

Adapting Well to New Circumstances?

UK Experience in Changing Times

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*Navigating Economic Change
Lessons from abroad and history*

Navigating Economic Change

As the UK is buffeted by the economic shocks and challenges of the 2020s, The Economy 2030 Inquiry, a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics (LSE), funded by the Nuffield Foundation, is publishing a series of essays examining how policy makers from a range of advanced economies, including the UK in the recent past, have managed periods of disruptive economic change. As we seek to reformulate the UK's economic strategy for new times it is vital that we learn the lessons of these comparative and historic perspectives.

Some consider the trajectory of a national economy following a major shock – for instance, Germany after unification, New Zealand after the UK joined the European Community, Estonia post-USSR and the UK during the tumultuous 1980s. Others examine the experience of particular cities – for instance a group of post-industrial 'turn-around cities' - or the adjustment of key features of a national economic system, such as Danish 'flexicurity'. Together they offer a powerful and timely set of insights on the successes and failures of economic policy makers in the face of economic shocks and structural change.

The essays are written by a range of leading economists and national experts and reflect the views of the authors rather than those of the Resolution Foundation, the LSE or The Economy 2030 Inquiry.

They have been commissioned and edited by Gavin Kelly (Chair of the Resolution Foundation and member of the Economy 2030 steering group) and Richard Davies (Professor at University of Bristol and fellow at the LSE's Centre for Economic Performance).

The Economy 2030 Inquiry

The Economy 2030 Inquiry is a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics, funded by the Nuffield Foundation. The Inquiry's subject matter is the nature, scale, and context for the economic change facing the UK during the 2020s. Its goal is not just to describe the change that Covid-19, Brexit, the Net Zero transition and technology will bring, but to help the country and its policy makers better understand and navigate it against a backdrop of low productivity and high inequality. To achieve these aims the Inquiry is leading a two-year national conversation on the future of the UK economy, bridging rigorous research, public involvement and concrete proposals. The work of the Inquiry will be brought together in a final report in 2023 that will set out a renewed economic strategy for the UK to enable the country to successfully navigate the decade ahead, with proposals to drive strong, sustainable and equitable growth, and significant improvements to people's living standards and well-being.

Adapting well to new circumstances

UK experience in changing time

1. Introduction

The UK economy faces several significant challenges in the next 10 or 20 years. These include the transition to a post-Covid economy, adjustment to Brexit, moving toward net zero and assimilating artificial intelligence. The combined effect is likely to entail major structural change. In the short term, we must also cope with the consequences of the war in Ukraine which has delivered a stagflationary shock similar to those which bedevilled the 1970s.

We have, of course, confronted the need to adapt to changing circumstances in the past. The objective of this paper is to examine several of these previous examples to provide a historical perspective on the UK's ability to deal with new challenges that mean that business as usual is not a good option. My central concern will be to examine the implications of the UK's institutions and policy responses for long-run productivity performance while also considering the adjustment costs that were incurred.

The UK's performance on long-run productivity growth has varied significantly over time (Table 1).²¹ Both labour productivity and total factor productivity (TFP) growth peaked in the so-called 'Golden Age' after World War II but at other times both have experienced periods of stagnation. Over the last decade or so in particular labour productivity growth has been very weak by the standards of the last 200 years.

The episodes of major change that are reviewed are taken from the economic history of the UK during the past 150 years. In chronological order, they are the Second Industrial Revolution, the Great Depression, the transition from war to peace after World War II, the Thatcher reforms, and the ICT revolution. A review of the UK's track record is interesting in any case but also provides important context for thinking about how to deal with the challenges of the near future.

A key point to bear in mind is that when change is required the starting point is not one of *tabula rasa*. The legacy of the past is felt in various ways. Institutions have been called the 'carriers of history' because they are notoriously hard to reform and may even be exposed to path dependence. But other aspects of the economy's past also affect the ability to respond to new opportunities or threats. These include its industrial geography, its inheritance of human capital, the set of feasible policies at a given moment in time, and awareness of the lessons from the past.

The UK's record in successfully adjusting to these various periods of structural change is, not surprisingly, quite mixed. From the successes and failures, it is possible to extract some pointers as to whether we are likely to cope well with the challenges of the 2020s, to note some past mistakes which should not be repeated, and to highlight areas where reform is necessary.

¹ Growth accounting methods and results are reviewed. See N Crafts & P Woltjer, [Growth Accounting in Economic History: Findings, Lessons, and New Directions](#), *Journal of Economic Surveys* 35(3), December 2021.

2. The Second Industrial Revolution

The First Industrial Revolution can be seen as essentially the invention of a new method of invention based on systematic empirical observation and experimentation which for the first time could deliver sustained technological progress.² This raised the probability of successful innovation through the availability and accessibility of more useful knowledge which encouraged more innovative effort since expected returns increased. At the same time the impact of innovations was enhanced by a greater capability of improving initial designs and through more effective diffusion of new technology.

The Second Industrial Revolution is a term conventionally applied to the late 19th and early 20th centuries, say, 1870 to 1914. It saw the invention of another (superior) method of invention, in this case based on applied science and the industrial Research and Development (R&D) laboratory, in contrast to the First Industrial Revolution which had little or no scientific base.³ Thomas Edison established his first laboratory in 1876. The rise of electricity as a general purpose technology (GPT) was an important aspect of technological progress resulting from the Second Industrial Revolution.⁴

TABLE 1: The sources of labour productivity growth, 1700-2019

	$\Delta Y/Y$	$\Delta K/K$	$\Delta L/L$	$\Delta LQ/LQ$	$\Delta(Y/L)/(Y/L)$	Capital Deepening	Human Capital Deepening	TFP
1700-1760	0.67	0.67	0.42	0.01	0.25	0.1	0.01	0.14
1760-1780	0.85	0.7	0.86	-0.01	-0.01	-0.06	-0.01	0.06
1780-1800	1.48	1.5	1.02	-0.02	0.46	0.19	-0.01	0.28
1800-1830	1.62	1.59	1.33	0.01	0.29	0.1	0.01	0.18
1830-1856	2.36	3	1.15	0.13	1.11	0.65	0.08	0.38
1856-1873	2.38	2.38	0.32	0.5	2.06	0.72	0.32	1.02
1873-1899	1.98	1.85	0.8	0.93	1.18	0.37	0.6	0.21
1899-1913	1.65	2	0.81	0.87	0.84	0.42	0.57	-0.15
1924-1937	2.13	0.63	1.43	0.65	0.7	-0.2	0.49	0.41
1950-1973	3.56	3.86	-0.36	0.77	3.92	1.16	0.56	2.2
1973-1995	1.97	2.75	-0.19	0.74	2.16	0.88	0.52	0.76
1995-2007	2.68	2.69	0.82	0.44	1.86	0.56	0.28	1.02
2007-2019	1.37	0.93	0.95	0.54	0.42	-0.01	0.38	0.05

NOTES: Based on conventional neoclassical growth accounting. Quantity of labour input is measured by hours worked and the contribution of labour quality is captured by human capital deepening rather than being subsumed in total factor productivity. $\Delta Y/Y$ refers to the rate of growth in output, $\Delta K/K$ represents the rate of growth in capital, $\Delta L/L$ refers to the rate of growth in labour hours, $\Delta LQ/LQ$ refers to the rate of growth in labour quality, and lastly $\Delta(Y/L)/(Y/L)$ refers to the rate of growth in labour productivity. Post-1950 estimates have been revised.

SOURCE: Updated from Crafts 2019.⁵

A striking feature of the estimates in Table 1 is the weakness of TFP growth in the period 1873 to 1913. Slow TFP growth after 1873 suggests that the capabilities of the method of invention characteristic of the First Industrial Revolution were quite limited.⁶ Negative TFP growth during 1899-1913, which has

2 J Mokyr, *The Enlightened Economy: An Economic History of Britain 1700-1850*, New Haven: Yale University Press, October 2009.

3 Or in Mokyr's words, 'It created a chemical industry with no chemistry, an iron industry without metallurgy, power machinery without thermodynamics'. See J Mokyr, *The Second Industrial Revolution, 1870-1914*, V. Castronovo ed *Storia dell' Economia Mondiale* 3, 1999.

4 Gordon lists several other 'great inventions' associated with the period of the Second Industrial Revolution including the internal combustion engine and chemical engineering. See R Gordon, *The Rise and Fall of American Growth*, Princeton University Press, January 2016.

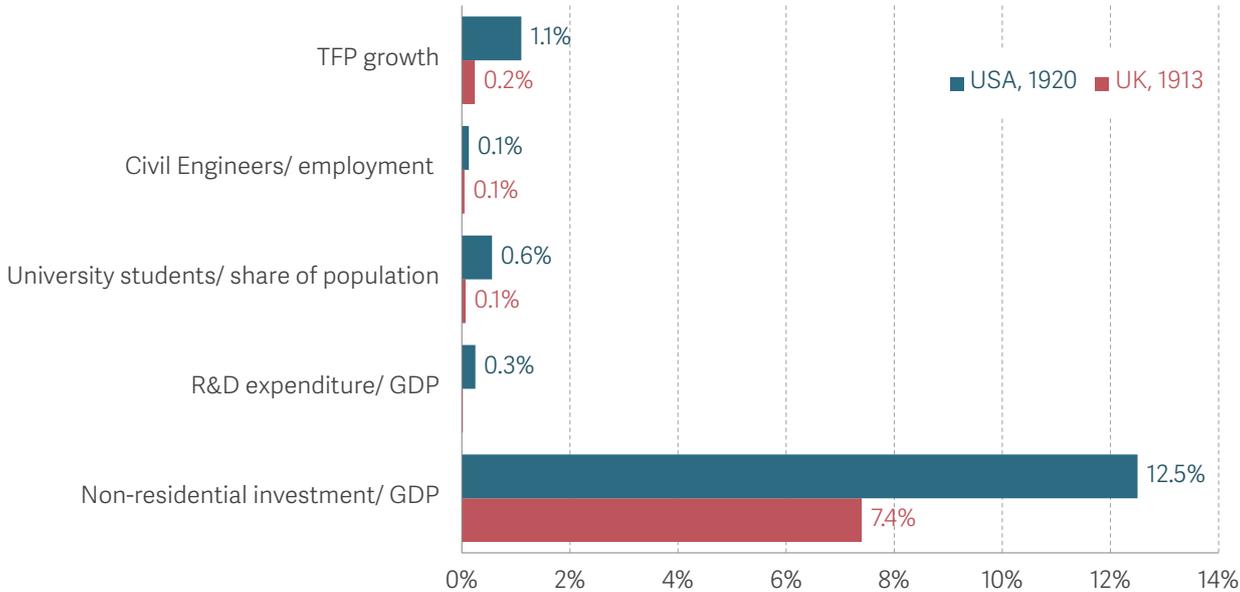
5 N Crafts, [The Sources of British Economic Growth since the Industrial Revolution: Not the Same Old Story](#), *Journal of Economic Surveys* 35(3), December 2019.

6 Steam-engine technology is a good case in point. Nuvolari and Verspagen describe the progress made in raising fuel efficiency in Cornish pumping engines via detailed observation and reporting of the performance of different designs. Systematic data collection was used as a substitute for theoretical understanding. See A Nuvolari & B Verspagen, [Technical Choice, Innovation and British Steam](#)

long been singled out as a period of weak productivity performance, is especially noteworthy. The most conspicuous late-nineteenth century failure was not improving the national innovation system.

UK productivity performance was markedly inferior to that of the United States. Labour productivity growth in the UK fell from 2.06 per cent per year in 1856-73 to 1.06 per cent in 1873-1913, whereas the United States recorded 1.92 per cent per year in 1874-1913,⁷ as the United States overtook the UK in terms of the level of real GDP per head. UK TFP growth did not match the early 20th-century shift to much faster TFP growth achieved by the United States (Figure 1).

FIGURE 1: **Broad Capital Accumulation and Total Factor Productivity (TFP) growth**



NOTES: UK TFP growth is average of 1899-1913 and 1924-1929 and USA is for 1909-1929; TFP growth does not include the contribution of labour quality.
 SOURCE: Crafts 2018 updated using Bakker et al., 2019.⁸

During the Second Industrial Revolution, technological leadership moved inexorably to the United States which exhibited a higher growth potential than contemporaneous or industrial revolution Britain. By now, invention relied a lot more on formal education. Whereas only 12 per cent of ‘great inventor’ patents were granted to people with science or engineering training in pre-1845 birth cohorts in the United States this increased to 32 per cent for those born between 1846-65 and to 60 per cent for the 1866-1885 cohort.⁹ By 1918, 665 R&D laboratories had been established in American manufacturing.¹⁰ Ultimately, the United States made much larger investments in advanced human capital and the knowledge economy which would become central to technological progress in the 20th century: university students made up just 0.07 per cent of the population and R&D was 0.02 per cent of GDP in the UK in 1913 compared with 0.56 per cent and 0.25 per cent, respectively, in the United States in 1920 (Figure 1).

⁷ [Engineering, 1800-1850](#), Economic History Review 62 (3), August 2009.

⁸ J Kendrick, Productivity trends in the United States, Princeton University Press, January 1961.

⁹ N Crafts, [Forging Ahead, Falling Behind, Fighting Back: British Economic Growth from the Industrial Revolution to the Financial Crisis](#), Cambridge University Press, August 2018; N Crafts, [The Sources of British Economic Growth since the Industrial Revolution: Not the Same Old Story](#), Journal of Economic Surveys 35(3), December 2019; G Bakker, N Crafts & P Woltjer, The Sources of Growth in a Technologically Progressive Economy: the United States, 1899-1941, Economic Journal 129(622), August 2019.

¹⁰ B Khan & L Sokoloff, Institutions and Technological Innovation during Early Economic Growth: Evidence from the Great Inventors of the United States, 1790-1930, MIT Press, 2006.

¹¹ D Mowery & N Rosenberg, Technology and the Pursuit of Economic Growth, Cambridge University Press, 1989.

The British government had quite limited ambitions in terms of support for innovation and higher education. Although small beginnings were made in promoting scientific research, for example, through the National Physical Laboratory (1899) and the Medical Research Council (1913), public expenditure on science and technology was only 0.06 per cent of GDP in 1914.¹¹ This undoubtedly meant that there was too little government support for R&D, a pro-growth activity prone to market failure in which social returns far exceed private returns.¹²

Broadening access to education was a key route to growth as greater human capital would support technological progress. Again, the US surged ahead of the UK. The United States publicly financed much more extensive secondary and tertiary education: in 1913, average years of tertiary education per person aged 15-64 were 0.08 in Britain compared with 0.20 in the United States.¹³ Provision of scientific and technical education expanded from the late 19th century with significant investments in technical colleges, polytechnics, and red-brick universities but in 1910 there were only 3,000 science and technology students in UK universities compared with 25,000 in Germany.¹⁴

Despite these shortcomings the shortfall in UK TFP growth relative to the United States resulted much more from the wider economic environment than government policy. The large TFP gap in manufacturing is especially striking and at first sight this may seem to connote British failure.¹⁵ However, this is rather misleading since it reflects scale economies, natural resources and technologies that were developed in America to exploit scale and cheap energy but were not appropriate for British conditions.¹⁶ Moreover, the network of cumulative technological learning was essentially intranational.¹⁷ In the Second Industrial Revolution, this underwrote clear American advantages in much cheaper electricity,¹⁸ which promoted the diffusion of electric motors and the associated transformation of American factories.

It used to be argued that UK managers 'failed' by not adopting new technology; an extensive literature has shown that this was generally not the case, rather the non-adoption was rational given input costs and market size. It is a staple of the literature that the only well-established failure to adopt cost-effective new technology, namely, not to switch from the Leblanc to the Solvay process in soda manufacture, was in a cartelized activity and this is seen as underlining the point that competition was an antidote to entrepreneurial failure.¹⁹ Similarly, the allocation of savings between foreign investment and new industries at home was efficient. In other words, markets worked quite well.²⁰

11 S Pollard, *Britain's Prime and Britain's Decline: the British Economy 1870-1914*, London: Edward Arnold, 1989.

12 Frontier Economics, *Rates of Return to Investment in Science and Innovation*, Department for Business, Innovation, and Skills, July 2014.

13 S Broadberry, *Human Capital and Productivity Performance: Britain, the United States, and Germany 1870-1990*, in P David and M Thomas eds, Oxford University Press, 2003.

14 S Pollard, *Britain's Prime and Britain's Decline: the British Economy 1870-1914*, London: Edward Arnold, 1989.

15 US TFP in 1911 was 2.14 times the UK level. See: S Broadberry, *Market Services and the Productivity Race 1850-2000*, Cambridge University Press, 2006.

16 L Cain & D Paterson, [Biased Technical Change, Scale, and Factor Proportions in American Industry 1850-1919](#), *Journal of Economic History* 46(1), March 1986.

17 R Nelson & G Wright, [The Rise and Fall of American Technological Leadership: the Post-war Era in Historical Perspective](#), *Journal of Economic Literature* 30(4), December 1992.

18 C Ristuccia & S Solomou, [Can General Purpose Technology Theory Explain Economic Growth? Electrical Power as a Case Study](#), *European Review of Economic History* 18(3), August 2014.

19 G Magee, [Manufacturing and Technological Change](#), in R. Floud and P. Johnson (eds.), *The Cambridge Economic History of Modern Britain*, vol. 2, Cambridge University Press, January 2004.

20 For a review of the evidence. See N Crafts, [British Relative Economic Decline in the Aftermath of German Unification](#), University of Warwick CAGE Working Paper No. 501, July 2020.

Belief in markets was, indeed, the default assumption of British policymakers. Nowhere was this more apparent than in the commitment to free trade: the UK's economic structure as a very open economy was predicated on the globalization of the pre-World War I period. This stance has been strongly criticized by those who viewed the UK as 'overcommitted' to traditional industries who believe that tariff protection could have been deployed to encourage future growth sectors.²¹

In practice, across the world, political pressures meant that protectionist measures at this time were not tightly focused on a few selected sectors with excellent growth prospects or positive externalities for the rest of the economy.²² Similar problems would surely have undermined any British attempt to use protectionism to promote faster growth. The political economy of tariff protection was such that the proposals with the most political support, such as those made by Joseph Chamberlain, would have diverted employment towards traditional sectors which were relatively labour intensive rather than new growth industries.²³ Moreover, tariffs would have weakened competition in product markets with potentially adverse effects on productivity performance. Subsequent British experience from the 1930s through to the 1970s suggests that protectionism was not a route to improved productivity performance but rather the opposite. Openness allied to competition paid dividends for the UK in this era. The UK's real problems lay in market failures that resulted in too little investment in human capital and R&D, and the right response was policy intervention by government to address these failures directly.

3. The Great Depression

The era of the Great Depression was a tumultuous one for the UK. The economy went through a severe recession such that annual output fell by 5.6 per cent between 1929 and 1931 (see Figure 2) following which, after a faltering start, real GDP grew at an annual rate of at least 3.1 per cent per year in each of the years between 1933 and 1937.²⁴ Unemployment was always high and rose steeply in the early 1930s but by 1937 was nearly back to the 1929 level. Prices, as measured by the GDP deflator, fell slowly until 1934 but by 1937 inflation was nearly 4 per cent. Contrary to many people's perception, the initial downturn, though large, was of a similar magnitude to that Britain experienced in 2008-9. This was not a 'great depression' as experienced in the United States.

A key event was the UK's early exit from the gold standard in September 1931 and the absence of a banking crisis was an important reason for the avoidance of depression. Given the opportunity for macroeconomic policy regime change, the UK response was highly conducive to rapid recovery via monetary stimulus and, from 1935, rearmament.²⁵ Real interest rates fell substantially; policy was designed to facilitate this through raising inflationary expectations at the Zero Lower Bound. The

21 H Richardson, [Over-commitment in Britain before 1930](#), Oxford Economic Papers 17(2), July 1965.

22 A Tena-Junguito, [Bairoch Revisited: Tariff Structure and Growth in the Late Nineteenth Century](#), European Review of Economic History 14(1), April 2010.

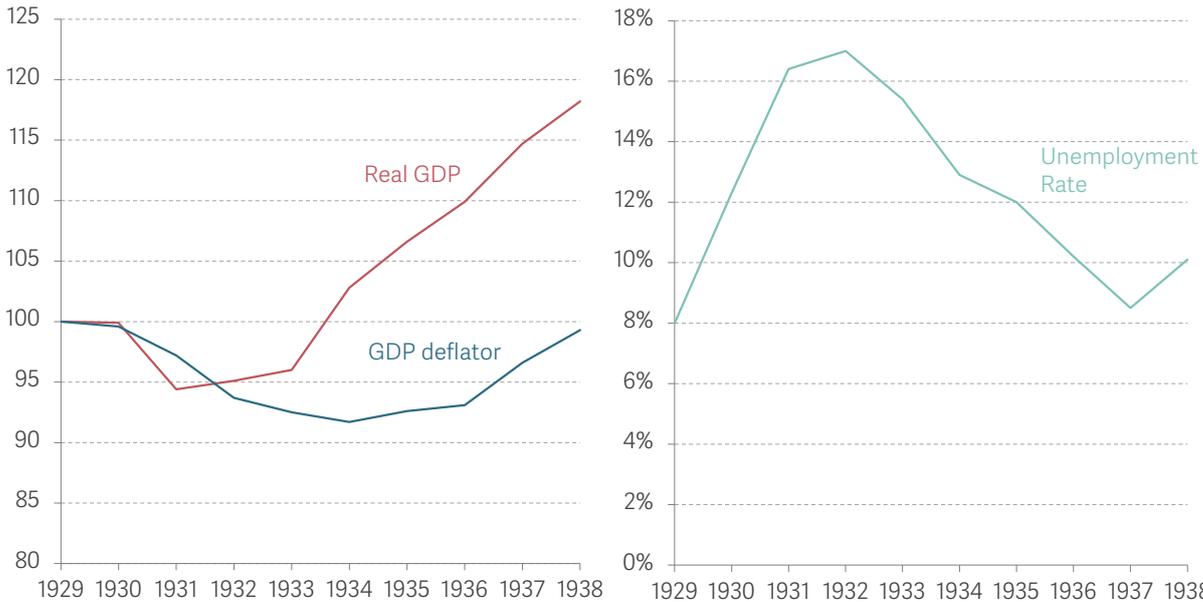
23 Thomas estimated that employment in agriculture and textiles would have risen by 45441 and 149851, respectively, while employment in chemicals, motor & cycle, and engineering would have risen by 241, 3102, and 10619, respectively, had a Chamberlain tariff been introduced in 1907 reflecting the pattern of effective protection that this would have entailed. See M Thomas, [An Input-Output Approach to the British Economy 1890-1914](#), University of Oxford, 1984.

24 The fall in real GDP from peak to trough based on quarterly data was 7.2 percent. See J Mitchell, S Solomou & M Weale, [Monthly GDP Estimates for Interwar Britain](#), Explorations in Economic History 49(4), October 2012.

25 For a detailed description. See N Crafts, [Returning to Growth: Policy Lessons from History](#), Fiscal Studies 34(2), June 2013.

package of measures aimed at raising prices included devaluation, tariffs, and encouragement of cartels. The result was a major reduction of competition in product markets which was not completely reversed for decades and did considerable damage to long-run productivity performance.²⁶ This was exacerbated by the adverse interaction of weakened competition with prevailing modes of industrial relations and corporate governance.²⁷ Short-run macroeconomic policy worked quite well but long-run supply-side policy caused collateral damage.

FIGURE 2: Real GDP and GDP deflator (left side, 1929 = 100) and unemployment (right side): UK, 1929-1938



NOTES: The measure of unemployment is not the National Insurance concept used at the time (which shows higher numbers) but a constructed series which is intended to be comparable with modern figures.
 SOURCES: Real GDP and GDP deflator: Feinstein 1972; Unemployment: Boyer and Hatton 2002.²⁸

Tables 2 and 3 show the Achilles heel of recovery in the 1930s, namely, persistently high unemployment in the regions of what at the time was called ‘outer Britain’. Nor did recovery bring much levelling up in regional GDP per person. A significant fraction of the high regional unemployment was long term, especially among elderly males.²⁹ High regional unemployment was associated with the spatial concentration of activities such as coalmining and textiles but in the worst-affected areas unemployment was higher across all sectors. The legacy of 19th-century industrialization in a free-trade economy left Britain exposed to high unemployment risks and significant labour-market adjustment problems. Trade wars, the rise of competing production overseas, and the world economic downturn severely affected ‘outer Britain’. Employment in coalmining, shipbuilding and textiles fell by 741,000 between the Censuses of Production in 1924 and 1935 and around half of this decline can be attributed to falls in exports. The downside of globalization through exposure of workers to risks became only too apparent.

²⁶ Abandoning competition policy and encouraging firms to exploit their market power has a theoretical justification when nominal interest rates cannot be reduced further. The textbook goes on to say that when the crisis has passed a normal policy setting should be resumed immediately. If only! See G Eggertsson, *Was the New Deal Contractionary?*, *American Economic Review* 102(1), February 2012.
²⁷ See Section 4 for more details. See N Crafts, *Forging Ahead, Falling Behind, Fighting Back: British Economic Growth from the Industrial Revolution to the Financial Crisis*, Cambridge University Press, August 2018.
²⁸ C Feinstein, *National Income, Expenditure and Output of the United Kingdom 1855-1965*, Cambridge University Press, 1972; G Boyer & T Hatton, *New Estimates of British Unemployment 1870-1913*, *Journal of Economic History* 62(3), September 2002.
²⁹ N Crafts, *Long Term Unemployment in Britain in the 1930s*, *Economic History Review* 40(3), August 1987.

TABLE 2: GDP per person for Great British nations and regions (Great Britain = 100), 1931-1991

	1931	1938	1951	1971	1981	1991
London	144.2	138.1	138.6	142.9	129.3	129.7
Rest of South East	114.0	119.5	84.8	91.5	108.4	111.4
South East	130.3	129.5	110.6	113.8	116.6	118.4
East Anglia	82.7	85.4	89.0	93.8	96.3	100.0
South West	92.3	92.0	89.3	91.5	92.9	93.6
West Midlands	95.7	93.0	104.0	102.0	90.0	92.2
East Midlands	86.6	89.9	95.8	89.2	96.3	95.9
Yorkshire & Humberside	86.4	82.5	97.5	95.9	91.7	86.7
North West	88.6	86.0	104.0	96.4	93.5	90.3
North	65.0	66.6	88.6	86.3	92.5	88.3
Wales	81.1	70.1	84.9	87.3	82.8	84.2
Scotland	94.2	101.1	89.3	91.9	95.6	95.9

SOURCE: Geary and Stark 2015.³⁰

TABLE 3: Unemployment rates for Great British nations and regions, 1932-1991

	1932	1937	1951	1973	1986	1991
South East	12.3%	4.9%	0.9%	1.5%	8.3%	4.0%
East Anglia	15.4%	6.9%	0.9%	1.9%	8.5%	3.7%
South West	16.1%	6.5%	1.2%	2.4%	9.5%	4.4%
West Midlands	22.0%	6.2%	0.4%	2.2%	12.9%	5.9%
East Midlands	19.7%	7.5%	0.7%	2.1%	10.0%	5.1%
Yorkshire & Humberside	27.0%	12.3%	0.7%	2.9%	12.5%	6.7%
North West	25.3%	12.7%	1.2%	3.6%	13.7%	7.7%
North	36.4%	16.8%	2.2%	2.5%	15.3%	8.7%
Wales	37.4%	20.7%	2.7%	3.5%	13.5%	6.6%
Scotland	26.8%	14.0%	2.5%	4.6%	13.3%	8.1%

NOTES: East Midlands and Yorkshire & Humberside are aggregated in 1951 as are South East and East Anglia. The interwar unemployment rates are based on national insurance claimants and exceed the overall rate of unemployment by about 30 per cent.

SOURCES: Beck 1951; Department of Employment and Productivity; Central Statistical Office.³¹

³⁰ F Geary & T Stark, [What Happened to Regional Inequality in the Twentieth Century](#), *Economic History Review* 69(1), June 2015; F Geary & T Stark, [Estimates of Regional GDP in Great Britain in 1935 and 1938](#), ESCoE Technical Report 06, March 2020.

³¹ G Beck, *A Survey of British Employment and Unemployment 1927-1945*, Institute of Economics, 1951; Department of Employment and Productivity, *British Labour Statistics Historical Abstract 1868-1968*, 1971; Central Statistical Office, *Abstract of Regional Statistics*, 1974; Central Statistical Office, *Abstract of Regional Statistics*, 1992

The structure of employment in the South East, and to a lesser extent the West Midlands, was skewed towards expanding sectors while declining sectors loomed large in the North East, North West, and Wales. The South East secured 47.9 per cent of new manufacturing plants during 1932 to 1938.³² In a new environment of electrical power and road haulage, the advantages of proximity to markets implied different industrial location decisions: the employment geography of Victorian Britain had become outdated. Electrical engineering and the car industry preferred the South East and the West Midlands to the North East and Wales. Spatial as well as structural adjustment was required. However, in the face of these developments, matching efficiency in the labour market fell significantly.³³

The unemployment problem in depressed areas required a policy response which came in the form of the beginnings of what might be called 'regional policy'. By 1937, Keynes was stressing that policies to increase aggregate demand needed to be supplemented by interventions at the regional level.³⁴ In practice, however, these were no more than modest short-term political expedients. The major initiative through to the mid-1930s was the Industrial Transference Scheme which subsidized internal migration of unemployed workers (a total of 289,000 between 1928 and 1938). In 1934, 'Special Areas' support was designated covering South Wales, Scotland, Durham and Tyneside, and West Cumberland which entailed government-financed industrial estate development and provision of loans to firms investing in these locations.

Evaluations of these policies have argued they reduced unemployment³⁵ and were very cost effective.³⁶ On the other hand, they were 'too little, too late' and did not pay much attention to diversifying the employment structure of the depressed areas.³⁷ Pitfield estimated that between 1934 and 1938 the impact on unemployment of support for transference and trading estates was 50,000 and 68,000, respectively.³⁸ Unemployment in the Special Areas was 439,000 in 1934 and 296,000 in 1938.

The scale and persistence of unemployment explains why it is widely thought that Britain went through a 'great depression' in the 1930s. The apparent intractability of the unemployment problem had serious implications for future economic policymaking. It led to a serious loss of faith in the market economy with the corollary that there should be a much larger role for state intervention in delivering economic security. It also meant that maintaining full employment became a political imperative once it was thought that this could be achieved. 'No return to the 1930s' would become the mantra of post-war politics.

4. The Transition from War to Peace after World War II

After 1945, the Attlee Government introduced major reforms intended to ensure that there would be no return to the 1930s. The 1944 White Paper on Employment Policy pledged that the maintenance of a high and stable level of employment was a primary aim and responsibility of government. It soon became conventional wisdom that this was essential for a government to be re-elected. The analysis

32 P Scott & P Walsh, [New Manufacturing Plan Formation, Clustering and Locational Externalities in 1930s' Britain](#), Business History 47, April 2005.

33 I Luzardo-Luna, [Labour Frictions in Interwar Britain, Industrial Reshuffling and the Origin of Mass Unemployment](#), European Review of Economic History 24(2), May 2020.

34 G Peden, [Keynes The Treasury and Unemployment in the later 1930s](#), Oxford Economic Papers 32(1), March 1980.

35 D Pitfield, [Labour Migration and the Regional Problem in Britain 1920-1939](#), University of Stirling, November 1973.

36 P Scott, [The Audit of Regional Policy, 1934-39](#), Regional Studies 34(1), 2000.

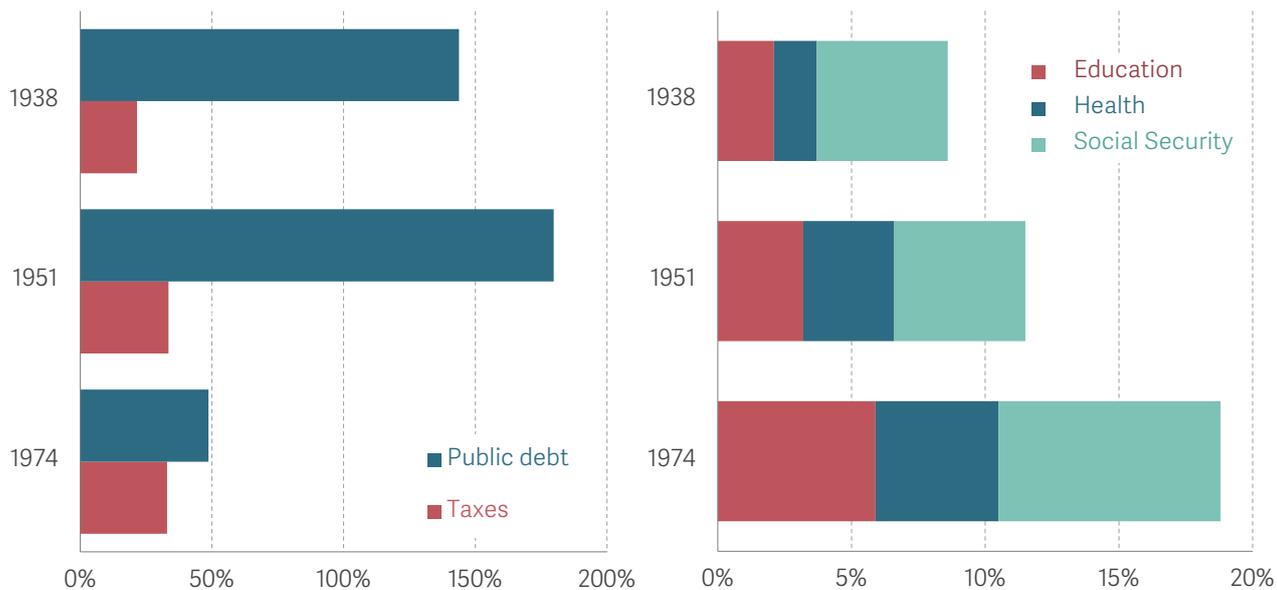
37 C Heim, [Limits to Intervention: the Bank of England and Industrial Diversification in the Depressed Areas](#), Economics History Review 37(4), November 1984.

38 D Pitfield, [Labour Migration and the Regional Problem in Britain 1920-1939](#), University of Stirling, November 1973. The methodology on which these estimates are based is not of today's standard.

of opinion poll data by Goodhart and Bhansali supported this belief.³⁹ They found that unemployment above 400,000 implied that the governing party had no chance of leading in the polls; clearly, presiding over a return to interwar levels of unemployment (never less than 1.8 million) would be electoral suicide.

A 'mixed economy' was created which by 1950 was radically different from the status quo of 1900. The post-war settlement shaped policy through the 1970s. Total public expenditure as a share of GDP was a great deal larger, government intervention was much more ambitious, the welfare state expanded as spending on defence faded, balanced budgets were no longer de rigueur, substantial parts of the economy were taken into state ownership, and protectionism had superseded free trade. The Bretton Woods agreement replaced the gold standard. This was designed to deliver trade liberalization but not deep economic integration. Capital controls were a key feature. They were instrumental in expanding domestic policy space, and, notably, increased the scope for policymakers to mitigate the risks to workers from re-globalization through a combination of welfare-state policies, effective financial repression and preventing tax competition.

FIGURE 3: Taxes and public debt as a share of GDP (left side), social expenditures as a share of GDP (right side): UK, 1938-1974



SOURCE: Middleton 1996 and supporting database.⁴⁰

The Beveridge Report and its apparent guarantee of freedom from economic insecurity as a right was hugely popular as an antidote to the difficulties of the interwar period and the widely perceived inadequacy of its social safety net.⁴¹ In the event, the implementation of much of Beveridge's plan for the welfare state raised 'social expenditure' but not dramatically (Figure 3). Expansion of the welfare state was compatible with rapid reduction of the public debt-to-GDP ratio because interest rates were low relative to growth rates and unemployment was low. The problem was that the Beveridge model

³⁹ C Goodhart & R Bhansali, *Political Economy*, Political Studies, 18(1), March 1970.

⁴⁰ R Middleton, *Government versus the Market*, Edward Elgar, 1996.

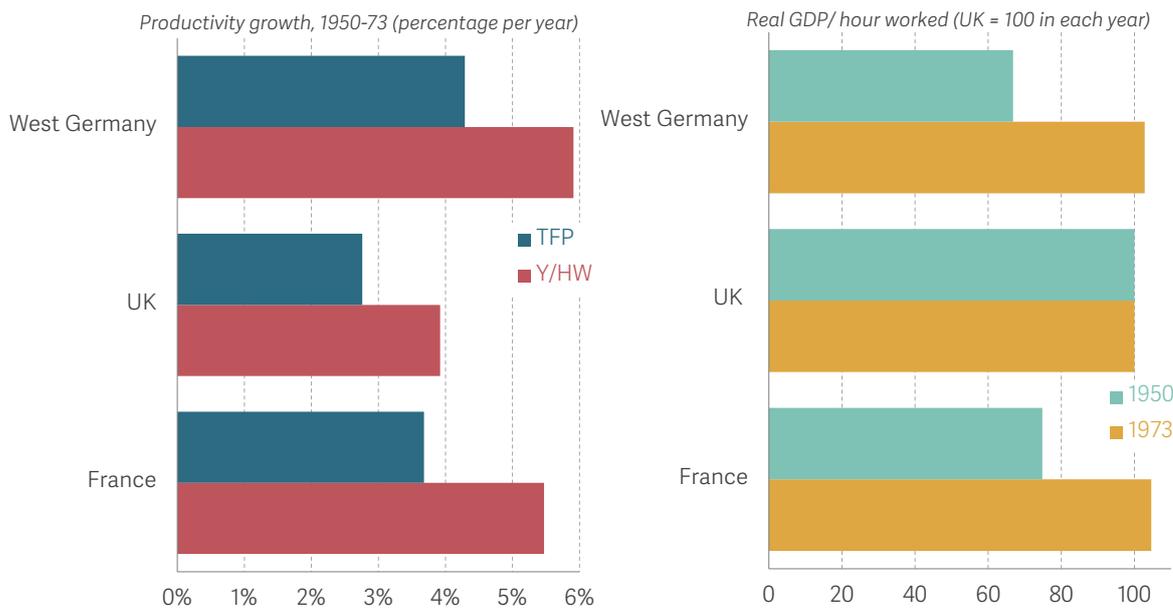
⁴¹ W Beveridge, *Social Insurance and Allied Services*, His Majesty's Stationary Office, November 1942; N Whiteside, *The Beveridge Report and its Implementation: A Revolutionary Project?*, *Histoire@politique*, 2014.

was badly designed and offered a false prospectus. It abolished neither poverty nor means testing nor did it provide true social insurance, although it did increase the generosity of provision compared with the pre-war system.⁴²

Social insurance entails provision of public insurance against risks of serious loss of income or wealth for which private insurance is infeasible. The Beveridge-style welfare state concept of 'social insurance' was not one of maintenance of income and wealth in the face of uninsurable adverse shocks but avoidance of poverty. A flat rate of benefit to prevent poverty falls well short of the insurance that most people would be willing to pay for if it was available; a component of earnings-related benefits must be part of a welfare state that provides proper insurance against income loss.

In the 'Golden Age' of European economic growth during 1950 to 1973, labour productivity growth was 3.92 per cent per year, the fastest ever for the UK. In a comparative international context, however, UK productivity growth was disappointing and was notably inferior to that of France and West Germany (Figure 4). The key point to note is that these countries had overtaken the UK by 1973 when their labour productivity levels were somewhat higher. This was a missed opportunity for which UK supply-side policy conceived in the 1940s was largely responsible.

FIGURE 4: **Comparative productivity performance for selected countries, 1950-1973**



NOTES: TFP is 'crude TFP'; the contribution of labour quality is not separately measured; TFP - total factor productivity. Y/HW - income per hour worked. GDP is measured in terms of 1990 Geary-Khamis dollars.

SOURCE: Table 1 and O'Mahony 1999; Crafts 2021.⁴³

The average level of unemployment during the Golden Age was 2.6 per cent, far below that of the 1930s. A striking feature was the low non-accelerating inflation rate of unemployment (NAIRU), estimated to be 2 per cent in the 1950s and 1960s compared with 9.8 per cent in the 1930s.⁴⁴ This

42 In 1948, 1 million claimants were on means-tested National Assistance rising to 2 million on Supplementary Benefit in 1968. 13.2 per cent of households were in relative income poverty in 1953/4 compared with about 16 per cent in 1937. See N Crafts, *What Can We Learn from the UK's Post-1945 Economic Reforms*, *Economic Affairs* 41(3), October 2021. Cartter estimated that net redistribution was 13.1 per cent of national income in 1948/9 compared with 8.8 per cent in 1937. See A Cartter, *The Redistribution of Income in Post-War Britain*, Yale University Press, 1955.

43 M O'Mahony, *Britain's Productivity Performance 1950-1996*, National Institute of Economics and Social Research, April 1999.

44 T Hatton & M Thomas, *Labour Markets in Recession and Recovery: the UK and the USA in the 1920s and 1930s*, in N Crafts & P Fearon, *The Great Depression of the 1930s: Lessons for Today*, Oxford University Press, November 2013.

was associated with a more favourable Beveridge Curve in the context of much lower regional unemployment (Table 3) which reflected the revival of world trade rather than successful regional policy.⁴⁵

Another important, albeit disputed, reason for the low NAIRU may be the post-war settlement. Whether or not this was the reason, the government clearly tried to engineer this outcome, recognising that keeping unemployment at the level the electorate seemed to demand without igniting inflation was problematic. This was addressed by an implicit 'social contract' between governments and organized labour which sought to deliver wage restraint in return for supply-side policies designed to please trade unions.⁴⁶ The result was the persistence of weak competition policies, high marginal tax rates, state-owned enterprise, protectionism, and dysfunctional industrial relations. In other words, the imperative of low unemployment came with a cost in foregone productivity growth.

A flagship policy of the Attlee government was the nationalization of a substantial component of the UK economy including public utilities and transport during the late 1940s. This meant that a sizeable fraction of investment would be undertaken by the state rather than the private sector. In the 1950s, industry boards were supposed to act in the 'public interest' and break even from one year to the next. Political interference was a continual problem. Financial targets were imposed in the 1960s but effectively abandoned in the 1970s. By then, inefficient use of labour and excessive investment were serious problems.⁴⁷

Competition policy was largely ineffective, politicized, and embodied an ill-defined 'public-interest' criterion for intervention.⁴⁸ Not surprisingly, the British economy was characterized by substantial market power in this period. Crafts and Mills estimated that the price-cost margin in UK manufacturing during 1954-73 averaged over 2; Geroski and Jacquemin found that supernormal profits of big firms during 1949-1977 were large and persistent.⁴⁹ Initially, collusive activity was widespread; in the mid-1950s only 27 per cent of manufacturing was free from price-fixing and 35.7 per cent was cartelized.⁵⁰ Average tariffs remained at mid-1930s levels and trade costs only fell very belatedly. Failure to liberalize trade underpinned market power as reflected by high price-cost margins.⁵¹

Weak competition undermined productivity performance. The weakness of import competition had a strong negative effect on manufacturing productivity growth, as did cartels.⁵² The weakness of competition in product markets affected productivity performance through its interactions with the industrial relations and corporate governance systems.⁵³ The former was characterized by the dissipation of excess profits through low-effort bargains ('overmanning') and the latter by principal-

45 N Crafts, [What Can We Learn from the UK's Post-1945 Economic Reforms](#), *Economic Affairs* 41(3), October 2021.

46 R Flanagan, D Soskice & L Ulman, *Unionism, Economic Stabilization, and Incomes Policies: European Experience*, Brookings Institution, September 1983.

47 J Vickers & G Yarrow, *Privatisation: An economic Analysis*, MIT Press, 1988.

48 R. Clarke, S. Davies and N. Driffield, *Monopoly Policy in the UK Assessing the Evidence*, Cheltenham: Edward Elgar

49 N Crafts & T Mills, [TFP Growth in British and German Manufacturing, 1950-1996](#), *The Economic Journal*, July 2005; P Geroski & A Jacquemin, [The Persistence of Profits: a European Comparison](#), *The Economic Journal* 98(391), June 1988.

50 S Broadberry & N Crafts, [British Economic Policy and Industrial Performance in the Early Post-war Period](#), *Business History* 38(4), 1996.

51 T Hitiris, [Effective Protection and Economic Performance in UK Manufacturing Industry 1963 and 1968](#), *The Economic Journal* 88(349), March 1978.

52 N Bos, [British Failure? Relative Economic Decline in an International Context 1935-1970](#), University of Groningen, January 2015; G Symeonidis, [The Effects of Competition on Wages and Productivity: Evidence from the United Kingdom](#), *Review of Economics and Statistics* 90(1), February 2008.

53 N Crafts, [Forging Ahead, Falling Behind, Fighting Back: British Economic Growth from the Industrial Revolution to the Financial Crisis](#), Cambridge University Press, August 2018.

agent problems which undermined efficiency. Case studies strongly implicate bad management and restrictive labour practices, resulting from bargaining with unions, in poor productivity performance.⁵⁴ This configuration was enabled by weak competition.⁵⁵

The 'mixed economy' era was notable for the politicization of supply-side policy. This culminated in a strong emphasis on selective industrial policies in the 1970s which prioritized vote-seeking rather than economic efficiency. There was a marked tendency for subsidies to be skewed towards relatively few industries, notably aircraft, shipbuilding and, latterly, motor vehicles. The high expenditure on shipbuilding is striking since this was clearly an industry in which the UK no longer had a comparative advantage. More generally, there is quite a strong bias towards shoring up ailing industries which is well-reflected in the portfolio of holdings of the National Enterprise Board, in the pattern of tariff protection across sectors, and in the nationalizations of the 1970s.⁵⁶ Moreover, policies to subsidize British high-technology industries with a view to increasing world market share were notably unsuccessful in this period in a number of cases including civil aircraft, which by 1974 had cost £1.5 billion at 1974 prices for a return of £0.14 billion, computers and nuclear power.⁵⁷ A horizontal policy such as an R&D tax credit would surely have been more appropriate than vain attempts to create 'national champions'.

5. The Thatcher Reforms

Macroeconomic outcomes in the 1970s deteriorated significantly compared with the two previous decades. Growth slowed down, unemployment rose to post-war record highs while inflation averaged 12.6 per cent and peaked at 24 per cent. The main policy response to surging inflation came in the form of incomes policies, most notably an explicit Social Contract instigated by Labour in 1975. This sought to control wages in return for pledges to unions about government policy. Like earlier incomes policies this reduced wage inflation temporarily but then broke down.⁵⁸ In this case, the episode culminated in the 'winter of discontent' in 1979 which featured significant labour militancy especially among public sector workers. Not only was the Social Contract ultimately unsuccessful as a counter-inflationary policy, it further entrenched the obstacles to supply-side reform that earlier endeavours at wage restraint had entailed. The 'winter of discontent' delivered the 1979 election for Mrs Thatcher thereby paving the way for a new era of economic policy.⁵⁹

In many respects, after 1979, there was a sharp break with the earlier post-war consensus, and this was certainly true of supply-side policies relevant to growth performance. Reforms of fiscal policy were made including the re-structuring of taxation by increasing VAT while reducing income tax rates,

54 C Pratten & A Atkinson, *The Use of Manpower in British Industry*, Department of Employment Gazette 84(6), 1976.

55 As was clearly revealed when competition strengthened in the 1980s giving rise to major changes in industrial relations and management structures that raised productivity significantly. See: S Machin & S Wadhvani, *The Effects of Unions on Organisational Change, Investment and Employment: Evidence from WIRS Data*, London School of Economics Centre for Labour Economics Discussion Paper No.355, 1989; R Harris, D Siegel & M Wright, [Assessing the Impact of Management Buyouts on Economic Efficiency: Plant-Level Evidence from the United Kingdom](#), Review of Economics and Statistics, February 2005.

56 C Wren, *Industrial Subsidies: The UK Experience*, Palgrave Macmillan, January 1996; D Greenaway & C Milner, [Determinants of the Inter-Industry Structure of Protection in the UK](#), Oxford Bulletin of Economics and Statistics 56(4), November 1994.

57 N Gardner, *The Economics of Launching Aid*, in A Whiting, *The Economics of Industrial Subsidies*, HMSO, 1976; J Hendry, *Innovating for Failure: Government Policy and the Early British Computer Industry*, London: MIT Press, 1989; R Cowan, [Nuclear Power Reactors: A Study in Technological Lock-In](#), Journal of Economic History 50(3), September 1990. Concorde and the Advanced Gas-Cooled Reactor were egregious policy errors. See: P Henderson, *Two British Errors: Their Probable Size and Some Possible Lessons*, Oxford Economic Papers 29(2), July 1977.

58 S Brittan, [The Futility of British Incomes Policy](#), Challenge 22(2), June 1979

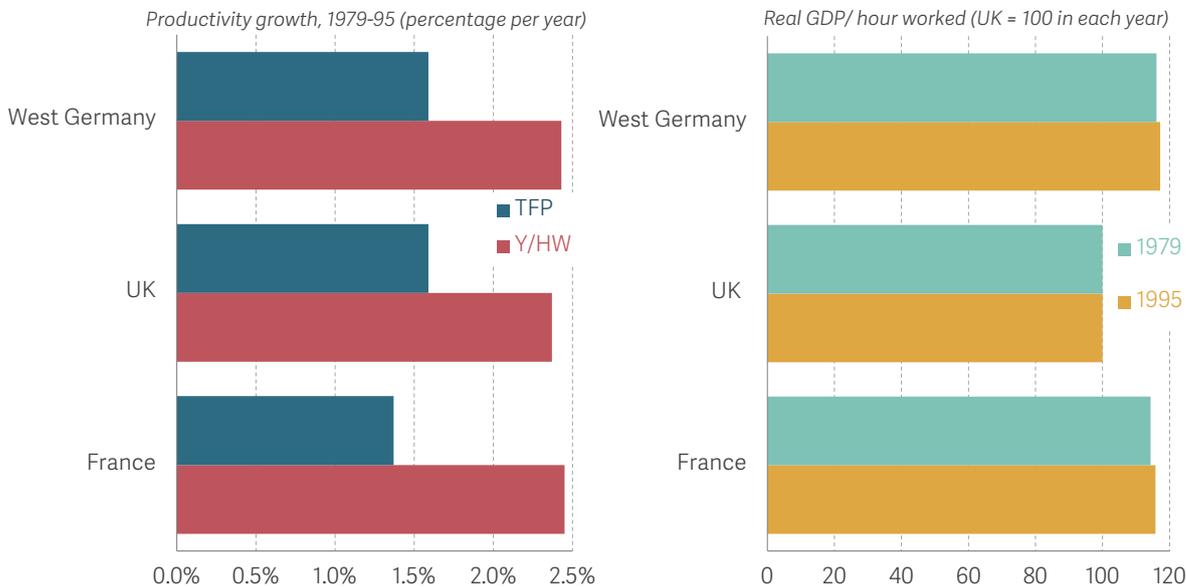
59 J Shepherd, *Crisis? What Crisis? The Callaghan Government and the British 'Winter of Discontent'*, Manchester University Press, September 2016.

combined with restraining the growth of public expenditure notably by indexing transfer payments to prices rather than wages, while aiming to restore a balanced budget. Trade liberalization including EU membership was embraced and mergers policy became much less permissive. Industrial policy was downsized as subsidies were cut and privatization of state-owned businesses was embraced while de-regulation, most notably of financial markets as embodied by 'Big Bang' in 1986, was promoted. Legal reforms of industrial relations further reduced trade-union bargaining power which had initially been undermined by rising unemployment. The high profile 1984/5 strike resulted in a serious defeat for the National Union of Mineworkers and the closure of 90 per cent of the remaining coalmining industry by the mid-1990s.

Clearly, there were serious errors and omissions in supply-side policy reform which proved persistent. The most obvious has been in innovation policy which is reflected in a low level of R&D but policy covering skills, infrastructure, land-use planning regulation, and the tax system also gave rise to significant cause for concern.⁶⁰ Meanwhile, British capital markets remained notably short-termist with a bias against long-term investment.⁶¹

Thatcherism was, however, a partial solution to the problems which led to underperformance in the Golden Age, especially those stemming from weak competition.⁶² Adverse effects of the UK's institutional legacy, notably the industrial relations system, were mitigated. Productivity growth was well below golden-age rates but relative economic decline compared with France and West Germany ceased (Figure 5).

FIGURE 5: **Comparative productivity performance, 1979-1995**



NOTES: TFP is 'crude TFP', i.e., the contribution of labour quality is included in it. TFP - Total factor productivity. Y/HW - income per hour worked. GDP is measured in terms of 1990 Geary-Khamis dollars.

SOURCE: Table 1 and O'Mahony 1999.⁶³ Derived using updates to Thomas and Dimsdale 2016 and The Conference Board.⁶⁴

60 Frontier Economics, Rates of Return to Investment in Science and Innovation, Department for Business, Innovation, and Skills, July 2014; OECD, [Skills Matter](#), 2016; LSE Growth Commission, [Investing in Prosperity: Skills, Infrastructure and Innovation](#), London School of Economics, January 2013; P Cheshire & C Hilber, [Office Space Supply Restrictions in Britain: The Political Economy of Market Revenge](#), The Economic Journal 118(529), June 2008; J Mirrlees, S Adam, T Besley, R Blundell, S Bond, R Chote, M Gammie, P Johnson, G Myles & J Poterba, [The Mirrlees Review: Conclusions and Recommendations for Reform](#), Institute of Fiscal Studies, September 2011.

61 R Davies, A Haldane, M Nielsen & S Pezzini, [Measuring the Costs of Short-Termism](#), Journal of Financial Stability 12, June 2014.

62 N Crafts, [Forging Ahead, Falling Behind, Fighting Back: British Economic Growth from the Industrial Revolution to the Financial Crisis](#), Cambridge University Press, August 2018.

63 M O'Mahony, [Britain's Productivity Performance 1950-1996](#), National Institute of Economics and Social Research, April 1999.

64 R Thomas & N Dimsdale, A Millennium of UK data Bank of England OBRA Dataset, 2017; The Conference Board, [Total Economy Database](#), 2016.

The reforms encouraged the effective diffusion of new technology rather than greater invention and worked more through reducing inefficiency than promoting investment-led growth. The impact on manufacturing was quite remarkable. Between 1979 and 1989, real output rose by 8.6 per cent, employment fell by 28.3 per cent, labour productivity rose by 51.4 per cent, and the share of manufacturing in total employment fell from 24.3 per cent to 17.3 per cent. The labour productivity gap with West Germany was reduced from 40.3 per cent to 5.9 per cent.⁶⁵ Only 46 per cent of manufacturing establishments present in 1979 survived to 1989 while downsizing among survivors accounted for about two thirds of the productivity increase. All this was in marked contrast with the 1970s.⁶⁶

The 1980s was a decade of persistently high unemployment – averaging 11.8 per cent and almost on a par with the 12.3 per cent of the 1930s when measured on a comparable basis.⁶⁷ Monetarist policies to address rampant inflation combined with the shakeout in manufacturing delivered a shock from which the economy took time to recover. Not only was there a substantial fall in aggregate demand but the NAIRU rose sharply compared to the post-war era rising to 9.5 per cent as wage militancy had replaced wage restraint, unemployment benefits had become more generous and taxes more onerous.⁶⁸ The Beveridge Curve (a graphical representation of the relationship between vacancies and unemployment) shifted out dramatically as a roughly constant level of vacancies was accompanied by much higher unemployment.⁶⁹

The Thatcher government downgraded the goal of full employment and repudiated the notion that policy would be designed to appease the trade unions.⁷⁰ It discarded incomes policies and the constraints on economic reform that went with them in favour of monetarism. It defied the hitherto conventional wisdom that low unemployment was a sine qua non for re-election.⁷¹ That said, the surge in unemployment was clearly a most unwelcome surprise which would not have been seen as acceptable *ex ante*.⁷² Policy reforms to unemployment benefits, industrial relations and taxation did, however, eventually reduce the NAIRU to 6.9 per cent by the mid-1990s.⁷³ By the 1990s, the outward shift of the Beveridge Curve had been partially reversed.⁷⁴ An obvious shortcoming of the policy response to this shift was the absence of active labour market policies especially prior to the Restart programme implemented in 1986.

The re-structuring of employment implicit in the Thatcher reforms had a strong regional dimension which is partly reflected in Table 3. The West Midlands, North West, and Yorkshire & Humberside lost ground in terms of relative GDP per person and significant regional differences in unemployment rates

65 S Broadberry, [The Productivity Race](#), Cambridge University Press, 1997.

66 N Oulton, [A Tale of Two Cycles: Closure, Downsizing and Productivity Growth in UK Manufacturing 1973-89](#), National Institute Economic Review 173, July 2000.

67 G Boyer & T Hatton, [New Estimates of British Unemployment 1870-1913](#), Journal of Economic History 62(3), September 2002.

68 S Nickell & G Quintini, [The Recent Performance of the UK Labour Market](#), Oxford Review of Economic Policy 18(2), Summer 2002.

69 S Nickell, L Nunziata, W Ochel & G Quintini, [The Beveridge Curve, Unemployment and Wages in the OECD from the 1960s to the 1990s](#), LSE Centre for Economic Performance Discussion Paper No. 0502, 2001.

70 M Holmes, *The First Thatcher Government 1979-1983: Contemporary Conservatism and Economic Change*, Wheatsheaf, May 1985.

71 The Falklands War and political strife in the Labour Party were no doubt helpful. Moreover, government popularity seems to have responded to the change in unemployment rather than its level, while perceived government competence in economic management and personal economic expectations were also important. See: S Price & D Sanders, [Modelling Government Popularity in Post-War Britain: a Methodological Example](#), American Journal of Political Science 37(1), February 1993; D Sanders, [Economic Performance, Management Competence and the Outcome of the Next General Election](#), Political Studies 44 (2), June 1996.

72 J Tomlinson, [Mrs Thatcher's macroeconomic Adventurism, 1979-1981, and its Political Consequences](#), British Politics 2, February 2007.

73 S Nickell & G Quintini, [The Recent Performance of the UK Labour Market](#), Oxford Review of Economic Policy 18(2), Summer 2002.

74 S Nickell, L Nunziata, W Ochel & G Quintini, [The Beveridge Curve, Unemployment and Wages in the OECD from the 1960s to the 1990s](#), LSE Centre for Economic Performance Discussion Paper No. 0502, 2001.

re-emerged albeit not on the scale of the 1930s. This picture is, however, seriously incomplete since there was a very substantial increase in male economic inactivity which was concentrated in areas with high unemployment and among low-skilled workers, many of whom were on incapacity benefits which provided a higher level of support. Whereas 4.7 per cent of men aged 25-64 were inactive in 1979 by 1998 the rate was 13.2 per cent. In that year, 43.4 per cent of low skilled workers were economically inactive in areas where the male unemployment rate was over 9 per cent.⁷⁵

The effects of large negative employment shocks in local authority districts have proved long-lasting. On average only 22 per cent of the change in the male employment rate between 1971 and 1991 had been reversed by 2011 and two thirds of the most deprived areas in 2015 were places that had experienced a large negative employment shock in the 1970s and early 1980s.⁷⁶ The long-run impact on the English and Welsh coalfields of job losses in coal mining is captured in granular detail in Table 4 where the reduction in recorded unemployment is deceptive because it is outweighed by the big reduction in economic activity.

TABLE 4: **Labour-market accounts for working-age men: English and Welsh Coalfields, 1981-2004**

	Number
Job losses in coalmining	222,000
+ Natural increase in workforce	86,600
+ Net in-migration	-57,900
+ Increase in net in-commuting	-30,700
+ Increase in economically active	-162,500
- Increase in noncoal jobs	-132,400
= Increase in recorded unemployment	-74,900

SOURCE: Beatty et al., 2007.⁷⁷

In the short term, the Thatcher reforms prioritized productivity improvement at the expense of full employment whereas the post-war consensus had implied the opposite. In the longer term, the NAIRU was slowly reduced as benefits were squeezed and policed more strictly while trade union bargaining power and income tax were reduced. The overall approach to addressing relative economic decline imposed high costs on a subset of workers but productivity growth delivered decent growth in real wages after the recession of the early 1980s which underpinned electoral support for the government.

⁷⁵ S Nickell & G Quintini, [The Recent Performance of the UK Labour Market](#), Oxford Review of Economic Policy 18(2), Summer 2002.

⁷⁶ P Rice & A Venables, [The Persistent Consequences of Adverse Shocks: How the 1970s Shaped UK Regional Inequality](#), Oxford Review of Economic Policy 37(1), April 2021.

⁷⁷ C Beatty, S Fothergill & R Powell, [Twenty Years On: Has the Economy of the UK Coalfields Recovered?](#), Environment and Planning A: Economy of Space 39(7), July 2007.

6. The ICT Revolution

The 'ICT Revolution' was at its height at the time of the 'post-Thatcher consensus' on supply-side policy which spanned New Labour and the Conservatives. When Labour won a landslide victory in the 1997 election, it was possible to wonder whether in government it would revert to 'Old Labour' policies. The answer soon became apparent and was a resounding 'No'. There was no nationalization programme, no move to subsidize manufacturing investment, no return to high marginal rates of direct tax, no attempt to resist de-industrialization by supporting declining industries, and no major reversal of industrial relations reform. Implicitly, the Thatcher supply-side reforms had been accepted. The changes that Labour made were to strengthen some aspects of horizontal industrial policies with a new emphasis on education, R&D, and strengthening competition policy.

FIGURE 6: ICT Contributions to labour productivity growth (percentage per year)



NOTES: TFP in ICT production is a weighted average of industries C26, J61 and J62-J63; estimates are for 2007-2017 for France and Germany and for 2007-2016 for UK.

SOURCE: The Conference Board and EU KLEMS.⁷⁸

Prior to the financial crisis, this period was one of respectable labour productivity growth (Table 1). Indeed, in the years 1995-2007, productivity growth exceeded that of France and Germany.⁷⁹ This was based to a significant extent on a strong contribution from ICT (Figure 6). ICT capital deepening contributed considerably more to productivity growth in the UK compared with France and Germany. In other words, the diffusion of this new general-purpose technology was relatively rapid in the UK. The ICT era was notable for its implications for the composition of employment. The direct and indirect effects of technological change tended to reduce employment in the 60 per cent of jobs which entailed routine tasks but the opposite was true both for the 20 per cent of high-paying jobs requiring non-routine cognitive skills and also for the 20 per cent of low-paying jobs requiring non-routine manual skills.⁸⁰

⁷⁸ The Conference Board, *Total Economy Database*, 2021; EU KLEMS, *Growth and Productivity Accounts*, 2019.

⁷⁹ Resolution Foundation, *Stagnation Nation: Navigating a route to a fairer and more prosperous Britain*, July 2022.

⁸⁰ M Goos & A Manning, *Lousy and Lovely Jobs: the Rising Polarization of Work in Britain*, *Review of Economics and Statistics* 89 (1), February 2007.

The diffusion of ICT was aided by complementary investments in intangible capital and in high-quality human capital. Expansion of higher education helped the UK but especially notable was a strong volume of investment in intangible capital.⁸¹ The international evidence also highlights that the diffusion of ICT was significantly inhibited in countries, not including the UK, which were heavily regulated.⁸² OECD research indicated that restrictive product market regulation deterred investment in ICT capital directly and the indirect effect of regulation in raising costs was relatively pronounced in sectors that use ICT intensively.⁸³

Employment protection was relatively weak in the UK (Figure 7), an aspect of the institutional legacy stemming from the history of British industrial relations with its tradition of ‘voluntarism’.⁸⁴ Employment protection did not become stricter in other countries in the late 20th century; it was not that their regulation became more stringent but rather that existing regulation became more costly in the context of a new technological era. Notably, employment protection has been shown to deter investment in ICT equipment because it increases the costs of reorganizing working practices and upgrading the labour force, which are central to realizing the productivity potential of ICT.⁸⁵

FIGURE 7: **Employment protection (scored from 0 -10)**



NOTES: West Germany prior to re-unification.
SOURCE: Crafts 2006.⁸⁶

81 C Corrado, J Haskel, C Jona-Lasinio & M Iommi, [Intangible Investment in the EU and US before and since the Great Recession and its Contribution to Productivity Growth](#), Journal of Infrastructure Policy and Development 2(1), February 2018.

82 G Clette & J Lopez, [ICT Demand Behaviour: An International Comparison](#), Economics of Innovation and New Technology 21(4), 2012.

83 P Conway, D de Rosa, G Nicoletti & F Steiner, [Regulation, Competition and Productivity Convergence](#), OECD Economics Department Working Paper No. 509, September 2006.

84 P Emmenegger, [The Power to Dismiss: Trade Unions and the Regulation of Job Security in Western Europe](#), Oxford University Press, October 2014.

85 C Gust & J Marquez, [International Comparisons of Productivity Growth: The Role of Information Technology and Regulatory Practices](#), Labour Economics 11(1), February 2004; E Brynjolfsson L Hitt, [Computing Productivity: Firm-Level Evidence](#), Review of Economics and Statistics 85(4), November 2003.

86 N Crafts, [Regulation and Productivity Performance](#), Oxford Review of Economic Policy 22(2), July 2006.

Investment in ICT was more profitable and had a bigger productivity payoff if it was accompanied by organizational change in working and management practices.⁸⁷ This would not have happened with 1970s-style industrial relations in conditions of weak competition. For example, Prais noted the egregious example of the newspaper industry where these conditions precluded the introduction of electronic equipment in Fleet Street although an investment of £50 million could have reduced costs by £35 million per year.⁸⁸

Success in ICT diffusion was partly an unintended consequence of deregulation in the Thatcher period. The liberalisation of services that are intensive in the use of ICT (notably finance and retailing), which reduced barriers to entry, was important for the UK's relatively successful response to the new technology, as the OECD cross-country comparisons revealed. Financial services delivered rapid productivity growth in the period 1995-2007 – labour productivity and TFP grew at 5.8 per cent and 4.3 per year, respectively.⁸⁹ The sector contributed 0.43 per cent per year to growth of real GDP per hour worked.

However, the financial sector also represented the Achilles heel of the post-Thatcher consensus where ill-judged de-regulation culminated in a banking crisis which undermined aggregate productivity growth. It is well-known that financial crises can have permanent adverse direct effects on the level of potential output. The estimate implied by Oulton and Sebastia-Barriel is a long-run impact on the level of labour productivity of -5.4 per cent.⁹⁰ The transition period, while the levels effect materializes and during which growth rates are depressed, may be quite long. There is good reason to think that the financial crisis also had significant temporary effects on productivity performance which, more than a decade later, may not yet have completely evaporated as resource allocation has been seriously impaired. Redeployment of labour appears to have been a key issue as workers moved to firms with inferior productivity characteristics.⁹¹

Banking crises reflect market failures in the banking sector combined with a failure of regulation to address them effectively. The problems arise from moral hazard and coordination failures in a context of asymmetric information. The typical pre-crisis symptom is rapid expansion of credit coupled with excessive risk taking. The likelihood of bank failures increases as leverage goes up and the ratio of equity capital to assets falls. Banking crises happen even in economies with strong growth fundamentals if banks are badly regulated and under-capitalized.

The financial crisis of 2007-8 in the UK matches this familiar pattern. Regulation was deficient and leverage soared following the deregulation of the 1980s with the median ratio of total assets to shareholder claims increasing from around 20:1 in the 1970s to almost 50:1 at the pre-crisis peak.⁹²

87 G Crespi, C Criscuolo & J Haskel, [Information Technology, Organizational Change and Productivity Growth: Evidence from UK Firms](#), London School of Economics Centre for Economic Performance Discussion Paper No. 783, 2007.

88 S Prais, *Productivity and Industrial Structure*, Cambridge University Press pp.198-199, August 1981.

89 It is sometimes claimed that mismeasurement of financial services output distorted the pre-crisis picture; Oulton shows that any such effect is very small - at most 0.1 percent per year during 2000-2007. See: EU KLEMS, *Growth and Productivity Accounts, 2019*; N Oulton, [Has the Growth of Real GDP in the UK been Overstated because of Mismeasurement of Banking Output](#), National Institute Economic Review 24, May 2013.

90 M Sebastia-Barriel & N Oulton, [Effects of Financial Crises on Productivity, Capital and Employment](#), Review of Income and Wealth 63(1), August 2016.

91 P Schneider, [Decomposing Differences in Productivity Distributions](#), Bank of England Staff Working Paper No. 740, July 2018.

92 Independent Commission on Banking, [Final Report: Recommendations](#), Department for Business, Innovation & Skills & HM Treasury, September 2011.

In effect, there was a huge implicit subsidy to risk-taking by banks that were too big to fail and were allowed to operate with inadequate equity capital. This was a major failure of the policy reforms rooted in the 1980s.

That said, it should not be inferred that pre-crisis growth in the economy as a whole was predicated on unsound finance even though the cost of capital would have been higher with resilient bank balance sheets. Miles et al., offer an illustrative calculation which suggests that the lower capital intensity entailed by the introduction of appropriate capital-adequacy regulation would have reduced the level of GDP by about 0.2 per cent.⁹³

7. Lessons for Today

There are several lessons which it is useful to take from these historical episodes that should be kept in mind when considering the pressing challenges of the 2020s.

First, a persistent and important problem with supply-side policy has been short-termism. This is always likely given the pressure of the electoral cycle since policies that improve productivity typically pay off in the longer run and the potential gains are hypothetical as well as distant to voters. Notably, short-term macroeconomic outcomes were pursued at the expense of long-run productivity growth both in the 1930s and in the post-war 'golden age'.⁹⁴

Second, politicization of supply-side policy implies pursuit of votes rather than economic efficiency. This was a serious problem in the 1970s especially. This is often exacerbated by the costs of implementation being concentrated on, and obvious to, relatively few people while the benefits are thinly spread over many most of whom do not know for sure that they will gain. This is characteristic of a process of creative destruction and imparts a systemic bias to selective industrial policy in favour of support for declining industries.⁹⁵ Nevertheless, this does not imply that government intervention to address market failures is always inappropriate. The dismal productivity performance of the pre-1914 economy with its inadequate national innovation system underlines this point. The implication is that political discretion needs to be constrained.

Third, competition really matters for productivity performance. It is an antidote to managerial failure and can be an important stimulus for innovation. Competition depends on entry threats as well as market structure and is supported by policies of openness rather than protectionism. A major benefit from joining the European Economic Community, and membership of the Single Market, was that competition was greatly strengthened.

Fourth, adjustment costs from the major restructurings of the economy that took place in the 1930s and 1980s were very large. They came in the form of large increases in unemployment and economic inactivity. The requirement in each case was not only sectoral but also spatial changes in the composition of employment. In this context, policy has an important role to play through the retraining of workers and the enhancement of labour market matching. The experience of these two decades highlights the downside of inadequate active labour market policies.

⁹³ D Miles, J Yang & G Marcheggiano, [Optimal Bank Capital](#), *Economic Journal* 123(567), March 2013.

⁹⁴ While the Thatcher government partly reversed this pattern, its apparent acceptance of short-term pain for long-term gain is illusory since the surge in unemployment after 1979 was not anticipated.

⁹⁵ R Baldwin & F Robert-Nicoud, [Entry and Asymmetric Lobbying: Why Governments Pick Losers](#), *Journal of the European Economic Association* 5(5), September 2007.

Fifth, the return of high inflation could provoke a revival of support for incomes policies, especially now that few remember the 1960s and 1970s. This would be most unfortunate. The most obvious reasons are that such policies are not a good substitute for well-designed monetary and fiscal policies in combating inflation and have a poor track record. The more subtle reason is that to gain acceptance of the need for wage restraint governments undermine supply-side policy and pay a price in terms of foregone productivity growth.

Sixth, workers place a high value on insurance against risks, i.e., a strong social safety net. This was the great appeal of the Beveridge Report even if it never achieved a proper system of wage insurance. Globalization and, more generally, creative destruction tend to increase risk but at the same time in the long run they raise productivity. To maintain political support for an economic system in which these forces can operate requires an effective welfare state as was well understood in the Bretton Woods era but less well heeded prior to Brexit.⁹⁶ This is a lesson that the UK needs to re-learn.

8. Facing the Future

The UK faces major challenges in the coming years. It does so in the context of very weak productivity growth in the pre-pandemic period (Table 1). Labour productivity growth during 2007-19 was only 0.42 per cent per year, lower than the troubled interwar period (0.7 per cent) and the so-called 'climacteric' years of 1899-1913 (0.84 per cent) which are sometimes seen as a precedent for the 'productivity puzzle'.⁹⁷ In fact, if we use 1873-1899 and 1979-2007 as the preceding comparator periods the deterioration in productivity performance has been much larger post-2007. Average annual labour productivity growth and TFP growth fell by 0.34 and 0.36 percentage points, respectively, then compared with 1.77 and 0.95 now.

The post-2007 slowdown relative to what previous trend performance would have delivered is unprecedented.⁹⁸ Trend labour productivity growth was over 2 per cent per year prior to the financial crisis and the shortfall in the productivity level compared with what this trend growth would have implied was about 20 per cent in 2018, about double the impact of the largest previous shock, and four times the 10-year shortfall after 1898 or 1929.⁹⁹ As such, it probably reflects an unholy combination of factors including the waning of the ICT contribution to productivity growth (Figure 8), the implications of the financial crisis, and the adverse effects of impending Brexit some of which will abate.¹⁰⁰ Beyond this, however, a return to pre-2007 growth performance probably depends on an acceleration of technological progress in the United States and its successful diffusion in the UK (as with the ICT revolution).

Given the decent productivity performance under the 'post-Thatcher consensus', it is important not to 'throw the baby out with the bathwater'. But, nevertheless, it is worth considering how well placed

⁹⁶ Fetzer provides strong evidence that government spending cuts were a major factor in Leave's victory in the 2016 referendum. See: T Fetzer, [Did Austerity Cause Brexit](#), *American Economic Review* 109(11), November 2019.

⁹⁷ For example, in an interview with the Daily Telegraph in 2018 Ben Broadbent, Deputy Governor of the Bank of England, compared the current state of the economy with the 'climacteric', the sharp fall in productivity growth during the pause between the age of steam and the age of electricity at the end of the Victorian era which was first highlighted by Phelps-Brown and Handfield-Jones. See: E Phelps-Brown & S.J Handfield-Jones, [The Climacteric of the 1890s: A Study in the Expanding Economy](#), *Oxford Economic Papers* 4(3), October 1952.

⁹⁸ N Crafts & T Mills, [Is the UK Productivity Slowdown Unprecedented](#), *National Institute Economic Review* 251, February 2020.

⁹⁹ N Crafts & T Mills, [Is the UK Productivity Slowdown Unprecedented](#), *National Institute Economic Review* 251, February 2020.

¹⁰⁰ N Bloom, P Bunn, S Chen, P Mizen, P Smietanka & G Thwaites, [The Impact of Brexit on UK Firms](#), Bank of England Staff Working Paper No. 818, August 2019.

the UK is to resume respectable productivity performance and whether historical experience points to systemic failings that should be corrected or highlights past mistakes from which we can learn.

The digital revolution, especially robotics and artificial intelligence, may well provide an opportunity significantly to raise productivity growth. Techno-optimists like Brynjolfsson and McAfee expect TFP growth of at least 2 per cent per year in the United States over the next two decades.¹⁰¹ As was the case with ICT in the 1990s, the UK is probably quite well placed to adopt these technologies relatively rapidly.¹⁰² At the same time, the prospect of the automation of jobs is regarded by some as threatening: a recent study estimated that 12 per cent of UK jobs are highly automatable (greater than 70 per cent chance) and 25 per cent are at risk of significant change (a 50-70 per cent chance) where the tasks involved in the job may be substantially altered.¹⁰³ Moreover, in the next phase, jobs which employ highly educated personnel and which entail non-routine cognitive tasks, such as engineers or actuaries, may be displaced.¹⁰⁴

Over time, the likelihood is that the second-round effects of technological change will create new tasks and an expansion of employment in sectors which benefit from income growth. We can expect a change in the composition of, rather than a reduction in, employment as happened with ICT. Similarly, the transition to a net-zero economy will mean a shift from high-carbon to low-carbon intensity jobs and a re-orientation of R&D to clean energy projects while hopefully facilitating a shift from low-productivity slow-growing sectors to high-productivity sectors with strong growth prospects.¹⁰⁵ On this reading, a revival of productivity growth implies an upturn in creative destruction.

Fears over the detrimental impact of AI for job losses are very probably overblown. The magnitude of job flows potentially involved do not seem large relative to what the labour market has absorbed in the past, for example during the ICT revolution in the 1990s.¹⁰⁶ Nevertheless, the UK has struggled with the impact of restructuring in the past both in the 1930s and the 1980s which were periods when unemployment and economic inactivity rose steeply and remained uncomfortably high.¹⁰⁷

The classic recipe to underpin creative destruction and minimize the damage from job losses is the golden triangle of 'flexicurity'. The aim is to protect the worker not the job while encouraging exit from unemployment into new work. The appropriate policy combination is limited employment protection, active labour market policies that promote effective job search and matching, and generous but time-limited social insurance. The UK has always had the first of these, has developed the second since the 1980s though it still lags behind a range of other European nations on this front, but it has never had the third which was not part of the Beveridge tradition of social security.¹⁰⁸ As the experience of the

101 E Brynjolfsson & A McAfee, *The Second Machine Age*, Norton, 2014.

102 G Nicoletti & G Quintini, [Digital Technology Diffusion: a Matter of Capabilities, Incentives or Both](#), *European Economic Review* 128, September 2020.

103 L Nedelkoska & G Quintini, [Automation, Skills Use and Training](#), OECD Social, Employment and Migration Working Paper No. 202, March 2018.

104 M Lane & A Saint-Martin, [The Impact of Artificial Intelligence on the Labour Market: What Do We Know So Far](#), OECD Social, Employment and Migration Working Paper No. 256, January 2021.

105 J Rydge, R Martin & A Valero, [Sustainable Growth in the UK: Seizing Opportunities from Technological Change and the Transition to a Low-Carbon Economy](#), LSE Growth Commission Report, December 2018.

106 N Cominetti, R Costa, A Eyles, T Moev & G Ventura, [Changing Jobs? Change in the UK Labour Market and the Role of Worker Mobility](#), The Resolution Foundation, January 2022.

107 It is likely that many of the long-term unemployed who comprised about a quarter of the unemployed in the late 1930s are better described as 'economically inactive'. See: N Crafts, [Long Term Unemployment in Britain in the 1930s](#), *Economic History Review*, 40 (3), August 1987.

108 OECD, [Connecting People with Jobs: Activation Policies in the UK](#), OECD Publishing, July 2014.

1980s underlines, a major focus of this policy framework should be to prevent a surge in economic inactivity when restructuring occurs.

Policies to provide a better social safety net have a strategic rationale in maintaining consent for capitalism and its potential for creative destruction by heading off voter discontent.¹⁰⁹ This is clearly a concern in the UK where 'anti-capitalist' sentiment is widely held among voters under the age of 40 and where half of all respondents to a recent opinion poll thought that the economic system in the UK needs either major changes or complete reform.¹¹⁰ This is reminiscent of the 1930s when early experiments with regional policies had some success but were inadequate. We now have better designed policy available, such as Regional Selective Assistance, which has been shown to be a cost-effective way to reduce unemployment.¹¹¹ Policy makers will have to think hard about the scale of these sorts of interventions to achieve meaningful impact to help people, and places, adjust to future shocks.

It is generally agreed among economists that Brexit will have a significant negative impact on the medium-term level of labour productivity. A reduction in competition is one aspect of this. OBR reviewed research in this area and concluded that a central estimate of leaving with a Free Trade Agreement would be a 4 per cent fall.¹¹² This may be an underestimate given that the actual terms amounted to a hard Brexit.¹¹³

This is not the whole story, however. An important aspect of EU membership has been that it constrained politicians' policy discretion, notably with regard to competition policy, state aid policy and trade policy. This was an important part of leaving the 1970s behind. Brexit removes these constraints and opens the door to a return to politicized supply-side policy orientated to saving jobs in the short term. Moves in this direction are already apparent.

This can be seen in the over-ruling of the Trade Remedies Authority regarding protection for the steel industry and in the National Security and Investment Act which allows ministers to block mergers and takeovers in the public interest in 17 areas of the economy.¹¹⁴ The proposed reform to competition policy currently out for consultation foresees government 'strategic steers' to ensure that CMA supports the 'plan for growth' and wider economic policy.¹¹⁵ The approach to subsidy control is somewhat constrained by the Trade and Cooperation Agreement but the government evidently intends to give itself wide discretion to 'back British business by introducing a new state aid regime

109 P Aghion, C Antonin & S Bunel, *The Power of Creative Destruction: Economic Upheaval and the Wealth of Nations*, Belknap Press, April 2021.

110 K Niemietz, [Left Turn Ahead](#), Institute of Economic Affairs, July 2021; Pew Research Center, [Global Attitudes Survey](#), April 2022.

111 C Criscuolo, R Martin, H Overman & J Van Reenen, [Some Causal Effects of an Industrial Policy](#), *American Economic Review* 109(1), January 2019.

112 OBR, [Economic and Fiscal Outlook](#), March 2020.

113 Fusacchia et al. estimate the impact on GDP will be 6.5 per cent not including any induced effects on investment or TFP. See: I Fusacchia, L Salvatici & L Winters, [The Consequences of the Trade and Cooperation Agreement for the UK's International Trade](#), *Oxford Review of Economic Policy* 38(1), January 2022.

114 L Winters & G Larbalestier, [Safeguard Tariff Rate Quotas on Steel Imports: the Computer Says 'No', but the Government Says 'Yes'](#), UK Trade Policy Observatory Sussex, July 2018; J Fingleton, [Mergers and the Public Interest: a Wolf in Sheep's Clothing](#), Fingleton Associates, October 2018.

115 BEIS, [Reforming Competition and Consumer Policy: Driving Growth and Delivering Competitive Markets that Work for Consumers](#), Department for Business, Energy and Industry Strategy, July 2021.

which makes it faster and easier for the government to intervene to protect jobs when an industry is in trouble'.^{116 117}

This turn of events underlines the need to address a persistent weakness in the UK's institutional architecture, namely, that there is no independent agency with safeguards against both political pressure and private-sector lobbying to oversee supply-side policy. The minimal requirements for an effective 'pro-productivity institution' with a focus on the long term are clear enough from previous experience.¹¹⁸ The Australian Productivity Commission provides an example that the UK might imitate. The remit should be to examine costs and benefits of supply-side policies and possible reforms in terms of economy-wide effects through a transparent evidence-based process whose results are in the public domain. The agency should have the authority and resources to instigate investigations. Its recommendations should be published, and the government be expected to comply or explain.

The desirability of providing a route to better policy making for long-term productivity performance results from the importance of addressing market failures especially those relating to increasing the rate of technological progress and its diffusion. As the experience of the 2nd industrial revolution underlines, this demands effective government intervention rather than a laissez-faire approach. That, in turn, requires government failure to be addressed as well. Tackling market failure and having a credible commitment to pro-growth supply-side policies are key to sustaining a revival of productivity growth.

¹¹⁶ Speech by Boris Johnson reported Financial Times. See: S Payne, C Giles & J Brunnsden, [Johnson Backs Looser State Aid Rules after Brexit](#), Financial Times, November 2019.

¹¹⁷ N Crafts, [Brexit and Control of Subsidies](#), Oxford Review of Economic Policy 38(1), January 2022.

¹¹⁸ A Renda & S Dougherty, Pro-Productivity Institutions: Learning from National Experience, OECD Publishing Working Paper No. 7, April 2017.

Navigating economic change: lessons from abroad and history

As the UK is buffeted by the economic shocks and challenges of the 2020s, The Economy 2030 Inquiry, a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics (LSE), funded by the Nuffield Foundation, is publishing a series of essays examining how policy makers from a range of advanced economies, including the UK in the recent past, have managed periods of disruptive economic change. As we seek to reformulate the UK's economic strategy for new times it is vital that we learn the lessons of these comparative and historic perspectives.

Some consider the trajectory of a national economy following a major shock – for instance, Germany after unification, New Zealand after the UK joined the European Community, Estonia post-USSR and the UK during the tumultuous 1980s. Others examine the experience of particular cities – for instance a group of post-industrial 'turn-around cities' - or the adjustment of key features of a national economic system, such as Danish 'flexicurity'. Together they offer a powerful and timely set of insights on the successes and failures of economic policy makers in the face of economic shocks and structural change.

The essays are written by a range of leading economists and national experts and reflect the views of the authors rather than those of the Resolution Foundation, the LSE or The Economy 2030 Inquiry.

They have been commissioned and edited by Gavin Kelly (Chair of the Resolution Foundation and member of the Economy 2030 steering group) and Richard Davies (Professor at University of Bristol and fellow at the LSE's Centre for Economic Performance).