R&D process and in the generation of innovation
    - Skilled workers generate spillovers for other workers and other firms by aiding the diffusion of new technologies and organisational practices, due to technology-skill complementarities
    - Lifelong learning will be important. The Lifetime Skills Guarantee – allowing everyone to access the education and training they need throughout their lives – is an excellent idea, but to get the take-up required, it needs to be carefully incorporated into a SMART plan, with suitable measures put in place to overcome the resistance of low-skilled workers to upskill.
    - SMART plans can be used by companies to support their employees with more personalised learning and critical skills development, as well as tailored career guidance.
    - Companies need to use skills intelligence and talent management to enable them to identify, validate, match, and personalise the connection of people to work opportunities and therefore the opportunities for them to grow. Companies also need to adopt an ‘agile model’ in order to respond quickly to new developments. Speed to competency is key to the ‘new skilling’ model used by high performance organisations (HPOs).

- Improving health and wellbeing:

    - Health is one of the key factors influencing both life expectancy and productivity. Public health reform, improvements in nutrition and higher incomes which enabled greater leisure have done more to increase life expectancy than clinical medicine. Nutrition and medical services are labour-enhancing technological factors that have improved labour productivity.
    - Increasing the number of people in work can contribute to growing the economy. But only one in ten out-of-work disabled people and over-50s are getting help to find work now. People need support and mentoring to find jobs, particularly if they are not fully fit. In other words, they need their own dedicated SMART plan.
    - Around 40% of UK productivity loss is due to employees' unhealthy lifestyle behaviours and poor mental wellbeing. Health and work support need to be better linked – especially in the new hybrid world that combines working from both home and office. Only by understanding and personalising health and wellbeing support – again via a dedicated SMART plan – can we deliver meaningful change and build a healthier workforce in the UK. Companies benefit from a more engaged and productive workforce that leads to better business performance. In turn, employees are physically and mentally healthier as a result.
    - While health and wellbeing are important issues, it is possible that they can be abused by those wanting to game the system and the result is lower productivity.

- Encouraging and supporting people on benefits to find jobs:

    - The government is trying the carrot and stick approach to encourage people on benefits to find jobs. Universal Credit was introduced with rigorous sanctions (the stick). The carrot is to increase hours worked and get more income and for individuals to take back control of their lives.
    - There are 8.7 million people claiming working-age benefits, of whom 3.5 million are not looking for work because of long-term sickness or mental health. Many of these want to work, so the solution is to provide greater help for these people back into work – via a personalised SMART plan – since work is a treatment for many with mental health problems.
    - The government's carrot and stick (tough-love) policy for encouraging people back to work is certainly consistent with SMART planning, such as personal work coaches and helping people to make small steps towards their goal. We know it worked when UC was introduced during the Cameron government. So potentially the carrot aspect might work.
    - But the policy by itself might not be sufficient: it needs to accompanied by greater investment in health, social care and childcare. There also needs to be a modern

public employment service which can facilitate the move to better paid and more interesting jobs.

- Also while moving from welfare to even minimum-wage work makes someone about £6,000 a year better off, it remains the case that many people are not much better off once in work (sometimes as little as £5 per week). In view of this, the stick no longer seems much of a threat, according to comments in the social media forums. One said: 'They will tell you to look for more hours and or another job. Doesn't matter. Just smile and wave'. To deal with this, incentives in the form of tougher love might have to be applied. Elon Musk certainly recognised this when he declared an end to remote working at Tesla, with the announcement: 'If you don't show up, we will assume you have resigned'.

- Providing the right type of incentives to retain and promote workers:

  - Improving employee retention and progression
    - Companies live or die by the success of their employees. Companies with better employee retention levels (because they encourage job mobility within the company) can enjoy sustained performance. Retaining staff helps to keep turnover and associated staff costs lower.
    - Once staff have been employed, it is essential to develop their skills and progress their careers. This helps workers do their jobs better, but also gives them a sense of development and achievement. A mentorship programme will also boost retention. People are looking for a better work-life balance, attractive work benefits, and the companies they work for to be socially and environmentally responsible.
    - The improved training of managers can help staff feel better supported and more likely to remain.

  - Providing support for workers with family commitments:
    - Properly funding the NHS and social care would increase productivity by allowing people to get the care they need so they can work.
    - There needs to be reform to the UK's expensive and inflexible childcare provision. Unaffordable childcare reduces productivity, as women leave the workforce to avoid extortionate childcare costs. The government must also cut the levels of red tape around early childcare years, relax ratios of children per childminder, and increase the number of cheaper informal childminders

- Retaining older workers in the workforce:
  - With older employees, the risk is, not that they move jobs, but that they retire from the workforce altogether. To reduce early retirement, the government should work with employers to increase access to occupational health services, overcome ageist recruitment practices and redesign jobs to meet older workers' needs.

- All these measures should, if they improve retention and the welfare of employees, also increase productivity. A well-designed SMART plan will consider all these factors – and modify them if necessary to suit both the preferences of each employee and the ethos of the company. Employers would need to conduct a cost-benefit analysis to assess whether there is a positive net gain from implementing each of them. That, in turn, would require them to introduce a metric for measuring improvements in productivity. The government also has an important role to play, e.g., in reducing the cost of childcare and encouraging older workers to remain in the workforce.

- The service sector:

  - There are a number of measures to improve productivity in the service sector in order to reduce effort and generate value for both customers and the organisation. These include focusing on customer service, identifying opportunities to reduce customer effort, and automating and simplifying processes.
  - There are also measures relating directly to employees: engaging, developing and empowering employees; demonstrating fairness in pay and incentives for employees; and aligning individual performance measures and the organisation's customer satisfaction and financial objectives to promote desired employee behaviours and competences. These measures would be embedded in the SMART plan these companies design for their staff.

- The public sector:

  - Public-sector productivity could be improved in a similar way to the wider service sector, to ensure tax payers get the best outcomes at the most efficient cost.
  - In 2022, the government it would cut 91,000 civil servants who had been appointed to help deal with the pandemic and the aftermath of Brexit. These plans were later scrapped because of the high upfront cost of redundancies. A government source said: 'We'll be guided by getting the best outcomes at the most efficient cost. That's what business does and it's the way we'll deliver the

best services for the British public'. It remains unclear how public-sector jobs with titles like Director of Lived Experience Practice contribute to this.

- Immigration:

    - The right type of immigration policy can, in principle, increase productivity because (1) it can provide workers with skills that are lacking amongst domestic workers, and (2) it can provide workers for particular sectors (e.g., agriculture and hospitality) where there are significant shortages.
    - Skilled workers can already enter the country under the skilled worker visa programme. The problem with unskilled labour shortages could be resolved using temporary work visas.
    - The issue of immigration reflects the multi-dimensional nature of the productivity problem and the need for policy coordination and consistency, since one policy (increasing immigration) can reduce the effectiveness of and possibly negate another (getting welfare beneficiaries into work). We know from experience that easy immigration reduces the incentive for companies to train British workers or make the jobs more attractive.
    - An appropriate immigration policy must therefore take all these factors into account and provide a balance between the economic and social costs and benefits in a way that increases aggregate productivity across the whole economy. This in turn requires the government to provide the infrastructure – new homes, schools, hospitals, roads, reservoirs, power stations, etc – to meet the needs of a growing national population.
    - However, our recent history has been one lacking in policy coordination and consistency.

- A comprehensive workforce strategy:

    - The International Longevity Centre UK (ILCUK) calls for the introduction of a comprehensive workforce strategy across the whole economy, given the predicted future shortages of workers in the UK
    - This would look at:
        - How to support people to stay in the workforce for longer, e.g., by supporting healthy workplaces, supporting carers and creating flexible conditions that suit people's needs.
        - How to ameliorate childcare costs and reintegrate people into the workforce following timeout for caring or a health need
        - The role of migration and automation in addressing major workforce gaps

- A comprehensive workforce strategy is something the government should introduce in order to increase productivity across the economy over the long term.

2.10.6 Companies – how they can be supported to improve their productivity

The following measures can be used to improve the productivity of companies. Companies need to design a SMART plan both for themselves and for each of their employees. Doing so is critical to them becoming high performance organisations:

- Effective productivity management:
    - This involves managers using goals, incentives, development, and communication strategies to increase employee performance, engagement and productivity. Companies must retain the best talents, upskill them, and provide additional responsibilities.
    - Companies also need to create a model for asynchronous work, making work possible for employees to complete, regardless of where or when they are working. This helps workers become more adaptable.
    - Managers play a vital role in improving productivity in their teams. A Gallup study points out that as much as 70% of the variance in employee engagement can be attributed to management. A good manager will have a clear understanding of the skill levels of each team member, their strengths and weaknesses, and work with them to ensure the best output from each of them.
    - Managers, in turn, need to be trained. Even if they have years of experience, productivity management strategies are always evolving, so training needs to be kept current.

- Improving the working environment for employees:
    - A key component of effective productivity management is improving the working environment for employees. Employees are looking for a work experience that is personal, and where growth and development is rapid and continuous. This requires a more human approach to people experience design.
    - This implies that companies need to carefully select and then manage staff on the basis of their talent. Effective talent management involves a number of steps, including monitoring progress, developing existing talent, placing people in the right jobs, and focusing the company's resources into individuals who are going to create value for the business.

- Investment:

    - Critical to improving company productivity is the investment strategy. This is where a company's own SMART plan comes into play.
    - The SMART plan should begin with the research and development spend which is key to stimulating productivity and economic growth, since it promotes new technological innovations and the production of new products, processes and services. One of the most effective ways of doing this is through R&D tax credits which can create up to £2.35 in R&D spending for every £1 of tax forgone as relief.
    - The government is, of course, aware of the importance of R&D and investment more generally and allows 100% tax relief on qualifying investments in the year of spend, via the Annual Investment Allowance. The Autumn Statement 2022 announced that 'In addition to economic stability, policy certainty is fundamental to giving businesses the confidence to invest. The government remains committed to supporting businesses to invest and grow'.
    - But even if all political parties could agree to deliver policy certainty in areas relating to investment, this would not by itself be sufficient to deal with the bias that British companies have against spending on investment. Since the first Industrial Revolution, the owners of British companies have typically preferred solutions involving labour, rather than capital investment which involves more fund raising and risk taking – despite the brilliance of British inventiveness. It is this behavioural bias – more than anything else – that needs to be overcome if corporate investment in the UK is to fulfil its critical role in improving UK productivity. Each company's SMART plan must contain measures to overcome the UK's corporate aversion to investment.
    - The importance of foreign direct investment (FDI) needs to be recognised, since it helps to boost productivity in the UK by importing capital, new technology, modern work practices and developing skilled managers. Foreign-owned firms can be twice as productive as domestic companies, despite using local staff and managers, and being subject to the same rules and regulations. The secret of their higher productivity lies in the fact that they tend to employ more physical and human capital per hour worked than domestic firms. If domestically owned firms increased their physical and human capital to the same level, it would eliminate Britain's productivity gap.
    - Clearly, FDI could provide a powerful stimulus that encourages domestic companies to raise their game. They would need to adopt similar capital investments in order to compete. So the government should do more to incentivise FDI.

- Automation:

    - Automation is critical to improving productivity – especially of processes that people find boring to do. The UK is very poor at automating processes compared with Germany. Germany has ten times more robots than the UK. For the last 20 years, UK companies relied on abundant cheap labour from Eastern Europe and this reduced the incentive for these companies to automate.
    - Corporate SMART plans must therefore include a commitment to automation

- Trade associations, business consultants, institutional investors, academic institutions and venture capital:

    - Trade associations have an important role in supporting companies increase their productivity. Large firms might look to business consultants for advice.
    - By engaging with company directors, institutional investors, such as pension funds, can have an important influence on increasing company productivity.
    - Academic institutions can provide potentially helpful research output and advice that could help improve productivity. UK companies tend to have much weaker links to academia than in other countries. By doing so, they are missing out on potentially helpful research output and advice that could help improve productivity.
    - Start-up company SMART plans should begin by estimating funding and capability needs and then arrange discussions with appropriate suppliers of venture capital in the form of business incubators, accelerators and seed funds.

- A comprehensive strategy for corporate investment and productivity improvement:

    - The government must introduce a comprehensive strategy for corporate investment and productivity improvement – and that strategy needs to be sustained until its aims are achieved. This will involve the government supporting companies to develop their SMART plan to overcome their behavioural bias against investment.
    - Company boards should charge a specific board member with responsibility (1) for the company's R&D, investment and automation strategy and (2) for designing and implementing the company's productivity management strategy and for turning the company into a high performance organisation.

- The government must learn why similar strategies in the past have failed. In 2017, the government introduced a new Industrial Strategy which included a target to increase R&D spending by companies. But there is no prospect of the government being able to meet this target without a substantial increase in the level of R&D tax credits.
- This shows how a great strategy is failing because of poor implementation and resourcing.

2.10.7 Government – what it needs to do to increase productivity

When it comes to the issue of productivity, the government's position is considerably more complex than that of workers and companies for a number of reasons.

First, the government has many more responsibilities than workers and companies. These responsibilities can be divided into two broad categories: (1) the government has its own direct responsibilities for things like the national infrastructure, and (2) the government sets the framework – principally for regulation, taxes and subsidies – that then influence the economic behaviour of workers and companies.

Second, the government is responsible for planning for the long term (30 or 50 years ahead), but does not itself have a long-term existence. A particular government is elected for 5 years and rarely lasts more than 15 years. There are also frequent changes of government leaders even within the same government and its departments of state. Governments therefore have no natural sense of long-run continuity, despite being responsible for long-term planning and the implementation of those plans. The result is continual changes in long-term plans as governments are constantly being buffeted by short-term problems which they have to fire fight. The result is policy churn, whereas what is needed is long-term policy stability across many political business cycles. The behavioural biases of the government personnel that result in this policy churn must be recognised and factored into the government's own SMART plan for productivity – which the government must then stick to come hell or high water. To repeat, policy stability over an extended period of time must be at the heart of this plan.

- National infrastructure:
  - The government's 2020 National Infrastructure Strategy is intended to 'transform UK infrastructure [in particular, transport, digital, energy and utility networks] in order to level up the country, strengthen the Union and achieve net zero emissions by 2050'.

- The government accepts that there are 'long-term issues that have held back UK infrastructure. These issues include "stop-start" public investment, insufficient funding for regions outside of London, slow adoption of new technology, policy uncertainty that undermines private investment, and project delivery plagued by delays and cost overruns'.

- The Strategy sets out how the government will address these issues and do things differently. It will 'Accelerate and improve delivery: the government wants to transform the way infrastructure projects are delivered in the UK. This will be achieved through wide-ranging reforms from speeding up the planning system, to improving the way projects are chosen, procured and delivered, and greater use of cutting-edge construction technology'.

- Around half of all infrastructure spending is private, especially in energy, water and telecoms. As part of its aim of reducing policy uncertainty that holds back investment, the government is setting up a UK Infrastructure Bank, to co-invest alongside the private sector in infrastructure projects. The government recognises that private investment has made an important contribution to the national infrastructure and will be critical over the coming decades.

- However, some have argued that the Autumn Statement 2022 will actually do little to increase investment and get the UK out of its low-growth trap: 'it freezes public investment after two years, saving £14bn in what amounts to an 8pc cut in the capital budget. This is national self-harm given that we know from global best practice that infrastructure projects have a multiplier of around 1.5 and therefore pay for themselves with interest. … The cure for low private investment is not to freeze public investment as well. Mr Hunt should be doing the opposite: he should increase the capital budget, in turn unlocking the excess savings of the corporate sector. That is how you set off the virtuous circle of a capex boom'.[331] So once again, short-termism dominates government decision making.

- Equally important will be the effectiveness of implementation and ensuring value for publicly-invested money. It has been estimated that the cumulative impact of several relatively small improvements (e.g., to the transport system) can often be at least as big as that of the large high-profile 'megaprojects' –

[331] For example, Ambrose Evans-Pritchard (2022) The Autumn Statement does not offer a way out of Britain's low-growth trap, Daily Telegraph, 17 November; https://www.telegraph.co.uk/business/2022/11/17/hunt-has-spared-us-austerity-doom-loop-investment-revolution0/

and that public investments in the UK cost 40% more than equivalent investments on the continent.

- This suggests that once projects reach a certain scale, the tendering procedure ceases to be that competitive – and only a small number of large companies with the resources to provide all the required information on health & safety, diversity, GDPR, modern slavery, and net-zero, etc, will put in tenders. Once a company gets the contract, the project becomes 'too big to fail' and then cost overruns become virtually inevitable. The way to avoid this is to break the large project into smaller units, make the tendering process easier and more competitive, and then have much better cost control mechanisms in place. This will, of course, create coordination problems – which a large company would resolve internally. The alternative is to find out how continental megaprojects cost 40% less than those in the UK.

- In respect of the national infrastructure, the government's SMART plan should recognise that productivity improvements must be the government's key priority and must dominate all other considerations. This means that maintaining the public investment programme is critical. It should not have been frozen in the Autumn Statement 2022. If Switzerland, Sweden and Denmark can maintain their public investment at 4% of GDP throughout the recession that followed the GFC, so must the UK maintain its investment programme through difficult times.

- Automation:

  - The government should adopt as much automation for the national infrastructure as possible.

  - An example would be digitising the NHS. The government has promised to 'radically innovate' and use new technology to deliver healthcare reforms, such as in digital record keeping, appointment management and analysis of X-rays. The aim will be to free up staff time for more productive uses. But medical staff can be resistant to new technology and the NHS lacks the in-house expertise to develop the powerful, scalable software that is needed. The solution would be serious collaboration with the tech companies, such as Apple, Microsoft or Oracle.

- The government's SMART plan for automation must put in place measures for dealing with the reluctance of people to adopt new technologies and provide the resources to develop and implement the required software.

- Regulation:

    - Regulation has become a contentious issue in recent years: should it be tighter or looser?, should it be aligned with that of another jurisdiction (such as the EU or US) or should it be aligned with global standards? The Retained EU Law (Revocation and Reform) Bill proposes to remove 2,400 pieces of EU legislation from the UK statute book by the end of 2023.

    - Perhaps we should reconsider the primary purpose of regulation which is to provide adequate protection for consumers, without overly burdening producers. It should not be there to protect incumbent producers against legitimate competition from new producers. Further, it should not inhibit innovation.

    - We should also be aware that, while poor regulations can inhibit productivity-improving economic activity, regulations, even good ones, cannot force organisations to improve their productivity. So what type of regulation can help?

    - Good regulation should be outcome-based (rather than rules-based), be smart in its implementation, and be adaptive to allow for future innovations.

    - Outcome-based smart adaptive regulation:

        - would actively support companies that are taking risks. It would encourage innovation, backing those who invest with their own money, free of bureaucratic strictures.
        - must not impede fair competition. In particular, it must prevent regulatory capture whereby incumbent firms ask for regulations which make it more difficult for new firms to enter the industry.

    - The Autumn statement 2022 announced that five sectors with the greatest potential for growth – digital technology, life sciences, green industries, financial services and advanced manufacturing – will be supported through measures to reduce unnecessary regulation and boost innovation and growth. The regulations for these sectors should be outcome-based, smart and adaptive – and incorporated into the government's own SMART plan.

- Financial services regulation should also be outcome-based, smart and adaptive, with unnecessary and poorly-drafted EU rules scrapped.

- Regulators themselves need to become faster and more flexible. Currently, basic organisational requests that should take weeks, instead take months, and make the UK look slow and poorly run to firms based overseas.

- One of the key reasons for leaving the EU was to remove the unnecessary red tape affecting the UK financial services industry and to allow it to contribute to UK growth. But after six years, little has been done to introduce the outcome-based, smart and adaptive regulation both in financial services and other sectors that can help to increase productivity.

- It is all very well having a fine set of high-level principles, but regulations will only be effective if they can deal with realities on the ground and take into account the behavioural traits of the regulator, the regulated and the government itself. The government must resist the urge to gold-plate regulations, for example. All his needs to be incorporated into the government's SMART plan for regulation.

- Taxation and subsidies:

  - Low taxes by themselves do not automatically increase private-sector investment and growth. Companies invest if they can see a profitable market for the products or services produced as a result of the investment – and if there are not cheaper alternatives like relying on low-cost overseas workers.

  - Even if lower taxes do increase investment, they will not necessarily increase growth. This is because the increase in investment will increase the capital stock and lead to a one-off increase in GDP but not the growth rate of GDP. The economy can only continually grow in the long term if there are continual increases in productivity.

  - Low taxes can, however, have an indirect effect on increasing productivity by encouraging foreign direct investment.

  - While low taxes might not lead to higher investment, higher taxes can certainly reduce investment.

  - Subsidies in the form of 100% deductions against tax for new investments (as in the Annual Investment Allowance to cover new investment up to £1 million) are very helpful in increasing investment.

- There is evidence that subsidies can contribute to improving productivity by helping to increase company investment in R&D and in intangible capital (e.g., the Singapore government's productivity and innovation tax credit covers expenditure not just on R&D activities, but also on design, automation of processes, training and the acquisition and development of intangible assets)

- The government's 2017 Industrial Strategy planned to increase R&D spend by government and private businesses to 2.4% of the GDP (up from 1.69%) within a decade. However, there is no prospect of the government being able to meet its target without a substantial increase in the level of R&D tax credits to stimulate private sector R&D spending.

- For training for human capital development, the most effective subsidies are student bursaries/grants and tax breaks for employers.

- There is also a case for offering tax incentives to employers and to tweak the tax and benefit systems to encourage more school leavers and workers who currently have low education or training to acquire *practical* skills and qualifications through sandwich courses and national diplomas, such as higher national diplomas (HND) and higher national certificates (HNC).

- The government introduced a new business subsidies regulation framework in January 2023 with the aim of 'providing a major boost for businesses and further impetus behind the government's plans to supercharge economic growth'.

- The government's SMART plan for its tax and subsidy regime should recognise that (1) lower taxes do not automatically increase domestic investment and growth, although lower taxes can encourage foreign direct investment, (2) higher taxes can reduce investment, (3) subsidies are very helpful in increasing investment, R&D spend and intangible capital – but they have to be sufficiently large as in the case of the 100% deductions against tax for new investments, and (4) subsidies in the form of student bursaries/grants, tax breaks for employers, and tweaks to the tax and benefit systems can encourage more school leavers and workers who currently have low education or training to acquire *practical* skills and qualifications through sandwich courses and national diplomas.

- A comprehensive strategy on long-term government policy:

    - The UK Productivity Commission was very critical of past government policy which was characterised by 'over-centralisation, weak and ineffective institutions and policy churn, institutional and policy silos, as well as short-termism and poor policy coordination'.

- The government therefore needs a SMART plan to implement a strategy on long-term government policy covering (1) a comprehensive workforce strategy, (2) a comprehensive strategy for corporate investment and productivity improvement, (3) a comprehensive strategy for the national infrastructure, automation, regulation, and taxes and subsidies, and (4) a national resilience strategy.

- This strategy must avoid the weaknesses in previous policy outlined above by the UK Productivity Commission. There therefore needs to be a national consensus about this. We can no longer tolerate each new government reversing the policies of the previous government.

3. Exports

3.1 The UK's export performance

In 1899, the UK was the world's biggest exporter, accounting for 33% of global exports.[332] The UK's share of global exports was around 11% in 1948 (exports of goods only), but this declined to around 3% in 2019 (exports of goods and services) – see Figure 41. The UK's comparative advantage is in services, but its share of global services trade declined from around 9% in 2007 to around 7% in 2017.

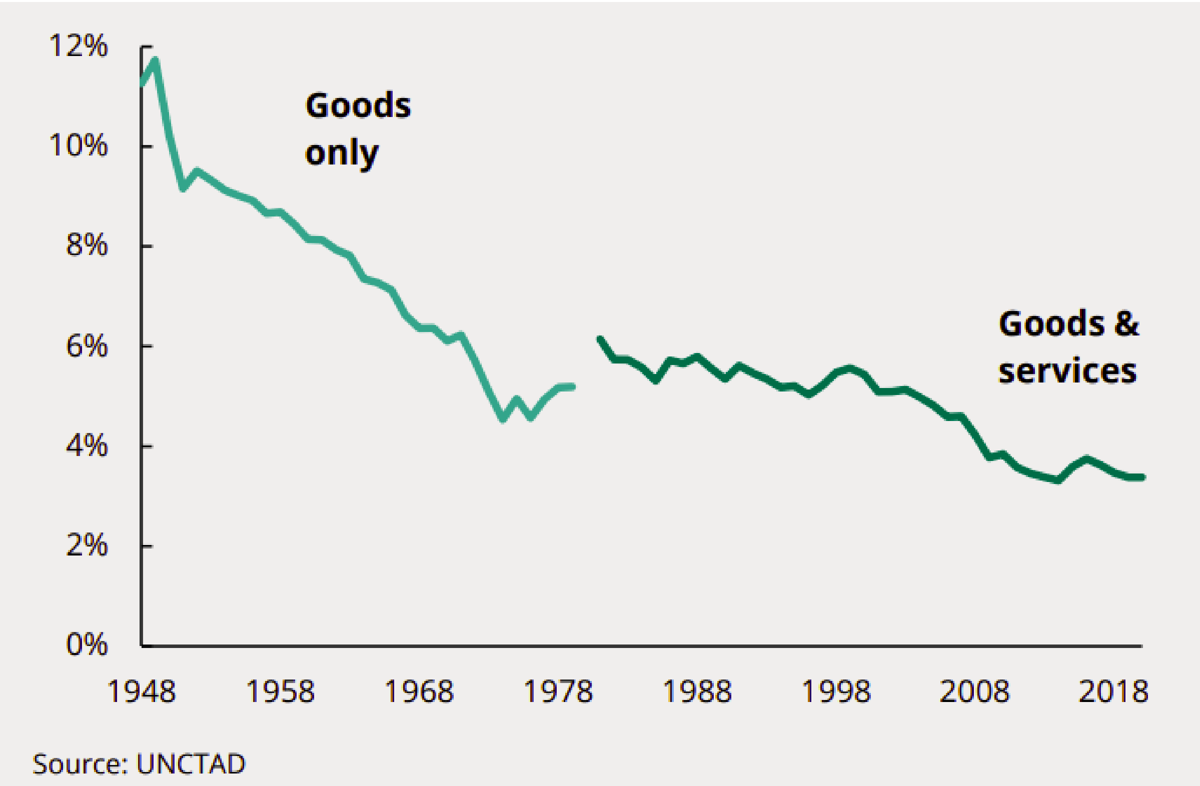

Figure 41: UK exports as a share of world exports, 1948 - 2019 (%)
Source: Matthew Ward (2020), UK trade, 1948-2019: statistics, Briefing Paper Number CBP 8261, 10 December; https://researchbriefings.files.parliament.uk/documents/CBP-8261/CBP-8261.pdf

The relative decline in exports without a corresponding reduction in imports has led to systematically deteriorating trade balance[333] as Figure 42 shows.

[332] https://onlinelibrary.wiley.com/doi/abs/10.1002/9780470998823.ch13
[333] The trade balance is calculated as the difference between the exports and imports of goods and services. A positive number means trade surplus and a negative number means trade deficit.

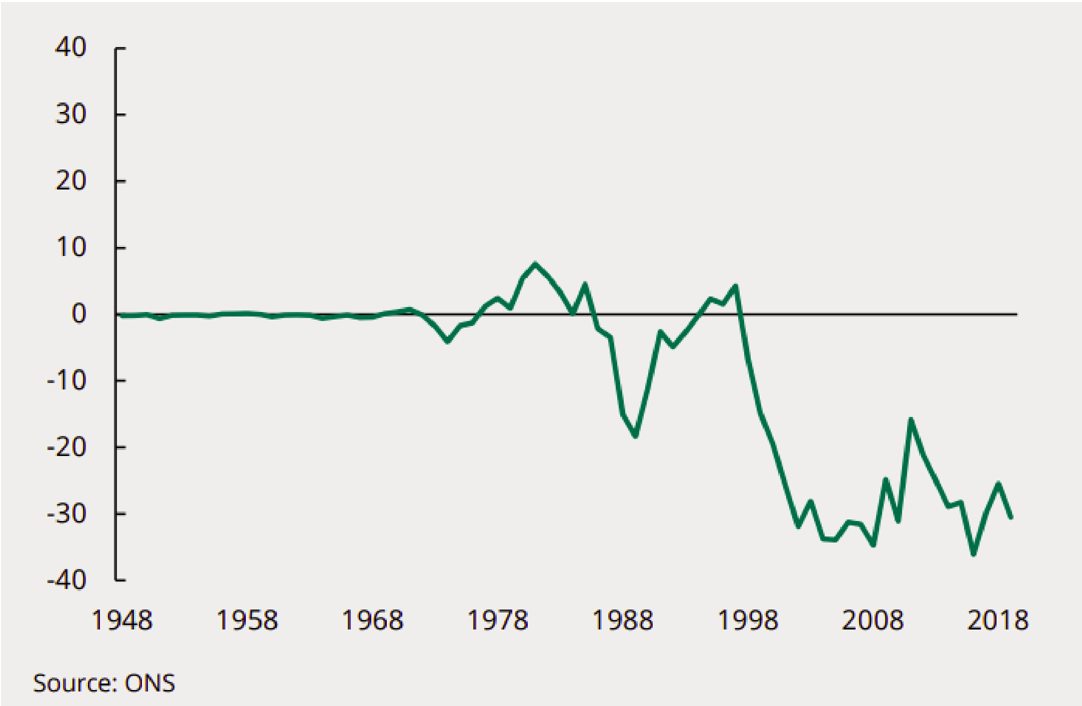

Figure 42: UK trade balance, 1948-2019 (goods & services, £ bns)
Source: Matthew Ward (2020), UK trade, 1948-2019: statistics, Briefing Paper Number CBP 8261, 10 December; https://researchbriefings.files.parliament.uk/documents/CBP-8261/CBP-8261.pdf

Over the last 10 years, the share of exports in UK GDP has varied in the range 25-30%,[334] but Figure 43 shows that the share of exports in the form of services has been increasing, while the share in the form of goods has been declining, reflecting the decline in domestic manufacturing.

Figure 44 shows that since around 1970, the UK has experienced an increasing trade deficit in goods and an increasing trade surplus in services.

Table 2 shows the UK's poor export penetration into China relative to Germany and France between 2017 and 2021.

[334] https://www.theglobaleconomy.com/United-Kingdom/exports/

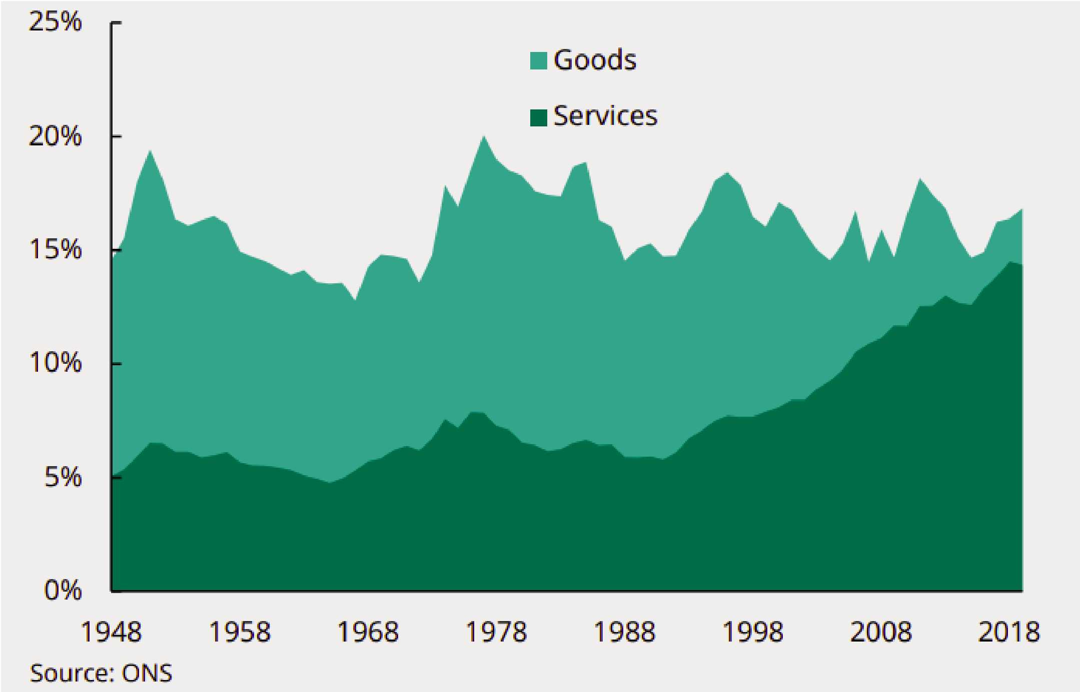

Figure 43: UK exports as a share of GDP, 1948 - 2019 (%)

Source: Matthew Ward (2020), UK trade, 1948-2019: statistics, Briefing Paper Number CBP 8261, 10 December; https://researchbriefings.files.parliament.uk/documents/CBP-8261/CBP-8261.pdf

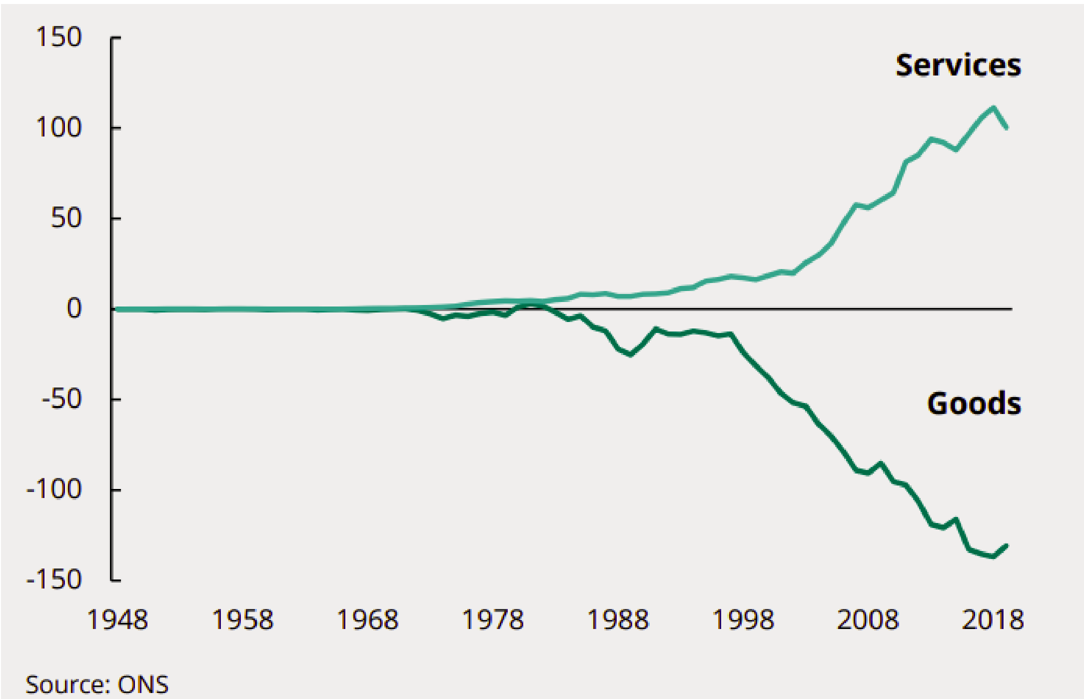

Figure 44: UK trade balance, 1948-2019 (goods & services, £ bns)

Source: Matthew Ward (2020), UK trade, 1948-2019: statistics, Briefing Paper Number CBP 8261, 10 December; https://researchbriefings.files.parliament.uk/documents/CBP-8261/CBP-8261.pdf

Table 2: Exports to China by Germany, France and the UK, 2017-2021, Total all products, US Dollars

Exporters	2017	2018	2019	2020	2021
Germany	96 bn	106 bn	105 bn	105 bn	120 bn
France	27 bn	32 bn	33 bn	30 bn	39 bn
United Kingdom	22 bn	24 bn	24 bn	20 bn	26 bn

Sources: ITC calculations based on General Customs Administration of China statistics since January, 2015; https://www.briefingsforbritain.co.uk/carney-v-portes-does-it-matter/[335]

Figure 45 shows the sectors where the UK has a comparative advantage. The UK is particularly strong in services, such as digital, financial and business (e.g., legal and accounting) services and life sciences.

Figure 46 shows the sectors with the greatest growth opportunities, given the UK's comparative advantage. It is dominated by digital, financial and business services and by life sciences.

[335] According to Catherine McBride (2022) Carney v Portes. Does it Matter?, Briefings for Britain, 11 November (https://www.briefingsforbritain.co.uk/carney-v-portes-does-it-matter/):

> *The dominance of different industries in the three economies is the cause of the divergence in GDP growth. Unlike the UK, Germany never abandoned its manufacturing base and sells China everything from vehicles to manufacturing equipment to electrical machinery to industrial chemicals. The French sell China luxury goods: cosmetics, perfume, and wine, and some aircraft, but at this stage of China's development, they are in less demand. The British export some vehicles, some fuels, and some machinery to China – but are not in the same league as Germany. The UK's services exports mainly go to countries that need insurance, have pension funds, use Common Law and the English language, but that doesn't really apply to China, although we do export architectural and engineering services there and some Chinese companies have listed on UK stock exchanges.*

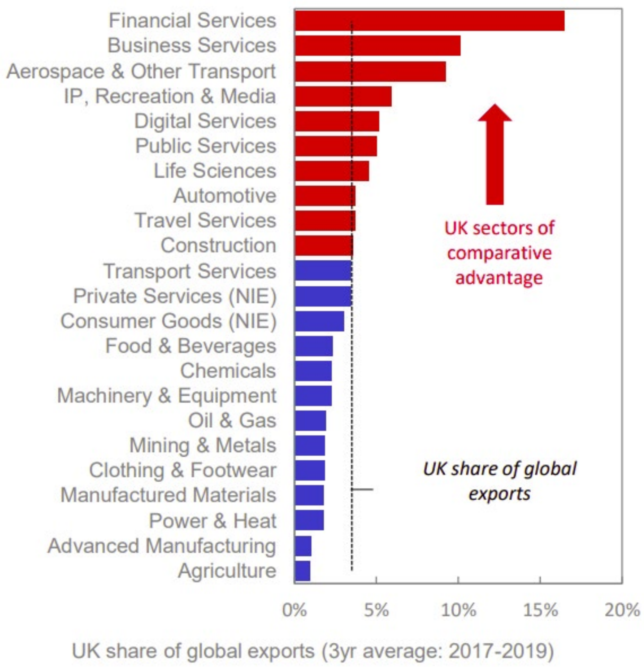

Figure 45: UK sectors of comparative advantage
Sources: UNCTAD, Office for National Statistics and DIT calculations; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033767/made-in-the-uk-sold-to-the-world-building-an-analytical-framework.pdf

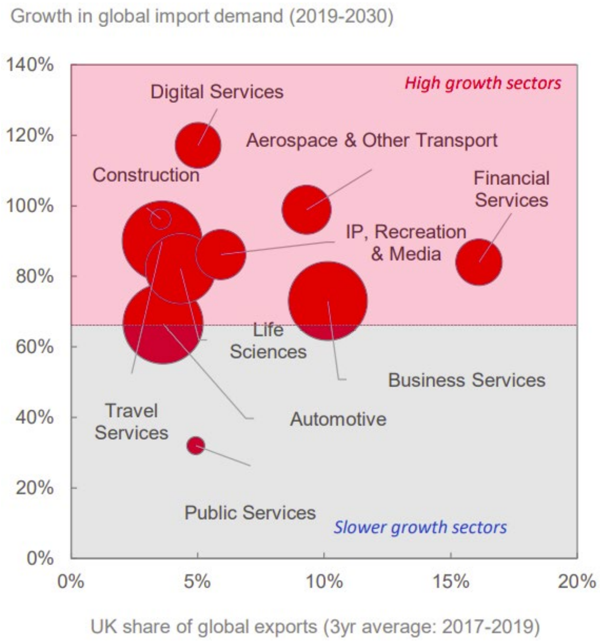

Figure 46: Global import demand growth for UK sectors of comparative advantage, 2019-2030
Sources: IMF World Economic Outlook April 2021, Oxford Economics, UNCTAD Statistics and DIT calculations. Notes: Projections are for nominal imports converted into US dollars at time-varying market exchange rates. Bubbles indicate 2019 sector size. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033767/made-in-the-uk-sold-to-the-world-building-an-analytical-framework.pdf

3.2 Why has the UK's export performance been so poor?

One study which looked at the issue concluded that positive changes in relative competitiveness and in demand are key drivers of export growth:[336]

> *The UK's export performance since 2008 has been disappointing, especially when sterling's depreciation in 2008-09 [and again in 2016] is taken into account. This reflects a deterioration in relative wage costs, particularly relative to the US and Germany. …The poor performance of exports is one of the key reasons for lacklustre growth in the UK, with GDP still below pre-crisis levels. [In addition, there has been an over-reliance on exporting to developed economies:] the slow pace of export growth is partly due to weak demand in key export markets such as the US, which has been labouring under the after-effects of the financial crisis, …and the Eurozone, where demand has been weighed down by the sovereign debt crisis [and more recently the Covid pandemic].*
>
> *…The bias of exports towards developed economies can also be explained by the high proportion of services as a share of total UK exports (40% of export volumes, compared with 15% for Germany). The UK's comparative advantage in financial and professional services means the balance of trade is more heavily weighted towards services than in other countries. As a result, the UK is more dependent on developed economies, which have higher demand for these services than developing economies.*
>
> *But [the slow pace of export growth] also reflects comparatively slow progress in penetrating fast growing emerging markets [especially in comparison with Germany]. In addition, the UK's comparative advantage in services, the demand for which is less price responsive than for goods, has limited the positive impact of sterling's depreciation. [A key reason for the poor penetration of emerging markets is that these economies are not yet rich enough to afford what the UK does produce well, namely branded consumer goods and services, and high-tech goods. By contrast, since these economies are rapidly industrialising, their demand for imported capital goods is high – and Germany, for example, is a big exporter of machinery to these markets]. The depreciation of sterling has not offset these disadvantages.*
>
> *…Turning to the impact of competitiveness, our analysis shows that it has been a much less significant contributor to growth in goods exports than foreign demand. This finding is in line with the economic literature on drivers of trade. We measure competitiveness using the UK's unit labour costs relative to unit labour costs in competing countries [converted to a common currency]. …*
>
> *We find that on average over the period [of the study], competitiveness has had a small negative effect on the growth in the UK's goods exports. The sharp appreciation of the*

[336] Why Has the UK's Export Performance Been so Poor? (January 2014). Economic Outlook, Vol. 38, Issue 1, pp. 21-30, 2014, Available at SSRN: https://ssrn.com/abstract=3597093 or http://dx.doi.org/10.1111/1468-0319.12056

pound in the late 1990s and early 2000s means that in the years before the crisis, 1996-2006, [reduced] UK competitiveness contributed negatively to export growth by 1.2 percentage points per year on average. The sharp decline in the pound in 2008-09 has not been sufficient to compensate for this, meaning that competitiveness has subtracted 0.5% a year from UK exports over the period as a whole. …

The UK's relative competitiveness has deteriorated, particularly against the US and Germany. …There are underlying structural weaknesses in the UK's export sector, which are limiting firms' ability to respond to new opportunities in emerging markets and take advantage of the weakening of the currency. …

The slow growth of export volumes is even more surprising (and disappointing) given the movements in the exchange rate. Sterling depreciated sharply during the financial crisis, and is currently over 20% below its average level in 2007. For exporters, the shift in the currency provided a significant improvement in competitiveness, as UK goods became much cheaper for foreign consumers than had previously been the case. …

However, the study concludes with the following positive thoughts:

There is a clear lesson here for the UK: you do not need to be in pole position to win the race but you do have to use your skills to manoeuvre your way up the field if you are to get a place on the podium.

It should … be noted that changes in trade patterns typically take five or more years to materialise, and the UK is well placed to take advantage of growing demand [especially for services] in developing economies over the next decade. … Manufacturers of branded consumer goods are likely to do particularly well in these markets. Their overseas business models are based on licensing and franchising rather than direct exports and have been very successful at penetrating emerging markets historically. … Growth will [also] be driven by sectors where the UK has a comparative advantage: chemicals, machinery and transport equipment and other [high-tech] manufactured goods.

The strength in exporting services [is] less price sensitive. …[T]he depreciation of sterling, which has cheapened UK exports for foreign consumers, …has had a relatively small impact on external demand and export volumes. Looking ahead, emerging markets' demand for services imports will rise as financial systems develop and household incomes increase.

But the poor performance over the last decade is not just the result of the mix of goods exported, and government policies to tackle structural, supply side deficiencies must be implemented for the UK to take full advantage of the opportunities on offer.

This, in turn, means increasing the productivity of exporting companies.

3.3 Why exports matter

One reason exports matter is because exporters tend to be the drivers of productivity growth as a result of their greater ability to generate and absorb new innovations. [337] A study from the UK Department for Business Innovation and Skills[338] confirmed this:[339]

> *The UK has had a persistent trade deficit over recent decades, reflecting relatively strong demand and weak supply performance in our traded sectors. Net trade has a positive impact on growth when it improves supply, either through increasing productivity or the utilisation of under-used resources. At the firm level, exports can help diversify revenue streams, expand overall sales, and drive improvements in productivity and innovation. At the same time, the more productive and innovative firms are likely to be the ones that will compete most successfully and sustainably in the international market.*

A second reason is that we need to reduce the size of the trade deficit – absent this, we become increasingly reliant on capital inflows (the counterpart to a trade deficit) to fund our excess spending. The UK spends too much on consumer goods and services and saves and invests too little. Sooner or later this deficit needs to be reduced – and this can only be done by increasing exports.

A third reason is that exports support around 6.5 million jobs in the UK (in 2016), with 74% of those outside of London.[340] Exporting firms also pay higher average wages than non-exporting firms.[341]

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[337] See, e.g., Wagner, J. (2007). Exports and productivity: A survey of the evidence from firm-level data. The World Economy, 30(1):60–82; Wagner, J. (2012). International trade and firm performance: a survey of empirical studies since 2006. Review of World Economics, 148(2):235–267.
[338] Later renamed Department for Business, Energy & Industrial Strategy
[339] Department for Business Innovation and Skills (2012) UK trade performance across markets and sectors, BIS Economics Paper No. 17, February; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/32475/12-579-uk-trade-performance-markets-and-sectors.pdf
[340] Fraser of Allander Institute (FAI) research on behalf of DIT: 'Estimating the relationship between exports and the labour market in the UK' (2021). Based on 2016 data; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/966549/Estimating-the-relationship-between-exports-and-the-labour-market-in-the-UK.pdf
[341] Riker, D. (2015) 'Export-Intensive Industries Pay More on Average: An Update', Office of Economics Research Note, U.S. International Trade Commission; https://www.usitc.gov/publications/332/ec201504a.pdf

The Office for National Statistics (2018)[342] conducted a study on the relationship between trade in goods and productivity. The key findings are as follows:

- *Only 4.6% of UK businesses engaged in international trade (either importing or exporting) in 2016*
- *UK businesses which declare international trade in goods were around 70% more productive on average than non-traders in 2016, with average output per worker of £62,900 against £37,200*
- *Businesses which trade goods internationally are large: only around one in five UK businesses with more than 10 employees made trade in goods declarations in 2016, but trading businesses accounted for around 40% of all employment over the same period*
- *Trading propensity also varies significantly by industry. Businesses in the Manufacturing, Wholesale and retail, Mining and quarrying (including oil extraction) and Electricity, gas, and steam, and water supply, Sewerage and waste collection industries are most likely to be traders. However, even among the most active trading industries, traders account for less than one-quarter of businesses. The smallest fractions of businesses which trade according to trade in goods declarations are in the Agricultural, Accommodation and food services and Construction industries.*
- *Of total UK exports, 35% to 40% were reported by the 50 largest exporting enterprise groups between 2008 and 2016; of total UK imports, 30% to 35% are reported by the 50 largest importing enterprise groups. These results also suggest that trade in goods is more concentrated for exports than for imports. The top 50 and top 100 enterprise groups for exports make up a higher share of total UK exports than do the top 50 and top 100 importing enterprise groups. 43% to 51% of exports are declared by the largest 100 exporter enterprise groups over this period, compared with 37% to 42% of imports.*
- *Most direct trade in goods is undertaken by the Manufacturing industry – which exported (imported) £149bn (£112bn) of goods in 2016 – and the Wholesale and retail industry – which exported (imported) £84bn (£222bn) over the same period; businesses in these industries also trade the largest number of products and have the greatest geographical reach.*
- *Businesses which report goods exports or imports were around 21% and 20% more productive respectively than businesses which do not trade after controlling for their size, industry and ownership status status; among traders, more productive businesses export more products and import from more destinations than less productive traders.*

[342] ONS (2018) UK trade in goods and productivity: new findings, 6 July; https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/articles/uktradeingoodsandproductivitynewfindings/2018-07-06

- *Businesses which source a large proportion of their inputs abroad, which export more products, or which export to more countries tend to be more productive than other traders.*
- *These effects appear to differ between the EU and non-EU markets: the productivity premia associated with trading with non-EU markets are considerably larger than those associated with EU trade, suggesting that lower productivity businesses find it easier to access EU than non-EU markets.*
- *Foreign-owned businesses are more likely to be active traders than domestically held traders. Among the British-owned business population, fewer than 5% of businesses declared trade in goods in 2016. By contrast, around 30% of UK businesses owned by companies in the EU reported some trade to HMRC over the same period, as well as 37% of UK businesses owned in the US. Businesses with Japanese owners are the most likely to trade, and the 48% of non-trading, Japanese-owned businesses only account for just 4% of total employment in Japanese-owned businesses.*
- *EU- and US-owned businesses in the UK appear to have strong connections to their "home" markets relative to domestically owned firms. In 2016, the goods exports and imports of UK businesses divided fairly evenly between the EU and non-EU countries: around 50.4% of the export declarations and 48.2% of the import declarations of these businesses by value were accounted for by the EU. However, businesses where the ultimate foreign owner is based in another EU country have trade that is more oriented towards the EU, with 60.1% of reported exports going to the EU and 81.7% of reported imports coming from the EU in 2016. Similarly, US-owned firms are slightly more orientated towards the non-EU. These businesses imported from the EU and outside the EU equally (50.5% and 49.5%), but sent 57.6% of reported exports to outside the EU in 2016. These results suggest some degree of "home market" bias in the behaviour of these businesses.*
- *Businesses owned in the EU and the US are around 15% and 19% more productive than UK owned businesses. UK firms which are ultimately owned in Japan are around 35% more productive than their domestically held equivalents.*
- *The productivity premium is driven by how much a business trades, as compared with whether they trade:*
    - *The number of markets with which a business trades is related to their level of labour productivity. Each additional EU nation to which a business exports is associated with a labour productivity premium of around 0.4%, while each additional non-EU nation a business imports from is associated with a 0.6% boost to their level of labour productivity. Each additional EU nation imported from is associated with a 0.7% reduction in labour productivity.*
    - *The number of products that a business trades is also related to its level of labour productivity. Each additional product category exported is associated with a productivity premium of around 0.1% – although this effect is stronger*

for the number of products traded with the non-EU than with the EU. Additional imported varieties are associated with small reductions in labour productivity.

- *Businesses which source a larger proportion of their inputs from overseas tend to have higher productivity on average than businesses which obtain more of their inputs from domestic sources. As before, this effect varies by geography, and is slightly larger for EU imports than for non-EU imports. Higher export to turnover ratios are associated with lower labour productivity.*

Figure 47 shows the distribution of labour productivity for non-traders and for businesses which trade to varying degrees, for 2008, 2011, 2014 and 2016. Traders whose goods exports (imports) account for more than 10% of their turnover (intermediate consumption) are labelled as "intensive" traders. The rightwards shift of the labour productivity distribution for intensive traders is particularly apparent.

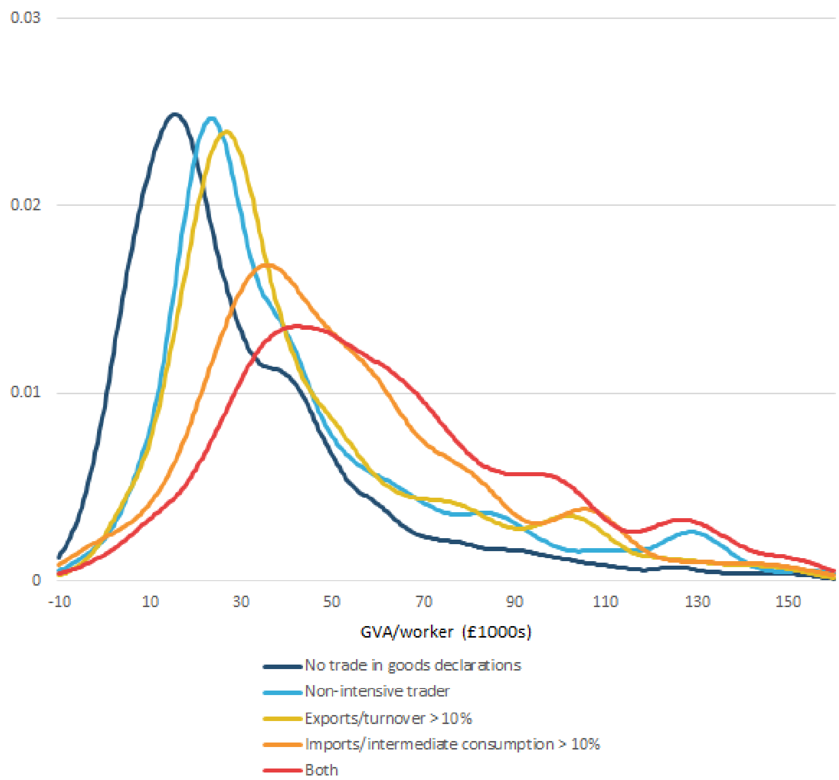

Figure 47: Distribution of labour productivity by trader status, employment weighted, 2016

Source: Office for National Statistics, HMRC. Notes:

1. *Weighted by employment and survey sample and grossing weights.*
2. *'Intensive' exporters are those businesses which have an export to turnover ratio of more than 10%. 'Intensive' importers are those businesses which have import values larger than 10% of their intermediate consumption.*
3. *Excludes the top 2% of exporters and the top 2% of importers by value. Businesses with export intensity greater than 110% or import intensity greater than 200% are excluded due to lack of survey and administrative data comparability (due to e.g. timing).*

All these findings suggest a strong, consistent, positive link between labour productivity and trade in goods-based trader status.

3.4 Exporting firms have higher productivity - Self-Selection and Learning-By-Exporting

Johannes Schwarzer (ud)[343] discusses the two main hypotheses that have been put forward to explain the higher observed productivity in exporting firms: Self-Selection and Learning-By-Exporting (LBE):

> *Self-selection into exporting implies that firms with higher productivity "self-select" into exporting, as their productivity edge allows them to amortise the higher costs of serving foreign markets. The self-selection hypothesis hence implies that firms which become exporters are simply more productive to start with. There is a broad consensus in the empirical literature as reviewed in Wagner (2007),[344] Greenaway and Kneller (2007),[345] and Bernard et al. (2012)[346] to this effect, confirming substantial differences in firm-level productivity between domestically operating firms and future exporters prior to their entry into exporting [The ONS (2018) study above confirms this].*
>
> *The Learning-By-Exporting (LBE) hypothesis stipulates that firms increase their productivity as a consequence of exporting. [Reasons for this include:]*
>
> - *technology diffusion through participation in international markets,*
> - *learning from foreign markets in terms of buyer-seller relationships, and increased competition with foreign suppliers,*
> - *adapting and improving product quality to suit foreign preferences,*
> - *increased competition with foreign suppliers,*
> - *demand-side driven exploitation of economies of scale.*
>
> *In the case of LBE, identification of the effect rests on the assumption that the productivity effect of a firm's international activity must – by definition – be specific to entering foreign markets, entailing activities and knowledge that non-exporters do not possess. The evidence for this effect so far is rather sparse, some examples include*

[343] Johannes Schwarzer (ud) The Effects of Exporting on Labor Productivity: Evidence from German firms; https://www.cepal.org/sites/default/files/events/files/40-the_effects_of_exporting_on_labor_productivity_evidence_from_german_firms.pdf
[344] Wagner, J. (2007). Exports and productivity: A survey of the evidence from firm-level data. The World Economy, 30(1):60–82.
[345] Greenaway, D. and Kneller, R. (2007). Firm heterogeneity, exporting and foreign direct investment. The Economic Journal, 117(517):F134–F161.
[346] Bernard, A. B., Jensen, J. B., Redding, S. J., and Schott, P. K. (2012). The empirics of firm heterogeneity and international trade. Annu. Rev. Econ, 4:283–313.

Hosono et al. (2015),[347] Fernandes and Isgut (2015),[348] Manjon-Antolin et al. (2013),[349] Lileeva and Trefler (2010),[350] and Girma et al. (2004).[351]

Firms that are not in the self-select group must therefore be prepared for a lot of LBE if they are going to be successful exporters.

Figure 48 illustrates the three-way relationship between productivity, innovation and trade.

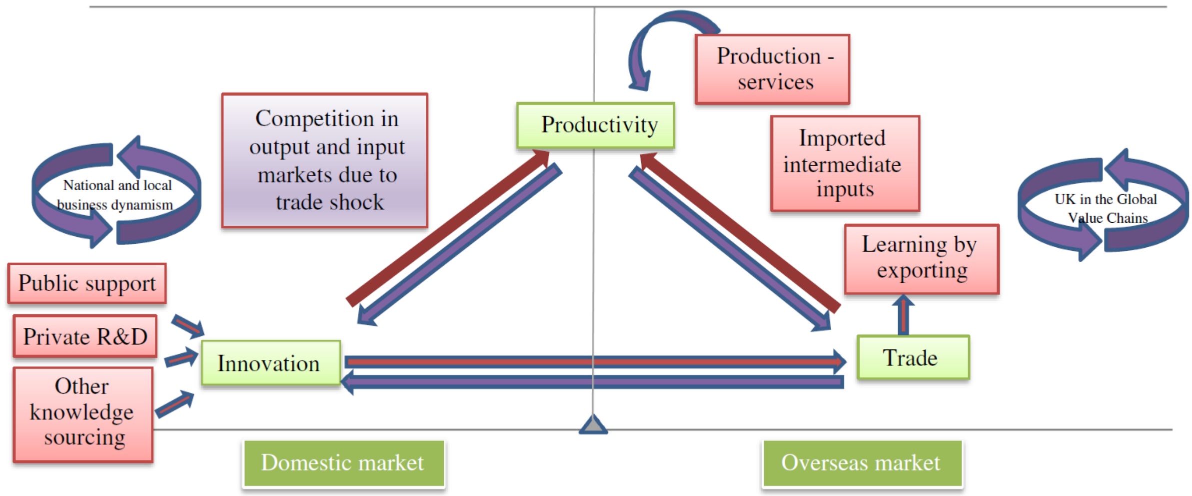

Figure 48: A three-way relationship: Productivity-innovation-trade

Source: Jun Du and Oleksandr Shepotylo (2021) UK trade in the time of COVID-19: A review; https://onlinelibrary.wiley.com/doi/epdf/10.1111/twec.13220

3.5 Why service exports are key for the UK

It is clear from the above that the UK's comparative advantage is in service exports – not least because the manufacturing base is too small (just 10% of the economy) to be a springboard for an export drive. As Martin Wolf (2022)[352] points out:

[347] Hosono, K., Miyakawa, D., and Takizawa, M. (2015). Learning by export: Does the presence of foreign affiliate companies matter? Technical report, RIETI Discussion Paper, 15-E-053.
[348] Fernandes, A. M. and Isgut, A. E. (2015). Learning-by-exporting effects: Are they for real? Emerging Markets Finance and Trade, 51(1):65–89.
[349] Manjon-Antolin, M., Juan A. Máñez, J. A., Rochina-Barrachina, M. E., and Sanchis-Llopis, J. A. (2013). Reconsidering learning by exporting. Review of World Economics, 149(1):5–22.
[350] Lileeva, A. and Trefler, D. (2010). Improved access to foreign markets raises plant-level productivity. . . for some plants. The Quarterly Journal of Economics, 125(3):1051–1099.
[351] Girma, S., Greenaway, D., and Kneller, R. (2004). Does exporting increase productivity? a microeconometric analysis of matched firms. Review of International Economics, 12(5):855–866.
[352] Martin Wolf (2022) The economic consequences of Liz Truss: It is surely a fantasy that further tax cuts and deregulation will transform performance, Financial Times, 20 September; https://www.ft.com/content/a9be9db6-a91e-48e4-8d69-4bbfff7e0f5f

Services are a different story. The ratio of trade in services to world output, though much lower than for goods, has continued to rise. Services are a very heterogeneous group of activities, some of which require movement of people (tourism, for example). But activities in the exceptionally dynamic category of "other commercial services" [OCS, such as IT, financial, insurance and pensions, construction] can, in large part, be supplied virtually. These include a highly diverse range of activities. The growth of trade in OCS is also exceptionally dynamic: between 1990 and 2020, trade in goods expanded fivefold while OCS multiplied 11-fold.

A crucial point is that the expansion of trade in such services has depended little on trade agreements. The regulation of service activities focuses on final services, not intermediate ones. There exist, for example, strict rules on selling accounting services in the US. Yet there are few rules on the qualifications of the workers that do the paperwork behind the provision of such services.

Thus, a "US accountant can employ pretty much anybody to tally up a client's travel expenses and collate them with expense receipts". Examples of occupations that provide intermediate as opposed to final services include book-keepers, forensic accountants, screeners of CVs, administrative assistants, online help staff, graphic designers, copy-editors, personal assistants, X-ray readers, IT security consultants, IT help staff, software engineers, lawyers who check contracts, financial analysts who write reports. The list goes on.

A report by McKinsey[353] concludes that 'UK companies can navigate shifts in global trade patterns by focusing on fast-growing services and digital trades, redoubling efforts in emerging markets, and digitising their supply chains':

The United Kingdom excels in services exports, which, in value-added terms, are almost twice the value of its goods exports (Exhibit 1). It has the second-largest market share in traded services globally. Moreover, it generated around 8 percent of the value of intangibles crossing the world's borders in 2017, with more than a quarter of that coming from its healthcare and pharmaceuticals sectors.

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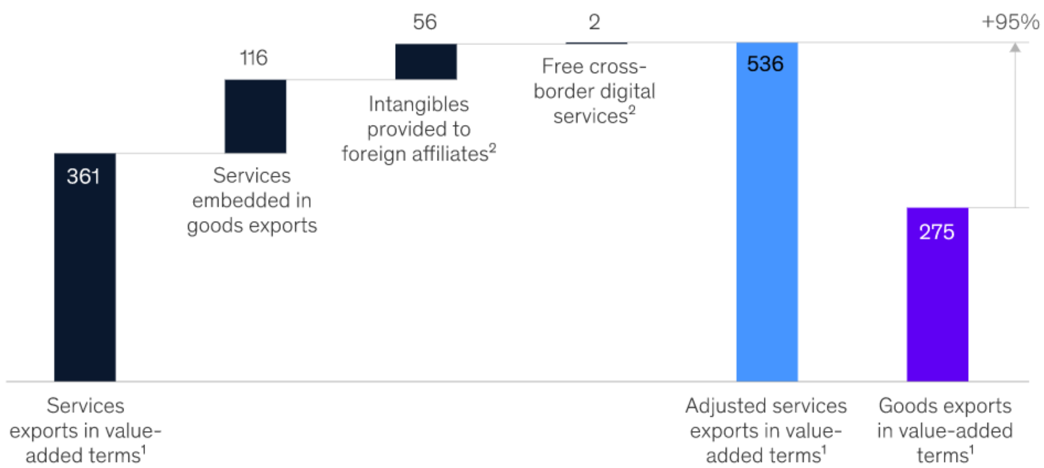
[353] Tera Allas, David Chinn, Dame Vivian Hunt, and Daniel Mikkelsen (2019) Brexit: The bigger picture—Revitalizing UK exports in the new world of trade, McKinsey, 29 March; https://www.mckinsey.com/featured-insights/europe/brexit-the-bigger-picture-revitalizing-uk-exports-in-the-new-world-of-trade

Exhibit 1

The United Kingdom's services exports are nearly twice the value of its goods exports.

2017 UK exports in value-added terms, $ billion

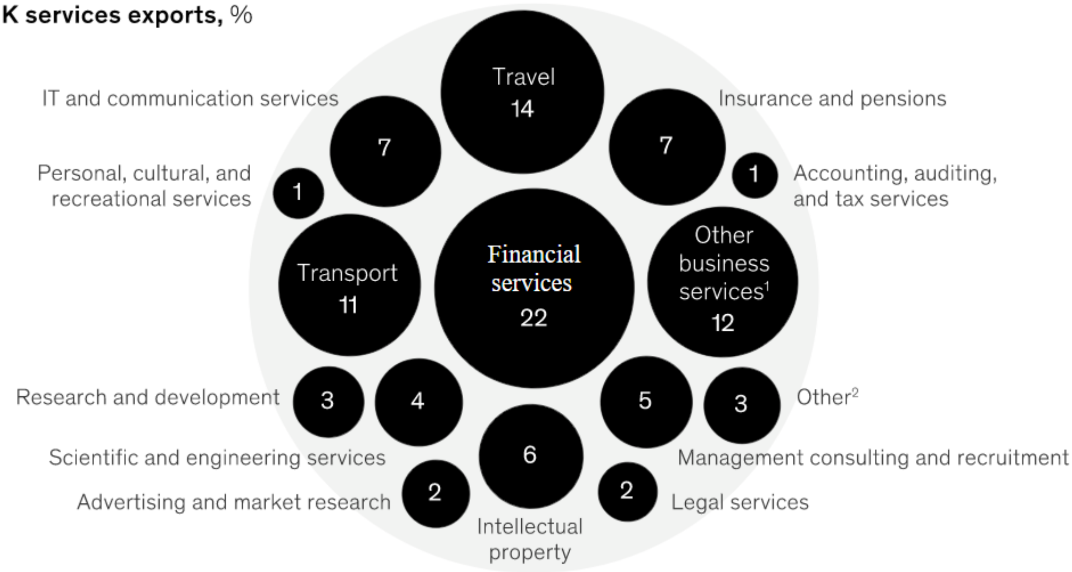


Note: Figures may not sum to listed totals, because of rounding.
[1]Includes only domestic value added of exports, rather than gross exports. For comparability, value of services embedded in goods trade and value of goods embedded in services trade have been removed.
[2]Higher-end estimate.
Source: Alexa Web Information Service; International Monetary Fund; S&P Capital IQ; World Input-Output Database; World Trade Organization; McKinsey Global Institute analysis

Exhibit 2

The United Kingdom's services exports are highly diverse.

2017 composition of UK services exports, %

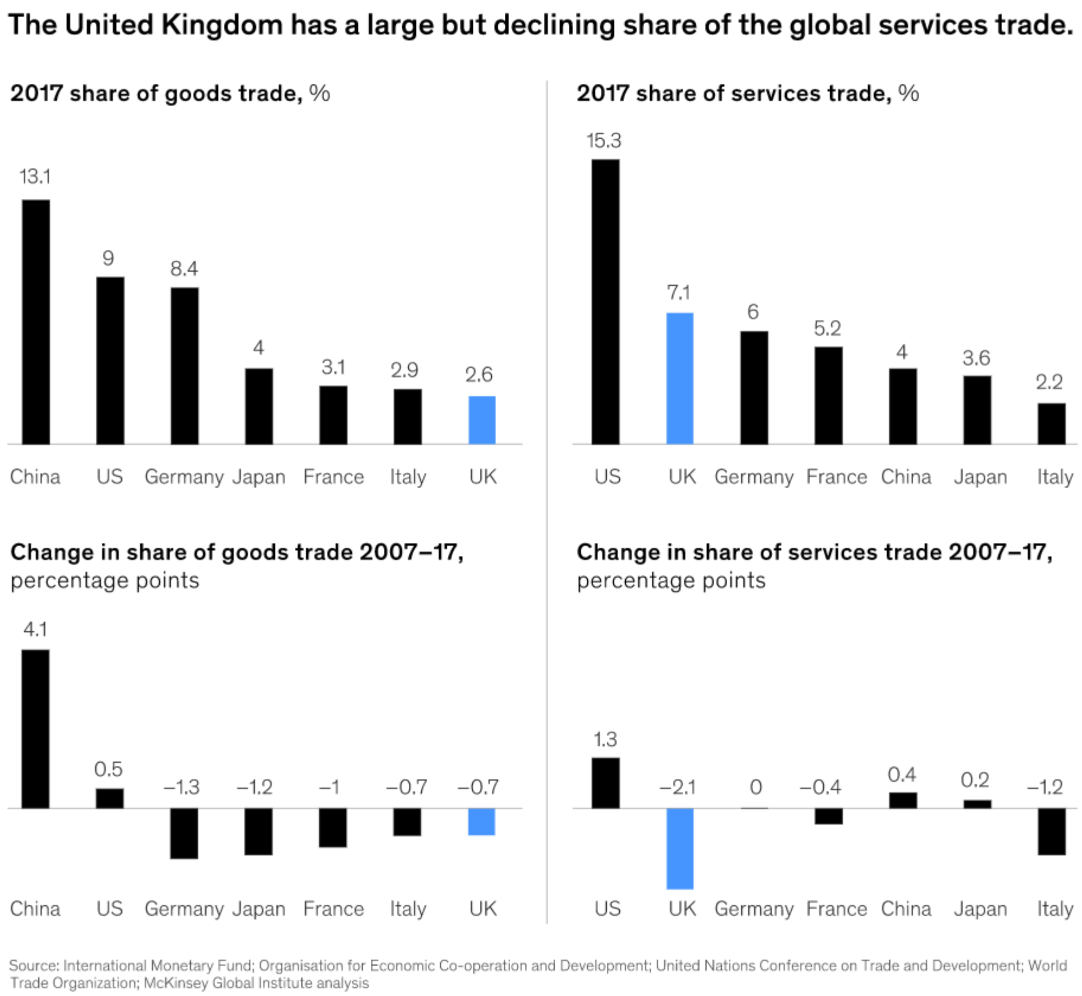


[1]Includes architecture, waste treatment, leasing, and trade-related services.
[2]Includes construction, maintenance, repair, and government services.
Source: *UK balance of payments, the Pink Book: 2018*, Office for National Statistics, July 2018, ons.gov.uk; McKinsey analysis

The United Kingdom's services exports are highly diversified, ranging from financial and professional services to IT services to advertising to R&D (Exhibit 2). It has trade surpluses in all services sectors, except travel and tourism and government services. Services exports are also well distributed regionally: as a share of GDP, they are above the global average in more than 60% of the United Kingdom's 168 local areas.

The picture is not entirely rosy, however. It is cause for concern that the United Kingdom's overall share of global exports has been declining. Even its strong position in services is under pressure: its share of global services trade declined from around 9 percent in 2007 to around 7 percent in 2017 (Exhibit 3). This has implications for both individual businesses and the whole economy. The United Kingdom's exporting companies are more profitable and more innovative than non-exporters, and they grow faster. Moreover, the domestic content of the United Kingdom's exports is high, at 85 percent, compared with the world average of 74 percent. That underscores the significant benefits that exporters create beyond their own businesses through their employees, value chains and participation in local communities.

Exhibit 3



UK companies' challenges in goods trade are not necessarily a barrier to the future success in exports, however, as global trade is increasingly turning to services and going digital. The global market for traded services is growing more than 60 percent faster than goods trade. Some subsectors, including telecom, IT, and business services, are growing two to three times faster. In fact, global trade in services already exceeds that in goods when measured in value-added terms (and adjusted for cross-border flows of intellectual property to foreign affiliates and for cross-border flows of free digital services.) That trend presents important opportunities for the United Kingdom in emerging markets, as the services sector is less dependent on proximity to trading partners.

In digital trade, a remarkable transformation is underway. Alibaba's AliResearch projects that cross-border B2C e-commerce alone will grow to approximately $1 trillion by 2020. Cross-border data flows have increased nearly 150-fold since 2005. Technologies such as additive manufacturing, digital platforms, the Internet of Things, automation, and artificial intelligence are also fundamentally changing the types of products and services that are traded, creating exciting opportunities for innovative companies.

The United Kingdom is already one of the world's largest exporters of digitally delivered services. For example, its exports of architectural, engineering, scientific and other technical services grew from around $5 to $15 billion between 1997 and 2017. There are plenty of success stories, such as Ryder Architecture. It has used digital platforms, such as building information modeling, to export UK architecture and design expertise to projects all over the world, especially in Asia. Another example is Arup, the UK-headquartered engineering company, which has used satellite imagery and AI to identify design hazards and export this analysis to sites across the world.

Yet it is not clear that UK-based businesses are taking full taking advantage of the technology revolution that promises to reshape global value chains. In "Digital Europe: Realising the continent's potential,"[354] McKinsey Global Institute estimated that the UK economy had captured 17 percent of its digitisation potential. While this is ahead of the United Kingdom's European peers, it lags behind China and the United States. While many UK companies have embraced customer-facing innovations, such as e-commerce, they have invested less in transforming end-to-end process efficiency. For

[354] https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/digital-europe-realizing-the-continents-potential

example, only 12 percent of UK enterprises have adopted supply-chain-management software, compared with 30 percent in Germany.

The McKinsey report recommends three priorities for UK businesses:

> *First, UK exporters need to* prioritise growth, speed to market, and proximity to customers. *With the economic centre of gravity shifting east and south, businesses need to be present in the world's big growth markets. Over the next 15 years, China's working-age-consumer segment will expand by an additional 100 million people. The speed of innovation in the digital powerhouse that is China is both a challenge and an opportunity; companies require customer-centric operating models*[355] *to succeed. For example, product managers responsible for developing new offerings need the authority to make decisions quickly and to hold staff from functional groups accountable.*
>
> *Second, UK companies need to* make the most of digital technology to optimise their supply chains.[356] *By better capturing individual-customer data, companies can improve demand forecasts by up to 90 percent, minimising the cost of lost sales and customer disappointments. They can also reduce logistics costs by up to 30 percent—for example, by using dynamic routing, capacity-sharing platforms, autonomous vehicles, and 3-D printing. With advanced-systems support, they can automate as much as 90 percent of all planning tasks, delivering better quality compared with tasks performed manually. The same tools can dramatically reduce inventory needs.*
>
> *Third, to respond to the rapidly changing environment, UK companies need to* become more agile *as a whole, beyond digitisation, customer centricity, and supply-chain optimisation. McKinsey research*[357] *shows that the combination of speed and stability—the hallmark of agile businesses—is a significant catalyst for organisational health and performance. In a large-scale survey, respondents in agile units were 1.5 times more likely than others to report financial outperformance. The path to agility depends on the starting point, so the first step is to identify where the biggest pain points lie, and address these. However, in all cases, it will be necessary to put in place incentives to reinforce the new, agile behaviours.*
>
> *UK businesses must embrace the new realities of world trade. They must act now to foster long-term growth and sharpen their competitiveness—regardless of the uncertainty about Brexit. The priorities are clear: get close to customers in new*

[355] https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/introducing-the-next-generation-operating-model
[356] https://www.mckinsey.com/capabilities/operations/our-insights/supply-chain-40--the-next-generation-digital-supply-chain
[357] https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/why-agility-pays

markets, harness technology to optimise supply chains, and embed agile practices throughout the organisation.

Just as the 'agile model' was so important for increasing company productivity, it is equally important for increasing exports.

3.6 How can exports be increased?

3.6.1 What will not work

There have been many previous government-led initiatives to increase exports. A notable example was the Growth Review launched in November 2011 by Business Secretary Vince Cable and Chancellor George Osborne.[358] Trade and investment was one of the six cross-cutting themes of the Review. It noted that:[359]

> *global opportunities are increasing, particularly supporting economic development in emerging and developing economies, and in catering for rising consumerism amongst these markets' expanding middle classes. However, there is also strong global competition, as other developed markets also look to capture these opportunities, whilst BRIC economies[360] continue to rise up the value chain and start to compete in areas of UK specialism, namely services and high technology, high quality products. UK based firms must therefore maintain and improve their competitive advantage and actively tap into global opportunities, particularly those in emerging markets. …[M]any UK firms are increasingly keen to do just that, as part of their growth strategy in the face of weak UK, EU and US demand. Government's support can be instrumental in overcoming barriers that might otherwise hinder this activity.*
>
> *The new [Department for International Trade, DIT] Strategy builds on the framework outlined in the Trade and Investment for Growth White Paper, setting out a practical plan of action that the government is taking to support UK exporters and foreign investment. However, government resources are limited, so it is vital to focus policy action, including prioritising key markets and sectors.*

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358 https://www.gov.uk/government/news/government-launches-growth-review--3
359 Department for Business Innovation and Skills (2012) UK trade performance across markets and sectors, BIS Economics Paper No. 17, February; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/32475/12-579-uk-trade-performance-markets-and-sectors.pdf
360 Brazil, Russia, India, China and South Africa

So as far back as 2011 the government was aware of the issues and saying all the right things about what needed to be done. It even recognised the potential barriers: 'Some of the barriers to exporting cited by non-exporters could be lowered by DIT support. This includes services providing training on how to export, information on particular markets, and relevant contacts in overseas markets, to build partnerships and sales'. However, despite these positive attempts to reduce barriers, this particular top-down initiative has been no more successful than all the others in increasing exports.

A similar problem emerges with the Third Report of the Global Britain Commission (GBC)[361] whose chair is the Rt Hon Dr Liam Fox MP:[362]

> *It is clear that the British economy needs considerable supply side changes if we are to see anything like the rates of economic growth we need if living standards are to improve in the way expected by the British people. We published a separate document on how the UK needs to change many of our current practices if we are to get finance to our fledgling businesses and get start-ups and scale-ups operating at the level of our global competitors.[363] We need to stop our best creative and innovative businesses from leaking intellectual property, especially to the US, and we need to break our dependency on the model of bank debt to get more private equity into our small businesses.*
>
> *It must, however, be a genuine two-way conversation. While the government needs to better recognise how the UK business community can, and does, make a global impact, the UK business community must recognise that policymaking often involves complex trade-offs. It is a dialogue that is currently not happening to the necessary degree.*
>
> *It is needed to fully appreciate the value that improved trade and investment can bring. This means the power of exports to boost profitability and the ability of imports to bring prices down for consumers. It means understanding the value of trade in the intermediate goods which now account for almost 50 per cent of the total. Our timid experiments with freeports have only scratched the surface. We must grasp the importance of inward investment to power higher paid employment and skills and understand how earnings from outward investments can assist with our chronic balance of payments problems. We also need to build on current targets to innovation and R&D, and human talent.*
>
> *Changes in the structure of government are needed if such a relationship is to flourish. Whitehall needs to be properly shaped for the post-Brexit world and the challenges and opportunities this brings. We may no longer be in the EU but you would never know it by looking at either the laydown or attitudes of much of our civil service.*

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[361] https://www.globalbritaincommission.com/media/report-how-to-deliver-global-britain-a-blueprint-for-government
[362] Liam Fox (2022) How to make Global Britain work, Daily Telegraph, 14 December; https://www.telegraph.co.uk/news/2022/12/14/how-make-global-britain-work/
[363] https://www.globalbritaincommission.com/media/global-britain-commission-launches-new-paper-how-to-solve-the-uks-growth-problem-scale-ups

Outward facing departments such as FCDO [Foreign, Commonwealth & Development Office] and DIT are still too heavily focused in the UK rather than promoting Britain abroad.

We need a major shake-up. The Department for Business, Energy and Industrial Strategy (BEIS) should be merged with the Department for International Trade, creating a Department for International Investment, Business, Trade and Enterprise. There should be a separate Department for Energy.

The objectives of this new Business Department would be to promote long-term, sustainable and balanced growth in the UK and overseas. This needs to be combined with boots on the ground in our key markets. It is hard to visit places such as the Gulf without bumping into French and German groups touting for business, well supported by their governments. Yet, in the three years since Brexit, rather than supercharging our presence, we are falling behind. …

We also want to see a Global Britain Advisory Council established, jointly led by business and government to identify where business and government can work more closely on cross-cutting-policy issues that would benefit Global Britain. And we want the appointment of business advisers with a minimum of 10 years' experience in the private sector to the relevant secretary of state's private offices. We need real time input from those who have managed rather than observed or redistributed our wealth creation.

These recommendations should be complemented with Global Britain Key Performance Indicators (KPIs). These would provide clear, measurable, long-term objectives.

Fox is spot on about the kind of things that needs to be done (e.g., 'We also need to build on current targets to innovation and R&D, and human talent'). But there is little on how to achieve them in practice. It therefore risks being another top-down proposal that sadly fails to deliver.

3.6.2 What can work – a SMART plan for exporters

What can work is designing a SMART plan for exporters:

- a national recognition of the problem and that a solution is urgently needed
- a sensible policy carefully designed with clear achievable goals, recognising the barriers that need to be surmounted en route
- goals need to be SMART: specific, measurable, actionable, relevant and time-bound
- careful and patient implementation of the policy
- engaging and motivating its target group (in this case potential exporters) – possibly using incentives and rewards

- then taking the target group from where they are, in small manageable steps, to where they need to be
- using suitably qualified mentors, allowing for the tailoring of solutions to meet the specific needs of individual members of the target group, with appropriate nudging and encouragement
- at each step, building confidence in the target group and avoiding a sense of being overwhelmed
- making use of suitable tools and traits, such as learning by exporting and nudging
- continuous and effective communication that emphasises progress towards reaching the desired goals
- a suitably targeted investment of resources
- all-party support, and
- policy certainty (i.e., the policy is maintained without constant interference and changes).

In this case, the goals should be to achieve:

- An increase in goods exports to the most rapidly growing emerging markets in areas where the UK has a comparative advantage (e.g., high-tech manufacturing, such as aerospace) – see Figure 46 (with a target growth rate equal to Germany)
- An increase in service exports, especially digital, financial and business services and life sciences – see Figure 46
- An increase in learning by exporting
- Closer collaboration between the government and UK trade associations to help UK companies (especially, small or medium-sized enterprises) increase their exports of goods and services

1. Trigger	2. Discovery	3. Development	4. Preparation	5. Win Business	6. Fulfill and deliver
• Factors that lead business to consider the exporting opportunity	• How business explore their options around exporting e.g. researching potential opportunitie s and seeking advice	• Business firmly establish their intention to export, develop relationships with central players and decide on a route to market	• Businesses finalise their export strategy and review the market-specific requirement s and resource implications of exporting	• Securing the contract to supply goods overseas	• After winning an overseas contract, a business will need to produce the product nad deliver tis to the customer, navigating logistics, e.g. transportation, ensuring they get paid on time

Figure 49: Six steps in a successful exporting journey

Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033767/made-in-the-uk-sold-to-the-world-building-an-analytical-framework.pdf

A successful SMART strategy will lead to the six steps shown in Figure 49.

3.7 Government – what it needs to do to increase UK exports

The government has a key role to play in helping exporters – using SMART plan. The success of the government's latest export strategy demonstrates this.

In November 2021, the government, via the Department for International Trade, announced an export strategy 'Export Plan - Made in the UK, Sold to the World'. The export strategy sets an ambition to reach UK exports of £1 trillion per year ('Race to a Trillion') faster than previously projected (2035). UK exports were £758.5 billion in the year ending October 2022, an increase of £135.7 billion (21.8 per cent) in current prices, compared to the previous 12 months.[364]

William Bain, head of trade policy at the British Chambers of Commerce, said:[365] 'The UK government has an ambitious agenda to promote exports and we look forward to working with the new DIT ministerial team to help get Britain selling again. But with the trade deficit still standing at over £20bn, it must first increase business confidence and capacity to sell overseas'. In other words, the journey must start with a series of small steps.

To achieve this target, the DIT has adopted SMART planning (even if it does not use the term).

For example, the DIT now offers tailor-made, expert advice on all aspects of selling overseas. It also lays out a four-step strategy for first-time companies to follow: [366]

> <u>Step one: Do your research</u>
>
> *[Begin with] the DIT's market guides,[367] which also provide key facts on trade deals.*
>
> *A key element of your research is the assessment of local demand for your product or service and an awareness of any modifications you may need to make. Do you have the necessary skills in place to meet these added requirements or do you need to upskill?*
>
> *Having decided on a target market, the next job is to create a profile of your potential customer, including a clear analysis of how you can meet their needs in a crowded marketplace.*

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[364] https://www.telegraph.co.uk/business/exporting-from-uk/key-statistics
[365] Quoted in Britain after Brexit, FT Newsletter, 13 October 2022
[366] Virginia Matthews (2022) How to start exporting, Daily Telegraph, 30 November; https://www.telegraph.co.uk/business/exporting-from-uk/how-to-start-selling-internationally/
[367] https://www.great.gov.uk/markets/

Awareness of who the main competition is and how your product or service stacks up against it is another decisive step, along with awareness of any sensitive cultural nuances involved.

Apart from detailing the key target consumer demographics and the strength of your own USP, it's vital to address legal and financial arrangements such as the classification of goods, duty relief and VAT arrangements.

Step two: Plan strategically

For most business owners, creating a plausible and investable business plan marks a pivotal stage in their firm's journey from entrepreneurial dream to market reality.

Exactly the same goes for the export plan, which will act as a guide as you complete each stage of your international journey and help you grasp potential opportunities, understand challenges and overcome risks.

As a document you will share with business partners, banks and other potential investors, the plan should contain a clear outline of why your target market has been chosen, how you intend to enter and develop in the region and the likely cost of additional resources such as marketing or hiring in specialist skills.

Your chosen route to market – licensing, franchising or a joint venture agreement, for example – will depend heavily on what you wish to achieve in your new territory and how you anticipate your export programme growing over time.

Selling direct may be the best option if you are in a position to find local clients for yourself, but for many new exporters, a local agent or distributor with all the necessary knowledge and contacts can help a business grow its exports more quickly.

Licensing or franchising will require you to finalise intellectual property arrangements in advance, while a joint venture agreement may be a good option if you wish to establish a local presence without shouldering full responsibility and the associated costs.

For more established exporters, opening a distribution hub close to a group of potential export territories may be a good way to reduce logistical headaches and process bulk orders more smoothly.

Step three: Find your customers

By connecting with experts on the ground, however, you can quickly build exposure in an unfamiliar international market.

With involvement in a packed calendar of trade shows, missions and conferences, DIT offers new and existing exporters valuable networking opportunities with key movers and shakers, as well as a wide range of practical help and advice to either get started or to enter new markets.

Whether it's a meet-the-buyer function or a series of meetings with key contacts on the ground, these set-piece events not only arm potential and existing exporters with free, up-to-date market information but also help raise a firm's visibility among local consumers and buyers.

Given the costs involved in travelling to and staying in overseas markets, it's worth noting that the UK Tradeshow Programme[368] offers grants to ease the burden.

Establishing an e-commerce strategy is crucial as part of any international expansion. It's an increasingly important business tool and whether you are a start-up, or you already have an established presence online, your online sales approach needs to be clearly defined.

Outlining what you want your web presence to achieve is a vital first step, along with understanding who your key competitors are in the online space and identifying what makes them successful.

E-commerce is a low-cost way to test out and grow in new markets, particularly if you use DIT's selling online overseas tool[369] to tap into one of the 50 global online marketplaces represented. Reduced commissions or try-before-you-buy packages are also available.

With more than 3.5 billion web users across the world buying goods and services the online world is a rich resource for any firm looking to trade overseas, regardless of its customer base.

While B2B players came relatively late to the e-commerce party, for example, in terms of scale, they are now significantly bigger than the B2C sector.

Having located your potential customers, your e-commerce strategy needs to demonstrate how you intend to serve them.

Up-to-date research around currency exchange arrangements, together with compliance and customs, need to be carefully outlined, as does correct classification of your goods or services and arrangements for offering in-country customer support.

[368] https://www.gov.uk/guidance/uk-tradeshow-programme/
[369] https://www.great.gov.uk/selling-online-overseas

Step four: Get support

Some SMEs need financial backing for their international venture and with the help of DIT's Internationalisation Fund,[370] match funding in areas such as market research, web development, trade fair attendance or intellectual property advice is available for businesses in England.

DIT is also a one-stop shop for advice on everything from building a plausible export plan to navigating export controls and logistics.

Based in more than 100 countries around the world, local teams provide help with language and cultural barriers, arrange exhibitions and buyer events and offer expert advice on the best e-commerce strategy to grow your business overseas.

In terms of selecting stage two export targets, SMEs report that DIT teams actively steer businesses towards countries where the rewards will be greater. Such hints can save a business valuable time and resources in the process.

For new exporters, DIT's UK Export Academy[371] is a comprehensive, free programme that links businesses to a range of experts in international trade.

Comprising a foundation course to build knowledge, together with sector-specific webinars, master classes and market access events, the UK Export Academy offers a clear route to exporting confidence.

Exporters need trusted partners, current market intelligence and a reliable sounding board, and in the experience of many UK firms, the services on offer via DIT should make them the first port of call for any business with international ambitions.

The DIT also offers free online lessons and tutorials[372] on pricing, market research[373] and how to assess the competition:[374]

[370] https://www.great.gov.uk/campaigns/internationalisation-fund-for-english-businesses
[371] https://www.events.great.gov.uk/website/6264/
[372] https://www.great.gov.uk/signup/?next=/learn/categories/
[373] https://www.great.gov.uk/export-opportunities
[374] Virginia Matthews (2022) Who are your export competitors?, Daily Telegraph, 30 November; https://www.telegraph.co.uk/business/exporting-from-uk/identifying-export-competitors/

How can you find information about your competitors?

Researching your competitors can start at your desk, simply by searching for similar products or services to yours in the market you hope to sell to.

Online marketplaces such as Amazon (or local ones such as Japan's PayPay Mall) can offer insights into who your competitors are likely to be, and then you can focus on competitor websites and social media accounts to learn more.

How are your competitors positioned in the market? Are they low-price or do they offer a premium experience? Online reviews can also offer an insight into what customers like or don't like about your competition.

DIT offers guides to various markets[375] *which can be a starting point to understanding the ones you are trying to enter and your likely competitors. You can also compare data on international markets to help you find the right ones for your product.*

Online research can help you to pick appropriate markets for the product or service you hope to sell. The next step is 'in-market' research, or field research, where you visit the country in question.

In-market research offers a good way to get in-depth information about competitors and their products or services.

However, the downside is that it's considerably more time-consuming and expensive than doing it via the internet, and is best carried out after you've done enough online research to have a basic idea of the market.

In-market research offers a chance to learn specific, tailored information about your potential market, including around competitor activity, and the best ways to bring your product or service to market.

DIT offers bespoke market research (for a fee), including advice on sectors and strategies for entering a specific market. DIT can also offer support during international visits.

How can you understand your competitors?

Knowing the price of similar products or services in your target market will help you to find your position in the market and, hopefully, a competitive edge.

[375] https://www.great.gov.uk/markets/

It’s important to understand not just your competitors’ pricing, but their market share and how their products are positioned. Ideally, you should be able to place all your competitors on a scale going from least expensive to most expensive.

It’s also worth thinking about the likely costs and overheads they face. How do they compare to the costs you will face? This information will help you set the price for your own products.

It’s also key to understand which of your competitors have the most market share: this will help you understand which products or services are likely to be popular with customers and which of your competitors are the most influential in the market.

You can often find this sort of information from local trade associations or via online reports and market research, or as a result of direct contact with your own customers and prospects in the market.

If you can, calculate the percentage market share of your competitors to assess which are the most important. This will also offer insight into how crowded the marketplace is.

Make sure to take a wide-angle view wherever possible.

Look at all your potential competitors, including larger companies and smaller ones, as well as regional competitors and local ones.

Taking the time to see beyond the obvious market leaders will help you to take a broader view of the competitive landscape and where your product might fit into it.

This can offer vital information when it comes to deciding how to bring your product to market and price it competitively. Do you have USPs that will allow you to price at a higher level? Over time this can result in a higher market share and higher profit margins for your business.

If any of this information is difficult to come by, consider commissioning market research in your target country. Local agencies can help you to conduct in-market research. This is more expensive but offers thorough results. Make sure to brief the agency well, and put in place a confidentiality agreement.

DIT may also be able to help. It offers tailored, in-market support on exporting to specific countries, including one-to-one advice and market intelligence.

How do you price your product or service for exporting?

Selecting a route to market is a key part of setting the right price for your product or service. For instance, it can be a good idea to sell directly to international customers to see what works, and whether your price works for you.

With direct sales, companies sell to an overseas customer without using agents, distributors or partners. This offers greater control over price and customer engagement, but requires the business to find clients and deliver without any support.

Other routes into market include using an agent (who is paid on commission) or a distributor (who purchases products and acts as a reseller).

This requires negotiations on commissions, margins and prices, and these should be factored into your target price.

Other approaches include licensing products to a local seller or creating a joint venture with a local company to share costs, profits and losses.

What determines a successful export pricing strategy?

When selecting a market to export to, it helps to work out the relationship between customer demand in the market (you can often work this out from sales of similar products, or imports of similar products) and ease of entry into that market.

Your business will almost certainly face additional costs in international markets, so you need to establish a target price in each one you sell to. This needs to take into account everything from currency and payment terms to freight and carriage charges, taxes, commissions and competition pricing.

In your export plan (DIT offers useful guidance to help you build one[376]), include details such as direct costs (raw materials and labour for example) and overhead costs, such as adapting a product for a new market, freight costs, agent fees and marketing and insurance.

This should allow you to establish a net cost per unit. Compare this to the average price per unit of competitors in your target market. This should allow you to see where you can price your product to remain competitive and profitable.

What is the best price for your product overseas?

Depending on the nature of your business, or if you are pitching as part of a tender process, you may need to negotiate with partners abroad. Before negotiating, set the

[376] https://www.great.gov.uk/advice/create-an-export-plan/how-to-create-an-export-plan/

minimum price you can sell at while still making a profit (using the information contained in your export plan).

Ensure you've factored in everything from import duties to warehouse storage (if applicable).

You'll also need to agree on a time-frame that you're committing to (for example, whether you agree to provide products at a particular price for several years) and understand warranty clauses where you're committing to cover the cost of replacements or repairs. This can be more complex in foreign markets.

You'll often be asked to provide detailed technical information, including whether your product conforms to local standards, so you should speak to your technical team and ensure you have all relevant documentation to hand.

<u>Export support for UK companies</u>

DIT offers a wide range of free export support for UK businesses via great.gov.uk, including in-depth guides on how to price products and assess the competition.

There is also an Export Plan Builder[377] to guide companies through the steps to creating a strategy for internationalising their product.

The UK Export Academy provides free, comprehensive training that gives UK businesses the know-how to sell to overseas customers. Participants can choose which webinars, masterclasses and events they take part in, making sure it fits around their business's needs.

The DIT also offers financial and insurance support:[378]

- Until 31 December 2022, the DIT offered grants of between £1,000 and £9,000 via the Internationalisation Fund. The grants were available for companies to support expenses such as market visits, consultancy, trade fairs, translation services and market research. They were open to SMEs with up to 250 employees, annual turnover below €50 million and a balance sheet below €43 million. Businesses needed to be based in England and self-fund between 40 and 50 per cent of their costs.

[377] https://www.great.gov.uk/export-plan/

[378] Virginia Matthews (2022) How to find the tools your business needs to start trading internationally, Daily Telegraph, 30 November; https://www.telegraph.co.uk/business/exporting-from-uk/start-trading-internationally/

- UK Export Finance (UKEF)[379] is the government's export credit agency and offers finance and insurance to help companies win contracts abroad, fulfil orders and get paid. More than 100 private credit insurers and lenders work with UKEF to deliver support to British companies exporting goods and services abroad. For example, UKEF offers working capital loans to help companies take on and fulfil orders and offers insurance against buyer default to help companies manage in challenging markets.

- Access to overseas trade shows. The DIT offers help to SMEs that want to attend or exhibit at overseas trade shows. The DIT's UK Tradeshow Programme[380] offers free training on how to maximise the benefits of attending trade shows, and applicants can also receive financial support to help with exhibiting at trade shows abroad.

There are other specific measures the government is planning in order to reduce trade barriers, such as the Electronic Trade Documents Bill[381] which will allow the digitising of trade documents and end the need for paper-based trading documents such as bills of lading and bills of exchange.

The DIT is therefore offering precisely the support that a well-designed SMART requires – including a lot of hand holding. Similar support could be provided to companies to help them improve their productivity.

A key objective of the SMART plan is upskilling through training. The Institute of Export & International Trade[382] provides training in international trade in the UK. The courses on offer (11,000 were delivered in 2021) range from beginners courses (with certificates equivalent to GCSEs and A-Levels) to master's degrees, and include in-depth training courses on everything from digital identities to international trade documentation. The courses can be taken part-time and full-time. The Institute of Export & International Trade's mission is to: 'enhance the export performance of the United Kingdom by setting and maintaining professional standards in international trade management and export practice. This is principally achieved by the provision of education, training and practical business support services. The challenging and often complex trading conditions in international markets mean that our role has never been more vital. The Institute continues to be committed to the belief that real competitive advantage lies in the competence of British businesses. Our future export growth must be underpinned by a sound foundation of knowledge'. [383]

[379] great.gov.uk/get-finance
[380] https://www.events.great.gov.uk/ereg/newreg.php?eventid=200242585&/
[381] Britain after Brexit, FT Newsletter, 13 October 2022
[382] https://www.export.org.uk/
[383] https://www.export.org.uk/news/590846/Director-General-Marco-Forgione-on-the-successes-and-challenges-of-2021--and-opportunities-in-2022.htm

This bottom-up, step-by-step approach has shown early signs of success. Exports increased by nearly 22% in 2022 and this increases the chances of winning the 'Race to a Trillion'. Two specific examples show the benefits of the approach:[384]

- The Medical Warehouse, a project management company specialising in procurement and logistics, used DIT experts to help increase turnover. Sue Lee, director of The Medical Warehouse, says: 'We started when we worked with a leading company that was setting up three hospitals in Ghana. It was a great apprenticeship for us. We dealt with the suppliers and the supply chain for all the medical equipment that went into the hospitals. We were working closely with DIT and UK Export Finance, and I started coming out to Tanzania in 2018. During the pandemic, I decided the future of our company was dependent on exports. We had a fantastic international trade adviser from DIT. I did all the training I could, joined everything I could online. It paid off because we started to get our name known'.

- Ingenious Probiotics, a supplier of probiotic cleansing systems, which now sells directly to the US. The DIT helped with financial advice and an e-commerce strategy. The company developed an e-commerce website and now sells directly to consumers in the US, New Zealand, South Africa and Australia. Joe Flanagan, director, says: 'DIT looked at our websites and gave us lots of helpful advice: that's free advice, coming from a government source, from people who want nothing more for you than to do better than you're currently doing. That's rare. You can also get advice on whether a particular product will fit a particular market, or which market would suit your product'.

It is clear that the directors of these two companies were highly motivated and so put in the effort to make a success of exporting.

3.8 Trade associations – what they need to do to increase UK exports

Trade associations can also help exporters. The three biggest trade associations are:[385]

- British Chambers of Commerce

  The British Chambers of Commerce (BCC) offer advice, expertise and contacts to businesses hoping to export. The BCC has affiliated members in more than 75 overseas markets. The ChamberCustoms service[386] offers advice and tips on exporting, with customs agents with direct links to all air, sea and land port terminals in the UK.

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[384] Rob Waugh (2022) British businesses remain optimistic about selling abroad, Daily Telegraph, 20 December; https://www.telegraph.co.uk/business/exporting-from-uk/key-statistics/
[385] Virginia Matthews (2022) How to find the tools your business needs to start trading internationally, Daily Telegraph, 30 November; https://www.telegraph.co.uk/business/exporting-from-uk/start-trading-internationally/
[386] https://www.chambercustoms.co.uk/

ChamberCustoms agents can offer up-to date advice and training on everything to do with customs, importing and exporting, as well as bespoke advice for businesses.

- Confederation of British Industry

The CBI's Global Trade Hub[387] offers businesses hoping to export toolkits, case studies and market insights. The hub offers up-to-date advice on trading globally, including in-depth advice on the UK's new relationship with the EU, and tips on moving goods between Great Britain and Northern Ireland. Toolkits offer tips on how to grow businesses globally and how to build resilience. It also offers information on the CBI's Seize the Moment Campaign,[388] which offers an economic strategy for the UK to pursue for 2030, including a plan to boost British exports. Andy Burwell, CBI director of international trade, said: 'The CBI's Seize the Moment campaign highlights the importance of a globalised economy in the UK's quest for growth. The CBI is working across industry to support UK exports, enabling firms to find new sources of revenue at a challenging time. Initiatives such as the industry-led Trade in Services Council, announced as part of the Government's export strategy, shows the potential for government and business to work together to inspire new and existing exporters and to embed an export-oriented mindset across the entire economy'.

- Federation of Small Businesses

The Federation of Small Businesses (FSB) offers advice for businesses hoping to export via its Trade Advisory Hub.[389] This includes in-depth advice on technical issues such as rules of origin and customs declarations for international trade, as well as beginners' guides for businesses just getting started in exporting. There is also advice on export finance, recruiting abroad and building an export plan, plus regular webinars and Q&As on the practicalities of international trade. Lucy Monks, head of international affairs at the FSB, said: 'Trade and export presents huge opportunities for small businesses, with those firms which look outside the UK's borders able to find new audiences and new avenues for profit. FSB is proud of the support we offer to our members who export goods and services, and we support measures to make the exporting journey as smooth as possible'.

[387] https://www.cbi.org.uk/global-trade-hub/
[388] https://www.cbi.org.uk/what-we-do/seize-the-moment
[389] https://www.fsb.org.uk/resource-library.html

Despite all this help and advice, trade associations have come in for some criticism. According to Michael Burrage (2017),[390] UK trade associations have been far less effective than their counterparts (especially in Germany) in helping UK companies create links with potential overseas customers. Burrage argues that future trade agreements will not be enough if British companies do not respond by increasing their level of exports and it is important to help companies to do so: 'The government is doing its bit with the DIT offering various trade promotion functions – such as providing risk assessments of world markets, funding participation in trade shows and appointing local trade advisors – tips for exporting via social media, entrepreneurial dealmakers/mentors for start-ups, and the designation of experienced diplomats as the 'trade commissioners' for those parts of the world they know best. In addition, the Office for National Statistics has introduced data tools which help to identify the trade flows in goods between the UK and 234 other countries, which will help producers and policy makers establish priorities for future trade agreements.[391]

However, Burrage also points out that much more needs to be done by the 2,500 trade associations in the UK to redirect their members towards export markets by encouraging them to become certified as Authorised Economic Operators under the World Customs Organisation (WCO) programme, which simplifies and fast-tracks customs procedures throughout the world. The programme is 'is likely to become especially important for UK trade with the EU27 post-Brexit, as well as with China, Japan, the US and other countries with which the EU currently has mutual recognition agreements (MRAs). The UK is a laggard in this programme. Germany currently has ten times more AEOs than the UK, and no UK association seems to have thought it worthwhile to help its SME members with the quite rigorous and time-consuming certification process'.

The trade associations also need to increase their role in a post-Brexit trade intelligence network, according to Burrage. Trade associations need to become 'research-intensive organisations whose primary goal is to know everything there is to know about the potential global markets for their own members' products or services. And the best way it may do that is by forming a relationship with them based on shared access to, and command of, the market analysis tools of the International Trade Centre (ITC) in Geneva. These provide international trade data in the form of comparative tables, graphs and maps alongside other key variables that affect trade, such as international demand, GDP, applied and bound tariff rates,[392] non-tariff barriers, trade agreements and rules of origin requirements of partner countries. They thereby provide an array of powerful indicators and measures of export performance… [In addition], the DIT should now be setting in motion wholly new, research-based relationships between government, trade associations and their members, as well as

[390] Michael Burrage (2017) It's Quite OK to Walk Away, Civitas; https://www.civitas.org.uk/content/files/itsquiteoktowalkaway.pdf

[391] https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/articles/tradeingoodscountrybycommodityexperimentaldata2011to2016/2018-04-16

[392] The bound tariff rate is the MFN WTO tariff rate, while the applied tariff rate can be less than this.

universities, with the aim of creating a wholly new environment which encourages and equips UK companies to break with past habits and face the export challenges and opportunities of Brexit'.[393]

Using SMART planning has shown that exports can be increased quite significantly. But much more needs to be done. For example, the government and the trade associations jointly need to increase the number of AEOs by a factor of 10 to match the number of AEOs in Germany.

3.9 A comprehensive strategy for exports

The government must introduce a comprehensive strategy for exports – and that strategy needs to be sustained until its aims are achieved. This will involve the government, building on the DIT's recent successes, and support companies – especially SMEs – develop a SMART plan to overcome the various barriers they face, not least their behavioural bias against exports. The plan will involve increased training and increased support from trade associations

Company boards should charge a specific board member with responsibility for the company's export strategy and for turning the company into a high performance exporter.

3.10 Exports – summary of problems and solutions

UK exports were around 11% of global exports in 1948, but have declined to around 3% in 2019. The relative decline in exports without a corresponding reduction in imports has led to systematically deteriorating trade balance. Over the last 10 years, the share of exports in UK GDP has varied in the range 25-30%, but the share of exports in the form of services has been increasing, while the share in the form of goods has been declining, reflecting the decline in domestic manufacturing. Since around 1970, the UK has experienced an increasing trade deficit in goods and an increasing trade surplus in services. Despite this, the UK's share of global services trade declined from around 9% in 2007 to around 7% in 2017.

The UK has a comparative advantage in service exports, such as digital, financial and business (e.g., legal and accounting) services and life sciences. The greatest growth opportunities over the next decade will be in these sectors.

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[393] Michael Burrage (2018) Ministers must urgently ramp up engagement with trade associations to get more British firms exporting, Brexit Central, 3 April

The UK's export performance has been poor over the last 15 years for the following reasons: a decline in relative competitiveness (higher relative wage costs compared with competitors, such as the US and Germany); weaker demand in the developed economies where the UK exports most; slow penetration of the fast growing emerging markets, despite a weakening of sterling.

Exports matter because exporters tend to be the drivers of productivity growth as a result of their greater ability to generate and absorb new innovations. Businesses which export have a productivity premium of 21% over those that do not export. Exports supported around 6.5 million jobs in the UK in 2016, with 74% of those outside of London. Exporting firms also pay higher average wages than non-exporting firms.

Service exports are key to improving overall exports. A report by McKinsey[394]concludes that 'UK companies can navigate shifts in global trade patterns by focusing on fast-growing services and digital trades, redoubling efforts in emerging markets, and digitising their supply chains'. The report recommends three priorities for UK exporters: prioritise growth, speed to market, and proximity to customers; make the most of digital technology to optimise their supply chains; and become more agile as a whole, beyond digitisation, customer centricity, and supply-chain optimisation.

How can exports be increased? What won't work is a government-led top-down approach, like the Growth Review launched in November 2011 – this failed to increase exports.

What can work is adopting the SMART plan for exporters:

- a national recognition of the problem and that a solution is urgently needed
- a sensible policy carefully designed with clear achievable goals, recognising the barriers that need to be surmounted en route
- goals need to be SMART: specific, measurable, actionable, relevant and time-bound
- careful and patient implementation of the policy
- engaging and motivating its target group (in this case potential exporters) – possibly using incentives and rewards
- then taking the target group from where they are, in small manageable steps, to where they need to be
- using suitably qualified mentors, allowing for the tailoring of solutions to meet the specific needs of individual members of the target group, with appropriate nudging and encouragement

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394 Tera Allas, David Chinn, Dame Vivian Hunt, and Daniel Mikkelsen (2019) Brexit: The bigger picture—Revitalizing UK exports in the new world of trade, McKinsey, 29 March; https://www.mckinsey.com/featured-insights/europe/brexit-the-bigger-picture-revitalizing-uk-exports-in-the-new-world-of-trade

- at each step, building confidence in the target group and avoiding a sense of being overwhelmed
- making use of suitable tools and traits, such as learning by exporting and nudging
- continuous and effective communication that emphasises progress towards reaching the desired goals
- a suitably targeted investment of resources
- all-party support, and
- policy certainty (i.e., the policy is maintained without constant interference and changes).

In this case, the goals should be to achieve:

- An increase in goods exports to the most rapidly growing emerging markets in areas where the UK has a comparative advantage – with a target growth rate equal to Germany
- An increase in service exports, especially financial and professional services
- An increase in learning by exporting
- Closer collaboration between the government and UK trade associations to help UK companies (especially, small or medium-sized enterprises (SMEs)) increase their exports of goods and services

The government has a key role to play in supporting exporters – using a SMART plan. The success of the government's latest export strategy demonstrates this.

In November 2021, the government, via the Department for International Trade (DIT), announced an export strategy 'Export Plan - Made in the UK, Sold to the World'. The export strategy sets an ambition to reach UK exports of £1 trillion per year ('Race to a Trillion') faster than previously projected (2035). UK exports were £758.5 billion in the year ending October 2022, an increase of £135.7 billion (21.8 per cent) in current prices, compared to the previous 12 months.

To achieve this target, the DIT has adopted SMART planning (even if it does not use the term). For example, the DIT now offers tailor-made, expert advice on all aspects of selling overseas. It also lays out a four-step strategy for first-time companies to follow: do your research (e.g., using the DIT's market guides and free online lessons and tutorials on pricing, market research and how to assess the competition), plan strategically (the DIT offers useful guidance on building an export plan), find your customers (e.g., using the UK Tradeshow Programme and the DIT's selling online overseas tool), get support (e.g., from the UK Export Academy). The DIT also offers financial and insurance support (via UK Export Finance).

A key objective of SMART planning is upskilling through training. The Institute of Export & International Trade provides training in international trade in the UK. The courses on offer (11,000 were delivered in 2021) range from beginners courses (with certificates equivalent to

GCSEs and A-Levels) to master's degrees, and include in-depth training courses on everything from digital identities to international trade documentation.

This bottom-up, step-by-step approach has shown early signs of success. Exports increased by nearly 22% in 2022 and this increases the chances of winning the 'Race to a Trillion'.

Trade associations can also help exporters. The three biggest trade associations are: the British Chambers of Commerce (its ChamberCustoms service offers advice and tips on exporting, with customs agents with direct links to all air, sea and land port terminals in the UK); the Confederation of British Industry (the CBI's Global Trade Hub offers businesses hoping to export toolkits, case studies and market insights); and the Federation of Small Businesses (offers advice for businesses hoping to export via its Trade Advisory Hub).

Despite all this help and advice, trade associations have come in for some criticism. According to Michael Burrage (2017),[395] UK trade associations have been far less effective than their counterparts (especially in Germany) in helping UK companies create links with potential overseas customers: 'Germany currently has ten times more Authorised Economic Operators (AEOs) than the UK'. He argues that the 2,500 trade associations in the UK should redirect their members towards export markets by encouraging them to become certified as AEOs under the World Customs Organisation (WCO) programme, which simplifies and fast-tracks customs procedures throughout the world.

The trade associations also need to increase their role in a post-Brexit trade intelligence network. They should become 'research-intensive organisations whose primary goal is to know everything there is to know about the potential global markets for their own members' products or services. And the best way to do that is by forming a relationship with them based on shared access to, and command of, the market analysis tools of the International Trade Centre (ITC) in Geneva.

So using the SMART plan has shown that exports can be increased quite significantly. But much more needs to be done. For example, the government and the trade associations jointly need to increase the number of AEOs by a factor of 10 to match the number of AEOs in Germany.

[395] Michael Burrage (2017) It's Quite OK to Walk Away, Civitas; https://www.civitas.org.uk/content/files/itsquiteoktowalkaway.pdf

4. Conclusions

From the evidence we have gathered, it does not take long to reach a shocking conclusion: the UK is facing the gravest long-term economic crisis in our lifetimes. The cause of the crisis is our very poor record on productivity and exports – the drivers of long-term living standards. The reason that this crisis is not transparent to more people is that this is a slow motion crisis that is not visible in our everyday lives. Covid was not visible either, but it's effects were immediate and the longer it lasted the longer its long-term impact.

Our flatlining productivity since the Global Financial Crisis and its follow through to stagnant exports will have a much bigger long-term impact than Covid if they are not reversed soon. We are collectively enjoying a standard of living that is not being earned by what we produce and sell. We are increasingly living beyond our means – and we are borrowing from abroad to do so. We are therefore reliant on the 'kindness of strangers' to continue to be willing to do this. But we know from the experience of the Truss-Kwarteng mini-Budget in September 2022 what happens when the markets suddenly turn against you.

Productivity and exports can be improved – but it is going to take a lot of hard work and it will be a very long hard slog. It will require the adoption of a grand overarching SMART plan – a nation-wide bottom up approach to overcome the barriers and hurdles that currently impede productivity and exports. Workers will need support to increase their skills, those on welfare benefits will need support to move into work, and companies will need support to enhance their management skills and see the advantages of improving the human capital and productivity of their employees through upskilling, talent management and capital investment. This will then have to be matched by a similar exercise with exporters and potential exporters. It has to start with a national campaign highlighting the extent of the problem: 'We Need a National Narrative: Building a Consensus around Raising Real Living Standards' which focuses on improving productivity and exports. Indeed, improving productivity and exports needs to be at the heart of all future government economic policy. This should not be any more politically contentious than the national campaign to increase pension savings through auto-enrolment. All political parties need to sign up to this new campaign as they did with auto-enrolment.

The key questions that need answering are:

- Who in government and industry are going to take the lead?
- How are individual workers and organisations (in both the private and public sectors) going to be persuaded that they have to be the driving force that delivers the improvements in productivity and exports?
- What role do the managers in these organisations play?
- What additional skills do these managers need?
- Who is going to resource this?

- Where will the mentors come from?
- Who will do the coordination between the various sectors to ensure consistency and the most efficient use of resources?
- What should be the key performance indicators?
- What are the key milestones?

We know this can be done if we put our minds to it. We need to put in the same energy as we did to defeat Covid – although it is unlikely that anyone involved with this will get the same Thursday evening round of applause that the NHS got. Going forward, every job – whether existing or new – should be assessed for how it contributes to productivity and/or exports – and then assessed for how it can contribute to an increase in productivity and/or exports. This does not mean that we all have to work more, but it does mean we have to work more effectively and efficiently.

Again we know this can be done, because a bottom-up SMART plan approach is already being used to increase exports. Motivation is key – as our recent successes in exports have shown – and we need to engender the same degree of motivation in others to increase both exports and productivity. It is obviously much harder to do this with say, an unemployed person with health problems – but we know that it is possible to get many of these people back into work doing useful and productive jobs if we find a way to get them motivated.

But it is absolutely certain that if productivity and exports do not significantly improve, then our real living standards will fall. This is because the most industrious amongst us will leave the country in a new brain drain, making matters worse. But the pain will not be evenly spread amongst those who remain. It is likely that heavily unionised public-sector workers will feel the pain less – as has already happened with their salary-related pensions which have been protected in a way that the pensions of private-sector workers have not. Similarly, if the health crisis is not resolved, then it will be employed workers who face ever increasing taxes to pay for the welfare benefits of their fellow citizens who cannot or will not work. And if people object that nothing can be done until various 'inequities', 'inequalities' and 'grievances' have been sorted out first – through some form of 'redistribution' – then the economy will decline even faster and there will be nothing much left to redistribute.

The only reasons that the SMART planning strategy could fail would be if (1) a sufficiently large number of workers refuse to upskill or seek gainful employment if they are on welfare benefits, (2) a sufficiently large number of companies refuse to adopt modern HR practices or invest in new technology, hoping instead that they can continue to find low-cost migrant workers from abroad, and (3) the government is unable to stick to its SMART plan for more than a short period before the next crisis blows it off course and it reacts by cutting public investment and raising taxes once again. The bottom line us that unless we collectively pull our finger out, we will soon be living in a very poor and miserable country.

The urgency of the situation was made clear by the CBI's Tony Danker speaking at Davos in January 2023: 'Global investors are shunning Britain because the government has no coherent economic plan and is failing to keep up with volcanic policy changes in the US and Europe. Money is leaving the UK. Investors are freezing up and the heart of the problem is that we don't have a strategy. All the major economies and blocs of the developed world are launching giant investment programmes backed by an industrial strategy, radically changing the contours of the global economy. This has left the UK strangely adrift as it pursues a retrenchment policy of fiscal austerity'.[396]

Helmut Schmidt once said: 'The biggest room in the world is the room for improvement'. Germany certainly took this message to heart and turned itself into one of the world's highest productivity economies and most successful exporters – from a base much lower than the UK faces today. We can follow suit if we adopt SMART planning. Chancellor Jeremy Hunt's wish to turn the UK into 'one of the most prosperous countries in Europe'[397] will never be realised until we do. But we have to start now.

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[396] Quoted in Ambrose Evans-Pritchard (2023) The world is giving up on Britain, warns CBI chief Lack of economic leadership means investors are pulling money out of UK, says Tony Danker, Daily Telegraph, 18 January; https://www.telegraph.co.uk/business/2023/01/18/world-giving-britain-warns-cbi-chief/

[397] Today Programme, BBC Radio 4, 16 March 2023.