What Can We Learn from the UK’s Post-1945 Economic Reforms?

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Abstract
This paper reviews the claim that economic policymakers in the post-Covid UK should learn the lessons of the 1940s. Post-1945 policies relating to delivering full employment, levelling up, upgrading social security, dealing with the public debt legacy, and addressing the productivity puzzle are considered. The paper finds many reasons to criticize 1940s’ policies. Although, superficially, outcomes appear to have been good, a closer look reveals significant failings notably concerning design of the welfare state and supply-side policy for growth. The main lesson from the 1940s is not to repeat the policy errors of those days.

Keywords: economic growth; policy reform; post-war settlement; welfare state.

JEL Classification: N14; N34.
1. Introduction

The transition from war to peace in the years after 1945 is often regarded as a great British success story. The economy is seen to have moved rapidly to a golden age of inclusive economic growth as well as establishing a welfare state that provided economic security ‘from the cradle to the grave’. The unemployment of the 1930s was eliminated while inflation remained under control.

There is still a great deal of nostalgia for the policy reforms of early post-war Britain. In a flagship speech called *A New Chapter for Britain* (2021), the Labour Party leader Sir Keir Starmer hailed the determination of those years to pursue fundamental reform and argued that there is now a similar mood to that prevailing in 1945 to build a better, more secure future. It is routine for commentators to call for ‘a new Beveridge Plan’ or slightly more circumspectly to argue that ‘a good start for a post-pandemic society would be to learn the lessons of the 1940s’ (Lansley, 2021).

If so, it is important to take away the right messages rather than look at the episode through rose-tinted glasses as is so often the case. In this paper, I review economic policy reforms implemented by Labour after World War II, and largely continued by the Conservatives subsequently, which relate to issues of importance to Britain in ‘building back better’ post-Covid. These include delivering full employment, levelling up, upgrading social security, dealing with the public debt legacy, and addressing the productivity puzzle.

I shall argue that, although the results of the post-war settlement may look good at first sight, in many respects, early post-war economic policy reforms were not well designed, and they should be regarded quite sceptically even recognising the difficult context for policymaking in the late 1940s. Notice should be taken of two aspects of that context, namely the imperative of dealing with the macroeconomic situation and the commitment to a post-war settlement that ruled out a return to the 1930s.

At the end of the war, the UK confronted not only a huge public debt to GDP ratio but also a large monetary overhang which was the result of repressed inflation during the war (Eichengreen 1993) and a serious balance of payments deficit on current account (Cairncross 1985). Marshall aid was almost entirely used to reduce government debt (Mayer, 1969). Priority was given to an export drive with imports and consumption held back by controls (Dow, 1964). In 1951, while real GDP was 23.4 per cent above the 1938 level and exports were 42.2 per cent higher, consumer expenditure and imports were only 3.6 per cent above and 0.7 per cent below their 1938 levels, respectively (Feinstein, 1972).

The ‘road to 1945’ meant that there would be a post-war settlement was based on the ideas of Beveridge and Keynes regarding the welfare state and maintenance of full employment (Addison, 1975). The state would provide security ‘from the cradle to the grave’ in a more equal society. The introduction of the National Health Service in 1948 was widely celebrated (Lowe, 2005). At the time it was believed that poverty could be eliminated.

Central to this new dawn was the end of the mass unemployment which had scarred the interwar period. The 1944 White Paper 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 a sine qua non for a government to be re-elected. The influential analysis of opinion poll data by Goodhart and Bhansali (1970) gives substance to this belief. They found that unemployment greater than 400,000 (about 1.8% of the labour force) 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.
Economic outcomes in the early post-war period were on the face of it very good and this has enabled the Attlee governments to get a good press. Macroeconomic performance in the long post-war boom seemed to be outstanding and certainly much better than could have been hoped for at the end of the war. The economic environment was much less hostile than the 1930s’ experience of depression and trade wars. Western Europe had the opportunity for rapid growth through reducing the productivity gap with the United States and recovering from the shocks of depression and war. As can be seen in Table 1, this was a time of rapid productivity growth, low unemployment, and tolerable inflation.

At the same time, living standards improved steadily, as is reported in Table 2. Real GDP per person (and real wages) nearly doubled in this ‘Golden Age’ while by 1973 life expectancy had exceeded the maximum thought in the 1930s to be attainable and hours of work were about 25 per cent lower than in the 1930s. By the late 1950s, the Prime Minister, Harold Macmillan, had coined the slogan, ‘You’ve never had it so good!’ The high point for happiness in the period after World War II was in 1957, the year of Macmillan’s famous speech.1

The expansion of the welfare state was accompanied by a rapid reduction in the ratio of public debt to GDP, as is recorded in Table 3. Fiscal sustainability was not an issue despite the expansion of the welfare state at a time when government debt had ballooned through wartime borrowing.2 This was, of course, helped by the low unemployment and strong economic growth of the period. A decline in the public debt ratio was also propelled by very low real interest rates which were generally well below the rate of growth.

Clearly, there was considerable progress in the early post-war decades but, nevertheless, a closer look at the outcomes of the post-war settlement reveals a less rosy picture than is often painted.3 In the next section, I examine in some detail how successful key policy reforms involved in reconstructing the post-war UK economy really were with a view to looking in the following section at lessons for post-Covid policymaking.

2. Post-War Economic Policy Reforms Revisited

The Attlee governments are generally recognised to have carried out far-reaching economic reforms which were fundamental for the reconstruction of the UK economy after the war and set the scene for the next two decades. These are years which are often described as the period of ‘post-war consensus’. This concept should be understood as the set of policies regarded as feasible by senior politicians and civil servants given presumed political constraints (Kavanagh and Morris, 1994). This implied a high degree of policy convergence but did not connote ideological convergence between the Conservative and Labour parties (Hickson, 2004). Certainly, it is fair to say that when the Conservatives returned to office in 1951 they did not try to dismantle the framework that Labour had constructed. So, it is appropriate to consider the medium-term impact of the policies adopted in the late 1940s.

Full employment

In the aftermath of the interwar experience of high, and in many areas persistent, unemployment, the post-war consensus implied a very strong commitment to maintaining full employment. In the famous

1 As measured by the valence of words in books; see Sgroi et al. (2017).
2 Public debt as a percentage of GDP peaked in 1947 at 240.7 (Middleton, 1996).
3 For example, by Hennessy (1993) in his well-known book: ‘progress on a scale and a duration never surpassed in the nation’s history’.
1944 White Paper the government made a commitment to ‘the maintenance of a high and stable level of employment’ (BPP, 1944). This was achieved – there was no serious recession and the average level of unemployment was a long way below that of the 1930s. Although this was a period when Keynesian macroeconomics was in the ascendency, Keynesian demand management was not the reason for this success. As Matthews (1968) pointed out a long time ago, aggregate demand was sustained by a macroeconomic environment conducive to investment and exports rather than by deficit finance. And in an era of ‘stop-go’, attempts at fine-tuning demand did not make any great contribution through stabilizing demand growth (Hatton and Chrystal, 1991).

The striking feature of the period was the low NAIRU which has been estimated at 2% in the 1950s and 1960s compared with 9.8% in the 1930s (Hatton and Boyer, 2005). This is paradoxical because the prediction of a standard wage and price setting model is that NAIRU in the 1950s would have been much higher than in the 1930s (Broadberry, 1994). One important, albeit disputed, reason for this may be the post-war settlement and the ‘social contract’ between government and organised labour that it entailed.

Whether or not this was the reason for the low NAIRU of the 1950s, 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 (Flanagan et al., 1983). This meant the persistence of weak competition policies, high marginal tax rates, state-owned enterprise, protectionism, and dysfunctional industrial relations. In other words, the pursuit of low unemployment came at quite a high cost in terms of impairing productivity growth.

Levelling up

When Labour took office in 1945 ‘levelling up’ was an important objective. The 1930s had been a period of persistent unemployment in many regions outside the relatively prosperous South and Midlands. Ending relatively high regional unemployment was a key aspect of achieving the promised goal of full employment. The years 1945 to 1947 put in place a strong regional policy initiative based on Development Areas which covered 17.8% of the population and which benefited from government-financed factory development and financial assistance to firms. 51.3% of new industrial building approvals in these years were in these development areas (Scott, 1997). In 1947, this approach was supplemented by the introduction of Industrial Development Certificates which were required for premises greater than 5,000 square feet and which could be used to control industrial location decisions.

As is reported in Table 4, relative to the interwar years, the early post-war period saw greatly reduced regional unemployment levels; for example, in 1951, unemployment in Wales was 2.7% compared with 24.8% in 1938. Estimates of regional GDP/person were not available at the time but it is now apparent that shortfalls below the average for Great Britain were generally much lower in the 1950s than in the 1930s, as is also shown in Table 4.

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4 Already in the late 1930s and early 1940s, Keynesian economists (notably James Meade) worried about the inflationary consequences of using demand management to reduce unemployment to very low levels since this would imply wage-push inflation. Some kind of ‘wages policy’ would be required to deal with this issue (Jones, 1987). In other words, these economists were aware that Keynesian policies would probably entail trying to deliver unemployment rates below the NAIRU.
The levelling up reported in Table 4 was promoted by a more favourable economic environment and the location controls adopted during the war and its immediate aftermath. The deglobalizing trade wars of the 1930s gave way to the world trade boom of the 1950s which revived the fortunes of the export industries and, no doubt, improved the matching efficiency of the labour market which had deteriorated markedly during the late 1920s and early 1930s (Luzardo-Luna, 2020). 141,000 jobs survived in 1960 from industrial moves made between 1937 and 1944 and 228,000 jobs survived in 1966 from moves made between 1945 and 1951, in each case mostly in ‘outer Britain’ (Law, 1980).

Nevertheless, this post-war regional policy had a short duration and had very limited ambitions with the result that its long-term impact was underwhelming. During the late 1940s, balance-of-payments considerations dominated the issue of IDCs. Regional policy spending fell sharply in the late 1940s and by the early 1950s regional policy was largely in abeyance (Moore and Rhodes, 1973). At the time, it seemed to many policymakers that the regional problem had gone away. In any event, development area policies focused on short-term employment creation rather than having a basis in an industrial strategy or seeking to improve productivity (Scott, 1997).

**Upgrading social security**

The best known of all the 1940s’ policy reform proposals were those of the Beveridge Report (Beveridge, 1942). This promised to guarantee ‘freedom from want’, i.e., to provide economic security, through ‘social insurance’. This is described as ‘first and foremost, a plan of insurance – of giving in return for contributions benefits up to subsistence level, as of right and without means test’ (p.7). If required, national assistance subject to a uniform means test would be a safety net for a limited number of cases which the scheme did not cover.

The framework was built on a number of ‘fundamental principles’ which included a flat rate of subsistence benefit, a flat rate of contribution, and adequacy of benefit. The chief means of providing income support was to be universal contingency benefits with the main categories being old-age pensions, sickness benefit and unemployment benefit. These would be financed by a combination of national insurance contributions (69%) and general taxation (31%). These proposals were largely implemented by 1948 with three important exceptions. First, there was no waiting period to build up contributions before a full pension was paid at retirement age. Second, benefits were continually updated to roughly keep pace with increases in wages. Third, the benefit levels payable at the outset were distinctly lower than the late 1930s’ poverty lines adopted by Beveridge and Rowntree (Dilnot et al., 1984). An implication was that, instead of withering away, claimants of means-tested National Assistance increased over time reaching 2 million in the mid-1960s.

Contrary to Rowntree’s original findings, a significant amount of poverty was still present in the early years after World War II after the implementation of the welfare state reforms. A recent analysis of the 1953/4 Family Expenditure Survey found that 7.1 per cent of all households were below the National Assistance level of income, 9.8 per cent were below 140 per cent of National Assistance income and 13.2 per cent were below 60 per cent of median equivalized income (Gazeley et al., 2017). No comparable estimate has been made for the interwar period but extrapolating from the post-war period a guesstimate is that about 16 per cent of the population may have been below 60 per cent of median income in 1937. Hatton and Bailey (2000) calculated that the true figure for York on Rowntree’s own criterion was 11.8 per cent of working-class households or 7.1 per cent of all

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5 The report also proposed the establishment of a national health service funded very largely out of general taxation but the analysis of this section of the paper only deals with the income-support aspects.

6 For the period 1961 to 2015, McKnight et al. (2017) estimated this measure of poverty = -0.0496 + 0.7261Gini. If Gini in 1937 = 0.29 (see Table 6), then this equation would predict poverty = 16.1 per cent.
households in poverty. They also calculated the proportion which would have been in poverty had the reforms not been introduced (Table 5). They estimate that if the 1936 social security system had still been in place in 1950, the percentage of working-class households in poverty would have risen to 15.5 and that if food subsidies had also been taken away 21.2 per cent would have fallen below the poverty line. Thus, even if food subsidies are included, the total impact of welfare reform on working-class poverty was 9.4 percentage points rather than the 20.1 percentage points claimed by Rowntree and Lavers (1951). Carter (1955) estimated that net redistribution was 13.1 per cent of national income in 1948/9 compared with 8.8 per cent in 1937.

In sum, the 1940s’ reforms reduced poverty but their impact was neither trivial nor transformative. However, the promises of the Beveridge Report were not delivered. This outcome was inherent in its seriously flawed design.

Beveridge stressed repeatedly that ‘social insurance’ was the core of his scheme and this informed the Beveridge principles of flat-rate benefits and contributions. He emphasized that his proposal delivered benefits in return for contributions. Flat-rate contributions constrained re-distribution partly because they were a regressive tax but also because they limited the scope to pay generous benefits. Compulsory national insurance was justified as a way of pooling risks and, in effect, addressing adverse selection problems that implied market failure. More generally, however, the concept of social insurance might be conceived as a way of protecting the individual against economic risks against which private insurance is infeasible such as inflation or unemployment or loss from unforeseen events, e.g., coronavirus. These aspects do not imply that the provisions equate to actuarial insurance where the premia cover expected loss plus a normal profit for the insurer (Barr, 2012) and they entail benefits based on current need rather than past contributions.

Beveridge’s scheme was deliberately very limited in its redistributive component because it was constructed to deviate as little as possible from actuarial insurance. The prime example of this can be seen in the proposal of a lengthy transition period to qualify for a full retirement pension. Not only did Beveridge-style pensions eschew redistribution but they did not provide adequate insurance; pensioners would have suffered severely from the unanticipated inflation of the 1970s against which they were much better protected by a PAYG scheme.

The social security system developed in the light of the Beveridge Report relied heavily on contingency benefits as opposed to means-tested benefits. This reduced adverse incentive effects from high effective marginal tax rates but at the same time implied that a high proportion of expenditure on benefits was not well targeted. Beckerman and Clark (1982) estimated the social security system removed 84.3 per cent of the pre-benefit poverty gap in 1961-3 but that only 27 per cent of spending contributed to reducing the poverty gap. In the end, this meant that achieving adequacy of national insurance benefits was too expensive.

Finally, it should be noted that the Beveridge Scheme (and its costings) make no sense if poverty is defined on a relative income basis, e.g., 60% median income. Then, economic growth implies that benefits must rise over time regardless of contributions or poverty will intensify.

Dealing with the debt

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7 Rowntree’s third survey reported that 4.8 per cent of working-class households (implying about 2.8 per cent of all households) were in poverty in 1950 (Rowntree and Lavers, 1951).
8 Food subsidies were not part of the Beveridge scheme but a ‘leftover’ from World War II.
9 See the discussions of ‘back to Beveridge’ in Atkinson (1969) and IFS (1978).
The public debt to GDP ratio can be reduced either by running primary budget surpluses and/or through experiencing a period when the real interest rate on government debt \((r)\) is lower than the growth rate of GDP \((g)\). The latter may be achieved by financial repression. A policy of ‘financial repression’ can be defined as one in which government intervention reduces the nominal interest rate on public debt below the free market rate. Combined with inflation, this will be conducive to a more favourable configuration of \((r - g)\) and may well entail a negative real interest rate on government borrowing.\(^{10}\)

It is well-known that the steady-state condition for the public debt to GDP ratio \((d)\) to be stabilized, such that \(\Delta d = 0\), is

\[
b^* = d(i - \pi - g) \text{ or } b^* = d(r - g)
\]

where \(b^*\) is the required primary budget surplus to GDP ratio, \(i\) is the nominal interest rate on government debt, \(\pi\) is the rate of inflation and \(g\) is the growth rate of real GDP. The required primary budget surplus increases with the debt to GDP ratio and with \((r - g)\). Of course, if \(r < g\), it is possible to stabilize the debt ratio while running a primary budget deficit.

The 1950s and 1960s witnessed a very rapid reduction of the public debt to GDP ratio. From almost 200 per cent of GDP in 1950 it was below the Maastricht limit by 1971 when it had fallen to 58.3 per cent of GDP. These two decades were characterized by primary budget surpluses in every year but they averaged only 2.3 per cent of GDP. The average rate of inflation was about 4 per cent per year and in eight years the ex-post real interest rate on government debt was negative; real interest rates were almost always below the real growth rate. Growth was strong by British standards but, even so, the striking feature of this period is the very low level of real interest rates; the average over the whole 20 years is only slightly positive (Table 6). An accounting decomposition of the reduction in the debt ratio shows that 54\% came from \((r - g)\) and 36\% from budget surpluses (Crafts, 2016).\(^{11}\)

The rapid debt reduction of these years was achieved together with an expansion of the welfare state but without many years of very painful fiscal consolidation. This could be done because it was possible to address the issue through financial repression. Allen (2014) provides a detailed account of the way that this was achieved which included making banks have high levels of liquid assets to deposits which could be met by holding Treasury Bills, controls on interest rates, credit restrictions for private sector lending, and comprehensive foreign exchange controls. In the 1950s, over 40 per cent of the public debt was held by domestic commercial banks and over 40 per cent was non-marketable (Abbas et al., 2014). The financial repression index score calculated by Battilossi (2004) was as high as 73.1 in 1953-7 and still 63.1 in 1963-7.\(^{12}\) Politically, financial repression fitted with an era of very high top marginal income tax rates in a rather egalitarian climate and a strong preference for tight regulation of the financial system following the banking crises of the interwar period.

The context under the Bretton Woods system was also a different macroeconomic policy trilemma choice, namely, a fixed exchange rate, independent monetary policy, and obstacles to capital mobility as foreign exchange controls were maintained from World War II until 1979. The UK had low scores

\(^{10}\) It should be noted that the ex-ante implication of financial repression on \(r\) is distinct from that of surprise inflation which is a different (possibly complementary) strategy for manipulating the ex-post real interest rate, cf. equation 6 in Reinhart and Sbrancia (2015).

\(^{11}\) The formula is that of Abbas et al. (2011) which includes a residual component. This amounts to 10\% of the decline in the debt ratio.

\(^{12}\) The index has 3 equally weighted components, namely, reserve requirements for banks, real deposit rates of banks and government liabilities held by the banking system. Each of these is measured on a scale of 0 (minimum) to 100 (maximum) standardized to a normal distribution.
both for central bank independence (Cukierman et al., 1992) and for capital account openness (Quinn and Toyoda, 2008). The evidence presented to the Radcliffe Committee underlined that the Chancellor not the Bank had responsibility for interest rate policy while debt management and controlling the interest costs of the national debt were central tasks for the Bank throughout these decades (Goodhart, 2012). Interest rates were decoupled from those prevailing abroad (Obstfeld, 1993). There was relatively little surprise inflation (Reinhart and Sbrancia, 2015); nominal interest rates rose but, even so, were held down relative to inflation.

Improving productivity performance

The post-war settlement set the scene for the UK’s growth performance in the ‘Golden Age’ of European economic growth which is conventionally located in the years 1950 to 1973. In Table 1, it was reported that labour productivity growth was 3.74% per year in this period, a rate which is comfortably the fastest ever for the UK.13

Placed in a comparative international context, however, UK productivity growth in the Golden Age was disappointing and was notably inferior to that of France and West Germany, as is reported in Table 7. Although these countries had more scope for rapid catch-up growth starting from lower productivity levels, the key point to note is that they had overtaken the UK by 1973 when their labour productivity levels were about 12 per cent higher. UK underperformance relative to the diagnostic prediction of an unconditional convergence regression has been estimated at 0.8 per cent per year (Crafts and Toniolo, 2008). This was a missed opportunity for which UK supply-side policy conceived in the 1940s was largely responsible.

That said, this shortfall should not be attributed to excessive expenditure on the welfare state, as was claimed by Barnett (1986). In 1949, UK social security spending was estimated by ILO (1953) as just above the median level for western European countries and appreciably below that of France or West Germany. Rather than blame the extent of the welfare state per se, an alternative might be to claim that it was funded by distortionary taxation, especially high marginal tax rates on corporate income which growth economics might emphasize. Here the important point to note is that depreciation allowances, introduced by the Labour government in 1945 and subsequently retained although continually modified, meant that effective marginal tax rates were not exceptionally high by the standards of the time. King and Fullerton (1984) estimate an average marginal rate across all assets of about 40% in 1960 compared with 50% in West Germany and 45% in the United States.14

The post-war settlement did have a serious cost in terms of foregone productivity growth this was incurred through the supply-side policies that it entailed, especially in the context of a looming balance of payments problem. The implicit ‘social contract’ entailed persuading organised labour to accept and encourage wage restraint in return for welfarism, expanded public ownership, unreformed industrial relations and commitments to full employment and significant re-distribution of income (Flanagan et al., 1983). The priority given to increasing exports and controlling imports ensured that the environment in which this was pursued was characterized by very weak product market competition.

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13 It should be noted that this estimate has been revised upwards following recent updates to the UK national accounts, see Crafts (2021).
14 The exact rates vary somewhat depending on the rate of inflation.
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 a typical post-war year (1971), the nationalized industries accounted for 18.7 per cent of investment, 7.2 per cent of employment and 10.2 per cent of GDP (Corti, 1976) so their productivity performance mattered and indeed a major justification for nationalization was that it would improve efficiency.

Principal-agent problems were, however, seriously underestimated and not adequately addressed until the late 1970s when a combination of external financing limits, cost targets, profit targets and investigations by the Monopolies and Mergers Commission was imposed. In the 1950s, by contrast, industry boards were supposed to act in the ‘public interest’ and break even each year. Financial targets were imposed in the 1960s but effectively abandoned in the 1970s. Political interference was a continual problem. If we suppose that there were information asymmetries, and that managers liked more output but disliked effort to reduce costs (Bishop and Thompson, 1992), it is not surprising that productivity performance in the 1950s and 1970s was very disappointing (see Table 7). Both inefficient use of labour and excessive investment were serious problems (Vickers and Yarrow, 1988).

For the first decade after the war the priority given to addressing balance of payments problems meant that import controls were relaxed very slowly and that the cooperation of trade associations was seen as crucial for the export drive. The implication was that the cartels which had proliferated since the 1930s were sustained with their market power enhanced. It was thought unwise to antagonize business interests by pursuing an effective competition policy, so proposals worked up at the Board of Trade during the war were dropped (Mercer, 1995). Average tariffs remained at mid-1930s levels and trade costs only fell very belatedly (Table 9). Failure to liberalize trade underpinned market power as reflected by high price-cost margins (Hitiris, 1978). The weakness of import competition had a strong negative effect on manufacturing productivity growth (Bos, 2015). The trade to GDP ratio which had been 51.5% GDP in 1929 before the UK turned protectionist was only 40.3% GDP in 1960 (Thomas and Dimsdale, 2017, Tables A9 and A36).

Competition policy was indeed largely ineffective, politicized, and embodied an ill-defined ‘public-interest’ criterion for intervention (Clarke et al., 1998). Only the Restrictive Practices Act (1956) had teeth. Not surprisingly, there is evidence that the British economy was characterized by substantial market power in this period. Initially, collusive activity was widespread; an examination of the agreements registered in compliance with the 1956 Act shows that only 27 per cent of manufacturing was free of price-fixing and 35.7 per cent was cartelized (Broadberry and Crafts, 1996). Crafts and Mills (2005) estimated that the price-cost margin in UK manufacturing during 1954-73 averaged over 2 compared with around 1.1 in West Germany which is consistent with the finding in Geroski and Jacquemin (1988) that the magnitude and persistence of supernormal profits for large firms during 1949 to 1977 was large in the UK but not in West Germany.

The evidence is that weak competition had an adverse effect on UK productivity performance during the Golden Age. Broadberry and Crafts (1996) found that cartelization was strongly negatively related to productivity growth in a cross section of manufacturing industries for 1954-63. This result is borne out by the difference-in-differences analysis in Symeonidis (2008) who showed that when cartels were

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15 This was likely to have reduced real GDP/person considerably. Had the 1929 trade ratio been maintained a calculation along the lines of Feyrer (2019) using a lower-bound elasticity of 0.5 implies that the level of GDP would have been about 10.9% higher in 1960. This calculation is similar in spirit to recent attempts to look at the long-run impact of Brexit.
abandoned following the 1956 Restrictive Practices Act labour productivity growth in formerly colluding sectors rose by 1.8 percentage points per year in 1964-73 compared with 1954-63. This finding implies that a well-designed competition policy would have improved productivity outcomes.

Case studies strongly implicate bad management and restrictive labour practices resulting from bargaining with unions in poor productivity performance. This configuration was enabled by weak competition. Pratten and Atkinson (1976) reviewed 25 studies of which 23 reported inefficient use of labour, in 21 cases from failings of management and in 14 instances from restrictive labour practices. Prais (1981) reported similar findings in 8 out of 10 industry case studies and in each case noted that competition was significantly impaired. Business respondents to an Oxford survey in the late 1940s thought that inefficient use of labour and industrial relations problems were prevalent (Andrews and Brunner, 1950). A strong theme in several studies which highlight low effort bargains is that they were sustained by the weakness of competition; for example, this emerges clearly in the study by Zweig (1951) as well as the seminal work in industrial sociology on restrictive labour practices (Lupton, 1963).

Britain had a distinctive and unreformed system of industrial relations characterized by craft control, multi-unionism, legal immunities for trade unions, and strong but decentralized collective bargaining reflected in increasing trade union membership and the proliferation of shop stewards (Crouch, 1993). These arrangements in conditions of full employment and weak competition gave trade unions bargaining power and rents to extract while exposing sunk-costs investment to a ‘hold-up’ problem. In the context of the post-war settlement, the government maintained an approach of ‘voluntarism’ in which industrial relations problems were to be resolved by bargaining between employers and unions with minimal regulation. This precluded much needed reform of industrial training, especially the apprenticeship system (Pemberton, 2001). This was seen by critics as unduly lengthy but not delivering high quality training as well as perpetuating restrictive practices, but trade unions saw it as supporting wage premia and employers benefited from cheap labour (Gospel, 1995).

3. A Blueprint for Post-Covid UK?

So, should we turn to the 1940s as a template for the post-pandemic UK to address the five policy issues listed in the introduction? In some cases, there is nothing of relevance, in others the main message is not to repeat costly errors but then there are aspects where the ideas are valuable, although the details would be different seventy-five years later.

A whole new ball game

Policymakers keen to ensure that the post-Covid economy is not scarred by unemployment or looking for interventions that promote levelling up will find that there is little or nothing of value in the approach of the early post-war years. Times are different and ideas have moved on.

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16 This was clearly revealed when competition strengthened in the 1980s giving rise to major changes in industrial relations and management structures that raised productivity significantly (Machin and Wadhwani, 1989; Harris et al., 2005).

17 The ‘hold-up’ problem arises when after an investment has been made workers use their bargaining power to extract a share of the profits. This reduces the incentive to innovate and thus the rate of growth. The more unions are involved in the bargaining, the more profits are reduced. The problem can be eliminated if a binding contract prevents renegotiation or there is no union or if a cooperative equilibrium is achieved with a single union. For a formal model and empirical evidence, see Bean and Crafts (1996).
The policy approach aimed at keeping NAIRU low in the aftermath of World War II was based on achieving ‘wage restraint’ in the context of voluntaristic industrial relations and strong trade unions. This entailed accepting that various aspects of supply-side policy were ‘no-go’ areas. This episode is not helpful in formulating policy today when industrial relations are very different and the institutions and policy settings of the pre-Covid economy were consistent with an equilibrium unemployment rate of about 4.5% (OBR, 2018). The post-Covid economy may well go through a difficult transitional phase as the composition of employment adjusts and this may require improved active labour market policy with better training (Mayhew and Anand, 2020) and job-search assistance (Costa Dias et al., 2020). However, the 1940s and 1950s do not offer any help in designing such initiatives.

Levelling up 1940s’ style relied on crude policy interventions which focused on short-term employment creation rather than improving productivity and modernizing industrial structure with long-term economic performance in mind (Scott, 1997). It is not completely clear what ‘levelling up’ entails but a sustained advance in economic performance in ‘left-behind’ areas surely requires improved labour productivity. The thoughtful analysis of how to devise a successful local industrial strategy in Zymek and Jones (2020) identifies various deep roots of spatial productivity differences and the possible problems arising from them which may need to be addressed. This is a promising approach which would not be improved by looking for policy ideas from the early post-war period.

No worries

Starting from basic ideas, ‘social insurance’ would entail provision of public insurance against risks of serious loss of income or wealth for which private insurance is infeasible. This will be the case where risks are correlated across the population, expected costs cannot be estimated, or contingencies cannot be foreseen. Income losses during the Covid-19 pandemic and wealth losses from paying for social care are classic examples.18 The Beveridge-style welfare state addressed neither of these issues. Its concept of social insurance was not one of maintenance of income and wealth in the face of 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 and a component of earnings-related benefits must be part of a welfare state that provides insurance against income loss.

The impact of Covid-19 was addressed through ad hoc income maintenance schemes, notably, the Corona Virus Job Retention (furlough) Scheme and the Self-Employed Income Support Scheme. This was a clear admission that the low-level payments available through Universal Credit are not an adequate form of social insurance. Unfortunately, there were holes in the safety net for the self-employed which meant that about 1.5 million people were excluded (Cribb et al., 2021) and a significant proportion experienced financial hardship (Blundell et al., 2021). If we now face a class of newly salient risks including further pandemics, climate-change related losses and cyberattacks where private insurance is not feasible (Aaron, 2020), social insurance is more relevant than ever, but it must be taken seriously by policymakers who, unlike Beveridge, embrace the concept fully.

Opportunity knocks

After World War II the post-war settlement dictated that there should no return to the 1930s. More than anything else, this meant that there should be no going back to the high unemployment of that decade. The equivalent in post-Covid Britain is that, even though the public debt to GDP ratio has topped 100 per cent of GDP, there should be no more ‘austerity’, i.e., fiscal consolidation based on

18 The Report of the Dilnot Commission (2011) sets out very clearly the reasons why the market does not offer private insurance against social care costs and the case for provision of social insurance against (a large part of) those costs.
expenditure cuts. This is understandable given the severity and duration of reductions in public spending after the financial crisis (Crafts, 2020).

The situation faced by the UK has similarities to the years after World War II in that there are urgent demands for more government spending (including more generous transfer payments) to address issues of fairness as well as improving public services and rectifying a large backlog in infrastructure investment while confronting the issue of ensuring fiscal sustainability by stabilizing and then reducing the public debt to GDP ratio. Clearly, increases in taxation will play an important part but the lesson from the experience of the UK in the 1950s and 1960s is that the interest rate growth rate differential is a key variable. Negative values for \((r - g)\) in those years made the combination of welfare state expansion and debt ratio reduction eminently feasible. Financial repression and golden age growth made for pleasant fiscal arithmetic. OBR (2020) envisages a medium-term scenario where \((r - g) = 0.2\) percent but pointed out that this was by no means guaranteed.

So, keeping the real interest rate on government debt down and improving productivity growth after its unprecedented pre-Covid slowdown (Crafts and Mills, 2020) have high priority as the foundation of a new fiscal settlement. It is not possible to replicate the 1950s – capital controls and golden age catch-up growth are the past not the future. It may, however, be possible to use an alternative method of financial repression.

The route to a modern version of financial repression lies through exploiting the opportunity provided by quantitative easing which means that nearly £900 billion of government debt has been bought by the Bank of England and is financed at the Bank Rate (currently 0.1%) paid on commercial bank reserves. A substantial part of these reserves could be frozen with no interest paid, although some fraction would have to continue to pay interest to make monetary policy effective. Alternatively, they could be compulsorily swapped for short and medium-term gilt-edged securities (Allen, 2021).

Either of these methods is in effect a tax on banks and in economic policy terms the issue is whether any adverse side effects of such a tax outweigh its public finance benefits. Politically, however, it is hard to think of a more popular way to approach a new fiscal settlement, especially with the ‘red-wall voters’ who matter so much to the government’s chances of winning the next election. Excessive risk-taking by banks which precipitated the financial crisis has imposed substantial fiscal costs on the UK economy. Freezing bank reserves might go some way towards a fairer contribution to making recompense as well as to some extent insulating \((r - g)\) from the impact of interest rate rises as the economy returns to ‘normal’.\(^{19}\)

\(\textit{Not on your nelly}\)

Policy reforms that can improve the UK’s productivity performance are a high priority given the very disappointing experience since the financial crisis. In this area, the lesson to be learnt from the 1940s is not to repeat the errors of that period relating to competition policy, protectionism, and state ownership.

Going back to 1950s-style competition policy through returning to a broad ‘public-interest’ rather than a narrow ‘competition’ basis, which is made possible by Brexit, would be a big mistake. During the period when the public interest was the key criterion, in practice, competition policy was subordinate to industrial policy (Wilks 1999) which undermined merger control, especially. Stronger competition

\(^{19}\) It might be noted that the banks still enjoy a (much reduced) implicit subsidy of about £5 billion per year (Ramsden, 2021) while total taxes on bank profits (including the Bank Levy and Bank Surcharge) are in real terms no higher than in 2006/7 (ONS, 2021).
in product markets improved UK productivity performance in the later 20th century (Crafts, 2012) and after reforms around the turn of the century the competition policy framework became conducive to productivity growth (Buccirossi et al., 2013).

A return to the earlier public-interest approach as advocated, for example, by IPPR (2018), would inevitably mean the re-politicization of competition policy (Vickers, 2017) with adverse implications for productivity. Unfortunately, this seems to be the direction in which competition policy is now heading, notably through the National Security and Investment Act which allows ministers to block mergers and takeovers in the public interest in 17 areas of the economy (Fingleton, 2018). Moreover, the proposed reform to competition policy currently out for consultation foresees government ‘strategic steers’ to ensure that the CMA supports the ‘plan for growth’ and wider economic policy (BEIS, 2021).

Protectionism impaired productivity performance in the early post-war years and reductions in trade costs, notably through European integration, had the opposite effect in the later 20th century. Attlee was a fully paid-up Eurosceptic and the Labour government took a very dim view of proposals for European integration as was evidenced by their refusal to participate in 1950 in the Schuman Plan for the European Coal and Steel Community, the precursor of the EEC (Bogdanor, 2013). This was also a big mistake. Eventually, accession to the EEC increased the level of real GDP per person by 8.6% after 10 years according to the synthetic control estimates of Campos et al. (2019). In the context of the European single market foreign entry stimulated domestic firms’ TFP growth (Aghion et al., 2004). Over time, EU membership very largely eliminated the subsidies which underpinned incumbent firms with declining productivity and slowed down the process of creative destruction in the 1970s (Oulton, 2000).

Unfortunately, these lessons are being disregarded and policy errors are being repeated. A hard Brexit, which will raise trade costs and reduce productivity levels is in place as political ambitions trump economic analysis. Industrial subsidies are on the way back albeit with some restraint from the Trade and Cooperation Agreement. These will be implemented by politicians subject to toothless scrutiny by a Subsidy Advice Unit. There is little doubt that subsidies, as in the past, will operate to slow down creative destruction (Crafts, 2022).

Expanding state ownership especially by re-nationalizing public utilities is popular with many voters. At the time of privatization, however, it was widely agreed that state ownership was a failed experiment (Hannah 2004) and 1940s-style nationalization is surely not a policy to be repeated. At a minimum, very different methods of control would be needed to address managerial and government failure (Vickers and Yarrow, 1988). A more appropriate response to scepticism about the performance of privatized companies is to improve regulation (Crossman et al., 2019). For example, the design proposed by Helm (2019) appears to offer strong incentives to productivity improvement while ensuring that investment is adequate in a de-politicized setting.

4. Conclusions

UK economic performance after World War II looks very good at first sight, especially considering the starting point in 1945. The post-war settlement delivered strong and inclusive growth, a rapid

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20 Key empirical papers which demonstrate the importance of competition for UK productivity performance include Blundell et al. (1999), Haskel (1991), and Nickell et al. (1997).

21 During the general election campaign as reported by Payne et al. (2019), the Prime Minister’s electoral antennae led him to declare that he would ‘back British business by introducing a new state aid regime which makes it faster and easier for the government to intervene to protect jobs when an industry is in trouble’. 
reduction in the public debt to GDP ratio, low unemployment, and expansion of the welfare state. It would be wonderful if post-Covid UK could do likewise, and it might seem that there is much to learn and seek to emulate from the policy settings of those days.

I have argued that this is not the case. In many ways, the policies chosen then are either irrelevant for today or would be harmful. On reflection, perhaps this is not surprising where supply-side policies are concerned but these comments apply equally to the Beveridge Report notwithstanding its iconic status in British political discourse.

I have reviewed five aspects of post-war economic policy central to the reconstruction of the post-Covid UK and these are the main findings.

First, a low level of unemployment was achieved but it came at a cost in terms of impairment of productivity performance and the policy tools of the early post-war period do not address the issues of labour market adjustment that may surface in the post-Covid years.

Second, regional disparities were less pronounced 70 years ago and, mindful of 1930s’ experience, the Attlee government began with a strong commitment to levelling up. However, regional policy was soon discarded and policies of short-term employment creation did not deliver long-run improvements in productivity.

Third, in several ways supply-side policies undermined productivity growth and the key takeaway is not to repeat these errors. This applies especially to competition policy, trade policy and nationalization. Lack of effective competition was the Achilles’ heel of the early post-war economy.

Fourth, the welfare reforms of the 1940s did reduce poverty somewhat but were based on a seriously flawed design which mistakenly relied on flat-rate contributions and benefits but did not adequately address market failures through providing true social insurance. We can surely do better.

Fifth, the post-war approach to reducing the public debt to GDP ratio partly through financial repression is worth thinking about in the context of quantitative easing and a political imperative of ‘no return to austerity’.

Overall, we can respect the post-war determination to make the UK a fairer society, to avoid a return to the unemployment of the 1930s, and to reconstruct a war-damaged economy. But we should not think that the economic policies of those days are a blueprint for reforming the welfare state or levelling up or improving productivity growth.
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[http://www.bankofengland.co.uk/research/Pages/onebank/threecenturies.aspx](http://www.bankofengland.co.uk/research/Pages/onebank/threecenturies.aspx)


<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment (%)</td>
<td>2.63</td>
</tr>
<tr>
<td>CPI Inflation (% per year)</td>
<td>4.70</td>
</tr>
<tr>
<td>Labour Productivity Growth (% per year)</td>
<td>3.74</td>
</tr>
</tbody>
</table>

Source: Thomas and Dimsdale (2017); Unemployment from Table A50, Column J, Inflation from Table 47, Column E, productivity growth based on hours worked and calculated from Table A8, column B and Table A54, column AW.

Table 2. Living Standards, 1950 and 1973.

<table>
<thead>
<tr>
<th></th>
<th>Real GDP per Person (2013 prices)</th>
<th>Life Expectancy at Birth</th>
<th>Annual Hours Worked</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>7114</td>
<td>69.0</td>
<td>2184</td>
</tr>
<tr>
<td>1973</td>
<td>13902</td>
<td>72.1</td>
<td>1860</td>
</tr>
</tbody>
</table>

Note: life expectancy is average of men and women.

Sources: Thomas and Dimsdale (2017); GDP/person from Table A21, Column X, hours worked from Table A54, Column AW; Life expectancy from ONS (2015).

Table 3. Fiscal Facts.

<table>
<thead>
<tr>
<th></th>
<th>1938</th>
<th>1951</th>
<th>1974</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Expenditures (% GDP)</td>
<td>8.6</td>
<td>11.5</td>
<td>18.8</td>
</tr>
<tr>
<td>Education</td>
<td>2.1</td>
<td>3.2</td>
<td>5.9</td>
</tr>
<tr>
<td>Health</td>
<td>1.6</td>
<td>3.4</td>
<td>4.6</td>
</tr>
<tr>
<td>Social Security</td>
<td>4.9</td>
<td>4.9</td>
<td>8.3</td>
</tr>
<tr>
<td>Taxes (% GDP)</td>
<td>21.6</td>
<td>33.5</td>
<td>33.0</td>
</tr>
<tr>
<td>Public Debt (% GDP)</td>
<td>143.8</td>
<td>179.8</td>
<td>48.7</td>
</tr>
</tbody>
</table>

Sources: Middleton (1996) and supporting database.
Table 4. Regional GDP/Person and Unemployment Rate, 1931-1971.

**a) GDP/Person (Great Britain = 100)**

<table>
<thead>
<tr>
<th>Region</th>
<th>1931</th>
<th>1938</th>
<th>1951</th>
<th>1961</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>144.2</td>
<td>138.1</td>
<td>138.6</td>
<td>145.3</td>
</tr>
<tr>
<td>Rest of South East</td>
<td>114.0</td>
<td>119.5</td>
<td>84.8</td>
<td>88.1</td>
</tr>
<tr>
<td>South East</td>
<td>130.3</td>
<td>129.5</td>
<td>110.6</td>
<td>113.4</td>
</tr>
<tr>
<td>East Anglia</td>
<td>82.7</td>
<td>85.4</td>
<td>89.0</td>
<td>92.4</td>
</tr>
<tr>
<td>South West</td>
<td>92.3</td>
<td>92.0</td>
<td>89.3</td>
<td>88.9</td>
</tr>
<tr>
<td>West Midlands</td>
<td>95.7</td>
<td>93.0</td>
<td>104.0</td>
<td>104.0</td>
</tr>
<tr>
<td>East Midlands</td>
<td>86.6</td>
<td>89.9</td>
<td>95.8</td>
<td>94.7</td>
</tr>
<tr>
<td>Yorkshire &amp; Humberside</td>
<td>86.4</td>
<td>82.5</td>
<td>97.5</td>
<td>94.1</td>
</tr>
<tr>
<td>North West</td>
<td>88.6</td>
<td>86.0</td>
<td>104.0</td>
<td>95.9</td>
</tr>
<tr>
<td>North</td>
<td>65.0</td>
<td>66.6</td>
<td>88.6</td>
<td>89.6</td>
</tr>
<tr>
<td>Wales</td>
<td>81.1</td>
<td>70.1</td>
<td>84.9</td>
<td>90.7</td>
</tr>
<tr>
<td>Scotland</td>
<td>94.2</td>
<td>101.1</td>
<td>89.3</td>
<td>92.4</td>
</tr>
</tbody>
</table>

Sources: Geary and Stark (2016) (2020)

**b) Unemployment Rate (%)**

<table>
<thead>
<tr>
<th>Region</th>
<th>1931</th>
<th>1938</th>
<th>1951</th>
<th>1961</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>12.2</td>
<td>8.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South East</td>
<td>12.0</td>
<td>8.0</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>East Anglia</td>
<td>12.0</td>
<td>8.0</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>South West</td>
<td>14.5</td>
<td>8.2</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>West Midlands</td>
<td>20.3</td>
<td>10.3</td>
<td>0.4</td>
<td>1.4</td>
</tr>
<tr>
<td>East Midlands</td>
<td>20.3</td>
<td>10.3</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Yorkshire &amp; Humberside</td>
<td>27.4</td>
<td>13.6</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>North West</td>
<td>28.2</td>
<td>17.9</td>
<td>1.2</td>
<td>1.6</td>
</tr>
<tr>
<td>North</td>
<td></td>
<td>18.4</td>
<td>2.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Wales</td>
<td>32.4</td>
<td>24.8</td>
<td>2.7</td>
<td>2.6</td>
</tr>
<tr>
<td>Scotland</td>
<td>26.6</td>
<td>16.4</td>
<td>2.5</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Notes: East and West Midlands aggregated in 1931 and 1938, East Midlands and Yorkshire & Humberside aggregated in 1951 and 1961, South East and East Anglia are aggregated throughout.

Sources: Garside (1990); Department of Employment and Productivity (1971); Central Statistical Office (1973).
Table 5. Estimates of Household Poverty Rates (%)

<table>
<thead>
<tr>
<th>1950 Working Class Households, York</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual, 1936 Rowntree Poverty Line</td>
<td>11.8</td>
</tr>
<tr>
<td>With 1936 Social Security</td>
<td>15.5</td>
</tr>
<tr>
<td>Without Food Subsidies</td>
<td>17.5</td>
</tr>
<tr>
<td>With 1936 Social Security and Without Food Subsidies</td>
<td>21.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1953-54 All Households, UK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Below National Assistance Poverty Line</td>
<td>7.1</td>
</tr>
<tr>
<td>Below 60% median</td>
<td>13.0</td>
</tr>
</tbody>
</table>

Notes: 1936 Rowntree poverty line is ‘human needs’ variant in prices of each year.

Sources: Gazeley et al. (2017); Hatton and Bailey (2000).

Table 6. Fiscal Sustainability Data

<table>
<thead>
<tr>
<th></th>
<th>b</th>
<th>i</th>
<th>π</th>
<th>g</th>
<th>d</th>
<th>b*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-59</td>
<td>2.59</td>
<td>3.22</td>
<td>4.22</td>
<td>2.67</td>
<td>1.479</td>
<td>-5.66</td>
</tr>
<tr>
<td>1960-70</td>
<td>2.10</td>
<td>5.03</td>
<td>3.67</td>
<td>3.26</td>
<td>0.882</td>
<td>-1.69</td>
</tr>
</tbody>
</table>

Note:

\[ b^* = \frac{(i - \pi - g)}{d} \]

Sources:

Middleton (1996) database except \( \pi \), rate of inflation based on GDP deflator, and \( g \), from Feinstein (1972).
Table 7. Comparative Productivity Performance in the Golden Age, 1950-1973

a) Productivity Growth, 1950-73 (% per year)

<table>
<thead>
<tr>
<th></th>
<th>Y/HW</th>
<th>TFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>4.83</td>
<td>4.02</td>
</tr>
<tr>
<td>UK</td>
<td>3.74</td>
<td>2.44</td>
</tr>
<tr>
<td>West Germany</td>
<td>5.83</td>
<td>4.06</td>
</tr>
</tbody>
</table>

Note: TFP is ‘crude TFP’; the contribution of labour quality is not separately measured.

Sources: Table 1 and the long-term productivity database for Bergeaud et al. (2016).

b) Real GDP/Hour Worked (UK =100 in each year)

<table>
<thead>
<tr>
<th></th>
<th>France</th>
<th>West Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>80.3</td>
<td>70.0</td>
</tr>
<tr>
<td>1973</td>
<td>112.6</td>
<td>111.9</td>
</tr>
</tbody>
</table>

Note: GDP is measured in terms of 1990 Geary-Khamis dollars.

Sources: derived from Thomas and Dimsdale (2017) Table A8, column B and Table A54, column AW and The Conference Board (2016).
Table 8. Productivity Growth in Nationalized Industries (% per year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>0.9</td>
<td>4.7</td>
<td>-2.4</td>
<td>0.4</td>
<td>3.0</td>
<td>-2.2</td>
</tr>
<tr>
<td>Energy</td>
<td>4.6</td>
<td>8.0</td>
<td>3.7</td>
<td>3.6</td>
<td>3.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Gas</td>
<td>1.6</td>
<td>5.5</td>
<td>4.9</td>
<td>0.7</td>
<td>3.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Railways</td>
<td>0.3</td>
<td>4.3</td>
<td>-2.0</td>
<td>-0.1</td>
<td>2.4</td>
<td>-1.7</td>
</tr>
</tbody>
</table>

*Note*: these four sectors contributed almost 90% of the output of nationalized industries.

*Sources*: Pryke (1971); Bishop and Thompson (1992).
Table 9. Indicators of Protectionism.

a) Average tariff rates on UK manufactures (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Tariff Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1932</td>
<td>13.2</td>
</tr>
<tr>
<td>1935</td>
<td>14.7</td>
</tr>
<tr>
<td>1960</td>
<td>14.5</td>
</tr>
<tr>
<td>1963</td>
<td>12.8</td>
</tr>
<tr>
<td>1968</td>
<td>11.2</td>
</tr>
</tbody>
</table>

b) Imports Subject to Controls (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports Subject to Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>96.3</td>
</tr>
<tr>
<td>1948</td>
<td>92.6</td>
</tr>
<tr>
<td>1951</td>
<td>51.5</td>
</tr>
<tr>
<td>1953</td>
<td>45.0</td>
</tr>
<tr>
<td>1955</td>
<td>22.5</td>
</tr>
<tr>
<td>1958</td>
<td>9.8</td>
</tr>
</tbody>
</table>

c) Trade Costs Index

<table>
<thead>
<tr>
<th>Year</th>
<th>UK-France</th>
<th>UK-Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>100</td>
<td>99</td>
</tr>
<tr>
<td>1938</td>
<td>121</td>
<td>122</td>
</tr>
<tr>
<td>1950</td>
<td>122</td>
<td>142</td>
</tr>
<tr>
<td>1960</td>
<td>122</td>
<td>115</td>
</tr>
<tr>
<td>1970</td>
<td>110</td>
<td>105</td>
</tr>
<tr>
<td>1980</td>
<td>74</td>
<td>66</td>
</tr>
</tbody>
</table>

Note: trade costs include all barriers to trade (policy and non-policy) and are derived from estimation of a gravity equation.

Sources:

Part a): Kitson and Solomou (1990); Morgan and Martin (1975);
Part b): Hemming et al. (1959);
Part c): data underlying Jacks et al. (2011) kindly provided by Dennis Novy.