4. Did Britain have a 'Keynesian revolution'?

The common understanding of the phrase, 'the Keynesian revolution', is a reappraisal of the theory of fiscal policy after the publication of Keynes's *The General Theory of Employment, Interest and Money* in 1936, followed by the practical adoption of the new ideas by the major industrial countries in the 1940s and 1950s. Specifically, whereas before the Keynesian revolution governments' priority in fiscal policy was to maintain a balanced budget, afterwards the budgetary balance was varied contra-cyclically in order to reduce fluctuations in economic activity. Britain is often regarded as the home of the Keynesian revolution. For example, the opening sentence of chapter VII of Christopher Dow's *The Management of the British Economy 1945–60* asserts, 'There is probably no country in the world that has made a fuller use than the UK of budgetary policy as a means of stabilizing the economy.'[1] The characterization of British macroeconomic policy as 'Keynesian' in the immediate post-war decades has become routine and unchallenged in standard textbooks.

A detailed narrative account of the evolution of fiscal policy in the Keynesian direction has been provided in the USA by Herbert Stein's *The Fiscal Revolution in America*. Stein describes the immense initial enthusiasm of young American economists, such as Samuelson and Boulding, for *The General Theory* in the late 1930s. As a result,

> By 1940 Keynes had largely swept the field of the younger economists, those who were soon to be 'back-room boys' in Washington and who, when they reached the age of forty-five or so, would be ready to come into the front room when John F. Kennedy became President in 1961.[2]

No similarly organized story has been told about the UK, perhaps because the policy revolution is deemed to be so self-evident that an analysis of personalities and events is unnecessary. (As discussed in the three essays in the first part of this book, Keynes himself had rather different attitudes and emphases from the Keynesians.[3])

The purpose of this essay is to suggest that, between the 1940s and 1970s, both the thinking behind British macroeconomic policy-making and the actual conduct of policy were far from the Keynesian model. As there is

little question that after the mid-1970s fiscal policy ceased to be Keynesian in either form or substance, the essay raises doubts about whether Britain ever had a Keynesian revolution. To throw more light on the issue, statistical tests are conducted of the relationship between changes in the budget position and the level of economic activity. The results of these tests are reported in the appendix. They show that the level of economic activity was not a significant influence on the change in the cyclically adjusted budget position in the supposedly Keynesian period between 1948 and 1974. (Less surprisingly, it was also not a significant influence between 1975 and 1994.) On this basis, the answer to the question, 'Did Britain have a Keynesian revolution?' is 'No'.

Of course, the demonstration that statistically there never was a Keynesian revolution does not rule out the possibility that, from time to time, key decision-takers did respond to their advisers and alter fiscal policy in a Keynesian manner. It may even be consistent with their desire to conduct fiscal policy on Keynesian lines all the time. Plans to vary the budget balance contra-cyclically may have been frustrated by sterling crises, of which there were many between 1945 and the mid-1970s, and other external shocks, such as the Korean War in 1950 and 1951. The absence of a Keynesian revolution in fact does not exclude the possibility that there was a Keynesian revolution in intention. The essay's first task has to be a review of the structure of macroeconomic policy-making, and the ideas held by policy-makers, from the 1930s onwards.

I

Keynes was appointed to the Economic Advisory Council, a high-level body set up to advise the government on economic matters, at its formation in 1930. It was the successor to a similar committee, created in 1925, to advise the Cabinet. The importance of this appointment should not be exaggerated, because – in the words of Lord Bridges – both the 1925 committee and the Economic Advisory Council were throughout the 1930s 'rather remote from the active centre of things'.[4] In particular, Keynes failed in 1931 and 1932 to halt the public expenditure cuts advocated by the May Committee, despite his ferocious and well-known attack on them in the *New Statesman*.[5] These cuts were a classic example of government expenditure being dominated by budget-balancing principles, instead of by the requirements of the business cycle. They were also an important part of the provocation for the new theories expressed in *The General Theory*.

Despite Keynes's apparent ineffectiveness in the policy debate of the early 1930s, the Economic Advisory Council set the precedent for professional

economists to supplement civil service advice on key issues in economic policy. Because of the imperative to reach the best possible decisions in wartime, the Economic Advisory Council was followed in 1939 by a Central Economic Information Service in the Cabinet Office. It had a full-time staff of economists and statisticians, and they were given the job of assembling in one place information about production which had previously been available only from a wide variety of sources. This had obvious significance for the organization of military output, but it also made possible the first estimates of national income and expenditure. Early in 1941 the Central Economic Information Service was split into two, with the economists becoming the Economic Section of the Cabinet Office and the statisticians the Central Statistical Office. The service's work made possible the publication of the first National Income White Paper, which informed the tax decisions taken in the Budget on 7 April 1941 by Sir Kingsley Wood, the Chancellor of the Exchequer.

According to Sabine, '1941 . . . was the watershed year when the Budget could at last be seen to be performing its correct dual function of raising the taxation required and restricting purchasing power.'[6] The connection between tax decisions and consumer spending power – and so, by extension, between the government's financial position and aggregate demand – had been emphasized by Keynes in articles in *The Times* on 'How to Pay for the War', where he developed the idea of an 'inflationary gap'. The gap, the excess of the nation's *ex ante* propensity to spend over its *ex ante* ability to supply, made sense conceptually only in the context of his theory of national income determination. 'It is impossible to divorce the practice of the Kingsley Wood regime from the theories of Keynes, particularly 'in the recasting of Budget mathematics to highlight the gap'.[7] Dow agrees that 1941 was the turning point. 'Since 1941 almost all adjustments to the total level of taxation have been made with the object of reducing excess demand or of repairing a deficiency.'[8]

Keynes is also attributed with a role in the authorship of the 1944 White Paper on *Employment Policy*. The *Employment Policy* White Paper is widely regarded as the charter for demand-management policies in the post-war period, largely because of its reference to 'a high and stable level of employment' as an objective of official policy. However, the actual wording of the White Paper is far from enthusiastic in its endorsement of a Keynesian purpose for fiscal policy. One passage reads, 'To the extent that the policies proposed in this Paper affect the balancing of the Budget in a particular year, they certainly do not contemplate any departure from the principle that the Budget must be balanced over a longer period'. Further, 'An undue growth in national indebtedness will have a quick result on confidence. But no less serious would be a budgetary deficit arising from a fall in revenues

due to depressed industrial and commercial conditions'.[9] It is plainly implied that depressed conditions might not justify discretionary action to expand the budget deficit.

At any rate, by the late 1940s ministers and many civil servants recognized that the annual Budget ought to be framed with a view to influencing the level of economic activity. In 1948 Sir Stafford Cripps combined the functions of Chancellor of the Exchequer with that of Minister for Co-ordination of Economic Affairs. In his Budget speech of 1950 he said, 'Excessive demand produces inflation and inadequate demand results in deflation. The fiscal policy of the Government is the most important single instrument for maintaining that balance.'[10] This is clear and straightforward, and undoubtedly represents an official stamp of approval for Keynesianism.

There is also no question that – when it was given – the statement was uncontroversial and commanded support from all parts of the political spectrum. The Conservative Party came to power in 1951 and made more deliberate use of monetary policy than its predecessor. Most notably, it allowed Bank rate to rise from 2 per cent (where it had been stuck, apart from a brief period at the start of the Second World War, since 1932) to 2½ per cent in November 1951 and 4 per cent in March 1952. Thereafter Bank rate was varied mostly in response to the vicissitudes of the exchange rate. But monetary policy was not thought to have a major part to play in influencing demand. Because it was assigned to the task of stabilizing foreign exchange sentiment towards the pound, fiscal policy could instead be used for the vital aim of managing the domestic economy and trying to secure, on average, a high level of employment. The 1941 and other wartime Budgets has set a precedent for the use of fiscal policy in peacetime. Fiscal policy was taken as being more or less equivalent to discretionary changes in tax, since public expenditure was judged too inflexible for short-run demand management.[11] Further, tax changes mattered mostly because of their impact on consumption, not on investment. Investment had the drawback that it was volatile and difficult to forecast, and so it seemed less amenable to fiscal policy treatment. In Ian Little's words, commenting on fiscal policy in the 1950s, 'in almost all respects, taxation (and, more generally, fiscal policy) is superior to monetary policy'.[12]

By the start of the 1960s economists began to feel more confident about quantifying the effect of tax changes on demand. As they could estimate the link between tax changes and consumption, and since consumption was the largest component of aggregate demand, they believed they had leverage over the economy as a whole. '[T]he procedure of official forecasting is designed to fit in with the procedure of budget-making.'[13] To quote Little again, writing in 1961,

> Mr. Heathcoat-Amory was the first Chancellor to predict demand in percentages in his 1960 Budget speech. More recently, Mr. Selwyn Lloyd has said, 'I believe it will be within our power to expand at the rate of 3 per cent per annum over the next five years, but to do this our exports will have to rise at approximately double this rate'.

Little welcomed the shift to forecasts of demand constituents in percentage terms, concluding his references to Heathcoat-Amory and Selwyn Lloyd with the remark 'Let us hope these are straws in the wind of change.'[14]

II

Superficially, informed views on fiscal policy theory and the actual conduct of fiscal policy had made a comprehensive shift from primitive pre-Keynesian budget balancing in the early 1930s to sophisticated Keynesian demand management in the early 1960s. This shift seems to have been comparable to that in the USA, as described by Stein in his *The Fiscal Revolution in America*. The standard textbook characterization of the period as 'the age of Keynes' appears to be justified.

However, even at the level of ideas, the Keynesian triumph was far from complete. Influential writers in the Keynesian camp themselves concede that official thinking was more muddled and ambivalent in this period than commonly thought. In particular, the conventions for measuring the various categories of public expenditure, taxation and the differences between them harked back to the budget-balancing orthodoxies of the pre-Keynesian era. For example, in his book on *The Management of the British Economy* Dow protested against the survival of accounting practices which originated in the Exchequer and Audit Departments Act of 1866 or even earlier. To those well versed in the precepts of modern macroeconomics, 'The traditional Exchequer accounts have constantly to be explained away as misleading.' Indeed, in a footnote Dow admitted that the references to fiscal policy in the 1944 White Paper on *Employment Policy* were 'highly confused', because of tensions between economists working in Whitehall and 'the guardians of the older Treasury tradition'.[15]

Moreover, these guardians of the older tradition did write, quite extensively, about how they thought the public finances should be organized. In 1959 Sir Herbert Brittain, a recently retired senior Treasury official, published a book on *The British Budgetary System*, to serve as 'a new and comprehensive account of our budgetary system and of the parliamentary and administrative arrangements that are part of it'. He saw his book as following in the wake of *The System of National Finance* by Lord Kennet and Mr Norman Young, which had previously 'filled that role'. The book

contained not a single reference to Keynes. Indeed, it is not going too far to say that, in certain respects, Brittain's description of budgetary arrangements appeared to be deliberately anti-Keynesian. Chapter III, on 'The general design of the Budget', placed a section on 'Prudent finance' before sections on 'Social and political questions' and 'Broad economic and financial policy'.

The comments on budget deficits under the 'Broad economic and financial policy' heading were highly traditional. Not only must the deficit be as low as possible in the interests of control, but also 'regard must be had to the fact that any deficit inevitably means an increase in the national debt'. Brittain noted the doctrine that 'an indefinite increase in the national debt does not matter so long as the rate of increase is less than the rate of increase in national income', but rejected it on the grounds that the tax burden depended on the size of all transfer payments and not on the debt interest charge alone. '[I]t may be dangerous to mortgage in advance any given part of the increase in revenue for the debt charge, irrespective of other possible claims.'[16] The section's verdict was that 'dangerous results' might proceed from a lack of confidence in the public finances. Finally, a footnote was attached, claiming that most of the 1944 *Employment Policy* White Paper, and in particular the passage in paragraphs 74 to 79 'dealing with Central Finance', had stood up 'to the test of post-war expenditure'.[17] Paragraphs 74 to 79 were exactly those which had reiterated the virtues of balancing the budget over the business cycle.

How should this balancing of the budget be defined? The central principle of the Treasury's fiscal conservatism was that the budget should be balanced 'above the line'. The distinction between items above and below the line was related, but not identical, to the distinction between income and capital. The crucial difference was that recurrent items of capital expenditure were regarded as above the line, 'as there is no case for spreading it over a period, and to borrow every year would only increase the cost over the years by unnecessary payments of interest'.[18] So borrowing was legitimate to cover the cost of exceptional, non-recurrent capital expenditure, but that was all. The intended aim of this type of fiscal conservatism was to prevent the national debt rising faster than the stock of capital assets owned by the government. The cyclical state of the economy was a secondary consideration. Further, in prosperous conditions extending over several cycles the result of applying such rules would be to keep the national debt growing more slowly than national income.

Which set of ideas – the Keynesian contra-cyclical activism described by Dow and Little or the fiscal conservatism defended by the Treasury knights – was in fact the predominant influence in the late 1940s, the 1950s and early 1960s? On some interpretations the data give a clear-cut answer. As noted by

Robin Matthews, writing in 1968, 'throughout the post-war period the Government, so far from injecting demand into the system, has persistently had a large current account surplus . . . [G]overnment saving has averaged about 3 per cent of the national income'.[19] A surplus of this kind would be the likely outcome of applying the above-the-line/below-the-line methodology favoured by Brittain and traditional Treasury knights, since it would correspond to the recurrent capital costs covered by revenue. The ratio of the UK's national debt to its gross domestic product fell sharply from 1945 to the mid-1970s, despite the charter for permissive deficit financing which Keynes was supposed to have given policy-makers in his *General Theory*.

Matthews continued, provocatively, to assert that fiscal policy appears 'to have been deflationary in the post-war period'. However, there is an important theoretical objection to this conclusion. The characterization of fiscal policy is beset with ambiguities. Quite apart from all the uncertainties about specifying the appropriate concept of the budget balance, fiscal policy can be measured and described in terms of either the *level* or the *change* in the budget balance. Matthew's conclusion depends on the premiss that fiscal policy is best described in terms of the level of the budget balance. A counterargument could be made that the change in the balance, appropriately defined, is the government's discretionary response to the economic situation and is therefore a better way of thinking about 'policy'.

Fortunately, several studies have been made of the relationship between the economy and changes in the budget balance in the first 25 years after 1945. Hansen, conducting a statistical review of *Fiscal Policy in Seven Countries 1955–65* for the OECD, judged that fiscal policy in the UK, measured in terms of changes in the cyclically adjusted deficit, had been destabilizing over the period.[20] (In other words, action had been taken to increase the deficit when the economy was operating at an above-normal level and to reduce it when economy was below normal.) In his narrative account *The Treasury under the Tories 1951–64*, Samuel Brittan was also highly critical. In 1971 he published *Steering the Economy*, a revised and updated version of *The Treasury under the Tories*. In it he suggested that 'Chancellors behaved like simple Pavlovian dogs responding to two main stimuli: one was "a run on the reserves" and the other was "500,000 unemployed" – a figure which was later increased to above 600,000.'[21] Even Dow – who made such strong claims for the historical reality of the Keynesian revolution in the early chapters of *The Management of the British Economy 1945–60* – acknowledged in later chapters that practice and out-turn had been very different from theory and plan. In the event many 'adjustments of policy were occasioned by the balance of payments', not the level of unemployment relative to a desired figure. The external interference had the result that,

> [a]s far as internal conditions are concerned . . . budgetary and monetary policy failed to be stabilizing and must on the contrary be regarded as having been positively destabilizing. Had tax changes been more gradual, and credit regulations less variable, demand and output would probably have grown much more steadily.[22]

The conclusion must be that, over at least the first two-thirds of the period from 1945 to the mid-1970s, fiscal policy was not Keynesian in the normally understood sense. The trend level of the budget deficit was determined by 'the older Treasury tradition', with its emphasis on the sustainability of government debt relative both to national income and the size of the public sector's stock of capital assets. Policy-determined variations in the deficit around this trend level were largely motivated by the balance of payments and the state of the pound, not by the counter-cyclical requirements of the domestic economy and unemployment. Moreover, many economists active at the time must have been fully aware that there was a sharp divergence between the actual conduct of fiscal policy and their Keynesian views of what fiscal policy ought to have been.

The election of the Labour government in October 1964, with Harold Wilson as Prime Minister, was accompanied by a large influx of professional economists into Whitehall. Many of them thought fiscal policy could and should be used to manage the economy. But economic policy in the years from 1964 to 1970 was again dominated by the balance of payments. The government sought financial help from the International Monetary Fund after the pound's devaluation in November 1967. The Budget of 1968 contained the largest tax increases since 1945, with fiscal policy specifically designed to curb the current account deficit. Unhappily, the current account's initial response to devaluation was slow. In June 1969 the government and the IMF reached agreement on further measures, with the Letter of Intent referring to a target for domestic credit expansion of £400 million in the 1969/70 year. Domestic credit expansion (DCE) was a new policy indicator, essentially equal to all new bank credit extended to the public and private sectors. DCE to the public sector was equal to the public sector borrowing requirement (PSBR) minus net sales of public sector debt to non-banks. A target for DCE implied some sort of limit on the budget deficit and so precluded contra-cyclical action to lower unemployment.

One result of the IMF's involvement in British macroeconomic policy was to make the PSBR – a cash measure of borrowing, which integrated readily with monetary analysis – the most prominent measure of the budgetary position. This led to a substantial modernization of the lexicon of fiscal policy, but policy itself was certainly not Keynesian. Most Keynesians were scornful of the IMF medicine, on the grounds that it was

merely a refurbishment of old sound finance doctrines. But the current account of the balance of payments was converted, after adoption of the IMF's prescription, from deficit in 1968 to large surplus in 1970. Indeed, a common refrain in 1970 and 1971 was that the fiscal contraction of 1968 had not turned the balance of payments round, whereas the monetary squeeze of 1969 had worked. The effectiveness of fiscal policy was compared unfavourably with that of monetary policy.

Another theme in policy-making circles in the early 1970s was that the UK's poor long-term record on economic growth could be largely blamed on undue anxiety about the balance of payments and the exchange rate. For example, Brittan argued that a balance-of-payments deficit was a non-problem, since the drain on the UK's foreign exchange reserves could be halted simply by allowing the exchange rate to float.[23] The editor of an important collection of essays on *The Labour Government's Economic Record 1964–70* judged in 1972 that, because of the reluctance to devalue the pound earlier, 'the Government never achieved any room for manoeuvre . . . It is little wonder that they were eventually blown off course'.[24]

The intellectual groundwork had been laid for the aggressive expansionism of macroeconomic policy in the two years to mid-1973. Policy-makers were determined that the exchange rate would not be allowed to hold back economic growth. Credit restrictions were relaxed in late 1971 and a highly stimulative Budget was introduced by the Chancellor of the Exchequer, Mr Anthony (later Lord) Barber, in March 1972. In response to the inevitable resulting weakness of the pound, the exchange rate was floated in June 1972. In 1973 gross domestic product rose by over 7 per cent. But the trend growth rate of the UK economy remained much as before and the 'Barber boom' led to severe overheating. Inflation (as measured by the 12-month increase in the retail price index) rose to double-digit rates in 1974 and peaked at 26.9 per cent in August 1975, while the current account of the balance of payments incurred the heaviest deficits (relative to GDP) in the post-war period.

In the subsequent policy debates, the policy thinking behind the expansionism of the early 1970s was often labelled 'Keynesianism'. This may be rather unfair, since Keynesianism encompasses a wide variety of positions about the relative importance of the different branches of policy and is merely 'an apparatus of thought' (in Keynes's own words), not a well-defined set of rules about policy. Two years in the early 1970s (from mid-1971 to mid-1973) may nevertheless be the only phase in the entire post-war period when policy was properly Keynesian, uncluttered by the constraints of the fixed exchange rate (as before 1971) or by an entirely different framework of thought (as after the mid-1970s). At the time, the Barber boom was regarded as Keynesian in intention by those who decided policy and as

Keynesian in form by the majority of commentators. It was also an unmitigated disaster. The euphoria of 1973 was followed over the next two years by the worst recession, the highest inflation and the widest payments gap in the post-war period.

III

After some point in the mid-1970s it no longer makes any sense to describe British macroeconomic policy as 'Keynesian'. Textual and narrative analysis has to admit that there is scope for debate about whether fiscal policy was Keynesian between 1945 and 1974, but there is no doubt about the period from 1979. Policy-makers, official advisers to Treasury ministers and commentators are all agreed that – after the election of the Conservative government under Mrs (later Lady) Thatcher – fiscal policy was determined by non-Keynesian considerations.

But that leaves undetermined the precise moment between 1974 and 1979 when fiscal policy-makers consciously and deliberately abandoned Keynesian thinking. Of course, the notion of a 'precise moment' is misleading. The attitudes of the key politicians, advisers and academics were in constant flux. They changed at different times to different degrees and in different ways from one person to another. Mr Denis (later Lord) Healey, who was Chancellor of the Exchequer from 1974 to 1979 and took a closer interest in the niceties of economic theory than most chancellors, made a fascinating appraisal in his autobiography, *The Time of My Life*. He found the PSBR so vulnerable to the economic cycle that it was 'impossible to get [it] right', which – in his opinion – undermined the heavy emphasis on the PSBR in 'the so-called "budget judgement", which in turn determined the extent to which taxes or spending should be raised or lowered'.[25] But he was also suspicious of dependence on the money supply, as 'the monetary statistics are as unreliable as all the others'. His response was to become 'an eclectic pragmatist'.[26] This may sound like a fudge, but it had an important consequence. After noting that when he arrived at the Treasury in 1974 it was still Keynes's intellectual 'slave', Healey ventured the comment 'I abandoned Keynesianism in 1975'.[27]

But the private and retrospective reflections of a Chancellor of the Exchequer are not the same as the public and transparent passage of events. For most observers 1976 was the crucial turning point. Heavy selling pressure on the foreign exchanges hit the pound in the spring, obliging the government to introduce a package of expenditure cuts and other policy changes. On 22 July Healey announced a target for the growth of the money supply, on the M3 measure (including bank deposits), of 12 per cent during

the 1976/77 financial year. It was the first time that a target for monetary growth had been included in an official statement on macroeconomic policy. As the pound remained under pressure in the next few months, the government again sought help from the IMF in late September. The IMF made a loan, but attached the condition that DCE should not exceed £9 billion in 1976/77, £7.7 billion in 1977/78 and £6 billion in 1978/79. As in the late 1960s, this implied a constraint on the amount of bank credit extended to the public sector and so on the size of the budget deficit. Fiscal policy could not be focused on the management of domestic demand and the maintenance of high employment, because it had to give priority to an externally imposed target.

In the event the government easily met the IMF's targets and the pound staged a spectacular recovery in 1977. However, the inflationary trauma and exchange rate crises of the mid-1970s stimulated drastic rethinking about both the theory and practice of macroeconomic policy-making. This rethinking has been given the generic brand name of 'monetarism'. Arguably 'monetarism' was – and remains – an even more disparate body of thought than Keynesianism, but the label cannot now be shaken off. In the mid-1970s two central tenets of monetarism were that high inflation was caused by high monetary growth and that targets to restrict monetary growth were therefore the key to controlling inflation. A large budget deficit undermines the task of monetary restraint, because there is a risk that the government will have to finance its deficit from the banking system. In that case the banks add claims on the government to their assets and incur deposit liabilities to the private sector on the other side of the balance sheet. These deposits are money. A target for monetary growth therefore implies some limit on the budget deficit. It needs to be emphasized that the limit is determined by the logic of monetary targeting. It applies whether or not the government is borrowing from the IMF, and irrespective of the exchange rate regime it has adopted (that is, irrespective of whether the exchange rate is fixed or floating).

The potential monetary consequences of excessive budget deficits demonstrate the interdependence of fiscal and monetary policy. If a decline in monetary growth is necessary in order to lower inflation, cuts in the PSBR are also an essential element in the programme. It follows that policy should be expressed in terms of both monetary growth and the fiscal position, and that these should be seen as two sides of the same coin of 'financial policy'. (In effect, financial policy absorbs both monetary and fiscal policy.) Moreover, the UK's inflationary plight in the mid-1970s was such that a rapid deceleration in monetary growth would cause a severe recession and soaring unemployment. So – for those persuaded by the broad thrust of the monetarist case – it was generally accepted that the

reductions in monetary growth and the PSBR should be phased over a number of years. Official policy should look not just to the next budget and the next year ('the short run'), but should be framed within a three- to five-year context of financial rehabilitation. Here lay the justification for medium-term macroeconomic planning, with the budget deficit geared to restoring medium- and long-run financial stability. Policy should not try to manipulate demand and employment from year to year in a Keynesian manner.[28]

Ideas of this kind were developed particularly among London-based policy-making and policy-advising circles in the crises of the mid-1970s. These circles included the Treasury, the Bank of England, some stock-broking firms in the City and what might be termed 'higher economic journalism'.[29] The intellectual input from economists in universities outside London was minimal. In fact, most academic economists remained wedded to Keynesianism, a preference which led to sharp debates between the university-based profession and policy makers in the 1980s. The London Business School played a vital role in promoting the new ideas. In 1977 Mr Terry (later Lord) Burns and Mr Alan (later Sir Alan) Budd proposed a medium-term financial plan in the London Business School's *Economic Outlook*. In 1979 the same two authors wrote an article in the same publication on 'The role of the PSBR in controlling the money supply'. In 1981 a book of *Essays in Fiscal and Monetary Policy* contained a paper by them on 'The relationship between fiscal and monetary policy in the London Business School model'. It made strong claims that 'The relationship between fiscal and monetary policy is a very close one, and under a floating exchange rate the prime determinant of monetary variations is changes in fiscal policy' and – even more ambitiously – 'Changes in the monetary aggregates are an "efficient" estimate of overall policy stance'.[30] The paper had originally been given at seminars organized by the Institute for Fiscal Studies in 1977 and 1978.

This emphasis on monetary variables as the best indicators of policy, combined with the linking of the fiscal and monetary policy in a medium-term context, set the scene for the introduction of the Medium-Term Financial Strategy (MTFS). The Thatcher government made clear soon after its election in June 1979 that it saw control of the money supply as necessary and sufficient to curb inflation. It was forthright in its rejection of Keynesian prescriptions. On 5 October 1979 a meeting to discuss medium-term financial planning was held at the Treasury between Sir Geoffrey (later Lord) Howe, his officials and a number of outside economists known to be monetarist in their doctrinal affiliations. Sir Frederick Atkinson, of Keynesian leanings, retired in late 1979 and was replaced as Head of the Government Economic Service by Burns on 1 January 1980.

In the Budget of 26 March 1980 the first version of the MTFS was announced. It set out targets to reduce the ratio of the PSBR to GDP from 3¾ per cent in the 1980/81 financial year to 3 per cent in 1981/82, 2¼ per cent in 1982/83 and 1½ per cent in 1983/84, and in parallel gradually to lower the rate of increase in the sterling M3 measure of money.

Two points need to be made about the original MTFS. First, it did not envisage a return to a balanced budget at any date and its supporters did not appeal to old-fashioned balanced-budget rhetoric to defend their position.[31] Second, the rationale for targeting the PSBR was to support monetary control, which had increasingly been seen in the late 1970s as more fundamental to the macroeconomic outlook than fiscal policy.

The existence of the fiscal targets in the MTFS is crucial to understanding the 1981 Budget, which was the final nail in the coffin of Keynesianism at the policy-making level. The year 1980 saw the deepest recession in the post-war period, with GDP dropping by almost 2½ per cent. In early 1981 output was undoubtedly well beneath its trend level. Meanwhile the pound had been a strong currency for over 18 months and there was no external constraint on fiscal relaxation. But the government decided to increase taxes by over £4 billion, equivalent to almost 2 per cent of GDP. In the event, the economy began to recover in the middle of 1981, which gave encouragement to the beleaguered policy-makers in Whitehall that they were on the right lines. Despite setbacks in other branches of macroeconomic policy, the government persevered with the fiscal component of the MTFS. By the mid-1980s the PSBR/GDP ratio was down to the levels envisaged in the original MTFS. However, the official rationale for PSBR targeting changed markedly. In 1980 sterling M3 grew well above the top of its target range, greatly embarrassing the government, which had at first placed heavy emphasis on this measure of money as the keystone of macroeconomic policy. In response, the target was 'quickly abandoned (although not formally) as the government came to recognize [sterling M3's] apparent misleading behaviour'.[32] (Given the drastic nature of the volte-face on sterling M3, it may be worth mentioning that the DCE target contained in the IMF's Letter of Intent in 1976 was broadly defined. It was equal to the increase in sterling M3 and the banking system's external liabilities; it therefore related to commercial bank credit and not merely to credit extended by the central bank. Whatever the government's view by 1981, the IMF had certainly thought that the behaviour of sterling M3 was important five years earlier.)

With the money supply dethroned, there was no longer any sense in justifying PSBR targets by their contribution to monetary control. Instead the emphasis shifted to such considerations as the need to prevent debt rising too fast relative to GDP and, more specifically, to avoid an excessive burden

of debt interest. The downfall of the monetary argument for fiscal restraint was also attributable in part to evidence from Professor Milton Friedman to the Treasury and Civil Service Committee of the House of Commons. Friedman, universally acknowledged as one of the intellectual founders of monetarism, told the Committee that the concern with the PSBR was 'unwise', partly 'because there is no necessary relation between the size of the PSBR and monetary growth'.[33]

The defence of PSBR targeting instead relied increasingly on the need to secure long-run fiscal solvency. An illustration of the new approach was the publication of a Green Paper on *The Next Ten Years: Public Expenditure and Taxation into the 1990s*, in conjunction with the 1984 Budget. This was the first Budget presented by Mr Nigel (later Lord) Lawson, who was to remain Chancellor until 1989. Paragraph 56 of the Green Paper projected the PSBR/GDP ratio into future years and noted that, 'net of debt interest little or no change in the PSBR is assumed'. It continued, 'on this basis the tax burden for the non-North Sea sector can be reduced to the extent that public expenditure falls more than North Sea tax revenues as a share of GDP'.[34]

This sounds complicated, but the essential message was that any success in controlling non-interest public expenditure would in future be translated into tax cuts. The PSBR/GDP ratio might decline, but only as a consequence of lowering the ratio of debt interest to GDP. There was no mention in the Green Paper of adjusting the PSBR to combat the business cycle (on Keynesian lines) or of lowering it in order to dampen monetary growth (as favoured by the monetarists). The Green Paper is interesting in three ways: first, as early evidence of Lawson's preference for tax cuts over budgetary discipline; second, for its dichotomy between the policy implications of interest and non-interest expenditure; and, third, because of its medium- and long-term planning perspective. The PSBR/GDP ratio was intended to drop to 1 per cent by 1993/94, helped by the projection of a sufficiently large decline in the ratio of debt interest to GDP. Separately, Lawson described a PSBR/GDP ratio of 1 per cent as 'the modern equivalent of a balanced Budget'.[35] A PSBR/GDP ratio of 1 per cent had earlier been judged compatible with long-run price stability in a paper published in the London Business School's *Economic Outlook* in 1983.[36]

The 1984 Green Paper was a theoretical document. The out-turns in practice were very different. In the late 1980s the economy experienced a strong and unforeseen boom in activity, which gave the usual cyclical boost to the public finances. The PSBR declined to less than 2 per cent of GDP in the 1986/87 fiscal year and turned into a small surplus in 1987/88. In 1988/89 the surplus widened to £14.7 billion or 3 per cent of GDP. The attainment of a surplus in 1987/88 and the extent of the surplus in 1988/89

were not predicted by the Treasury. In the 1988 Budget Lawson took the unusually benign fiscal performance as an opportunity to reinstate the doctrine of a balanced budget. His budget speech condemned the deficits recorded by previous Labour administrations, noting that 'profligacy' had bought 'economic disaster' and 'national humiliation', as well as adding 'massively to the burden of debt interest'. Lawson saw the doctrine of a balanced budget as 'a valuable discipline for the medium term'. Further, 'henceforth a zero PSBR will be the norm. This provides a clear and simple rule, with a good historical pedigree.'[37]

The aim of balancing the budget (in the sense of keeping the PSBR at zero) over the cycle remained the cornerstone of fiscal policy from the 1988 Budget until the 1997 general election. It was reiterated during the early 1990s, when in a deep recession the government once again incurred heavy deficits. As in the similar circumstances of 1981, the two budgets of 1993 raised taxes sharply in order to restore a satisfactory fiscal position over the medium term. But the official argument for a balanced budget was less strident and ideological, and far more pragmatic, than the case for medium-term PSBR reductions in the early 1980s. As in the Lawson period, it continued to rely on broad notions of stability and solvency. It eschewed Keynesian demand-management considerations and was rather casual about the interdependence of fiscal and monetary restraint. In Burns's words in 1995, now as Permanent Secretary to the Treasury delivering the South Bank Business School annual lecture,

> Essentially we have two objectives, low inflation and stable public finances. We have two instruments, interest rates and fiscal policy. Both instruments can have an impact on inflation but only fiscal policy can ensure stable public finances on a sustained basis. Intuitively, therefore, it seems clear that monetary policy will bear the main burden of delivering low inflation with fiscal policy taking the burden of delivering sound public finances.

This formulation was rather vague and later in the lecture Burns conceded that there were 'no hard and fast rules' for fiscal policy. But he made one exception, the need to contain 'debt service costs and the level of total debt outstanding in a way that avoids being caught in a debt trap where it is only possible to finance debt interest charges by higher levels of borrowing'.[38]

One interpretation of these remarks is that they represented a return to long-run solvency concerns of a kind emphasized by the Treasury knights in the 1930s and 1940s. The reference to runaway debt-interest costs in Burns's 1995 lecture had more than a passing resemblance to the section in the 1944 *Employment Policy* White Paper which warned about 'the charge on the Exchequer' from excessive public debt. Burns's views might therefore be regarded as the rejection of Keynesianism and the restoration of

old-fashioned sound finance doctrines. However, it is important to note major differences in definition and emphasis from earlier positions. No official statement on fiscal policy in the 1980s and 1990s was expressed in terms of the old distinction between above-the-line and below-the-line items. In this respect the principles of sound finance, as they were understood in the closing years of the 1979–97 Conservative government, departed significantly from their counterparts in the inter-war period and, indeed, from more distant Gladstonian precursors.

Instead of the aim to achieve balance or surplus above the line, the PSBR was the main benchmark of fiscal policy. The PSBR had initially been formulated inside the Treasury in the early 1960s, to help in the presentation of financial statistics. Its first major policy applications were in support of the IMF's balance-of-payments objectives in the late 1960s, and again in 1976 and 1977. In the early phase of the Thatcher government the announcement of a PSBR limit had been intended to buttress monetary restraint. To focus on the PSBR as a means of preventing excessive growth of debt was therefore a significant shift in its pattern of deployment. In fact, its position in discussions of long-run fiscal solvency is not particularly comfortable. It does not differentiate, as did the above-the-line/below-the-line distinction, between non-recurrent capital items and other types of expenditures. As a result, it does not have any clear message for the government's or the public sector's overall net assets (that is, its gross stock of financial and tangible assets, minus its debt). Moreover, as the government can both sell financial assets and borrow in order to on-lend to the private sector, there is no simple relationship between the PSBR and net debt.

These points did not – and do not now – invalidate the PSBR's legitimacy as a target or control variable. The alternatives also have their weaknesses. However, it is interesting to note that – if the old above-the-line/below-the-line distinction had survived – the public finances would have appeared to be in some disarray by the mid-1990s. The PSBR was held down during the Thatcher and Major Conservative administrations not by curbing current spending relative to revenues, but by restricting capital expenditure and taking in money from privatization. While the Treasury and its Conservative political masters acknowledged a long-run solvency constraint on fiscal policy, they defined it in a quite different manner from their predecessors before the supposed 'Keynesian revolution'.

At any rate, there is little doubt that, certainly since 1979, and perhaps since 1975 or 1976, fiscal policy was not regarded as 'Keynesian' by policymakers or their key advisers. There was a brief phase in 1979 and 1980 when fiscal policy could be characterized as 'monetarist' more than anything else. Later it became subordinate to 'sound finance', dressed up in modern terminology but with a rather incoherent rationale. Arguably the

Conservatives' zero-PSBR-over-the-cycle maxim was less restrictive of debt than the Treasury's old orthodoxies of the 1930s and 1940s. There were some similarities between the formulations of the 1990s and those earlier orthodoxies, but they were fortuitous, not consciously intended. Policy-makers sometimes admitted that they remembered what they were taught at university, namely that changes in the budget deficit could have significant effects on the level of demand in the economy.[39] But such considerations were secondary, or even tertiary, in actual policy decisions.

IV

The record of official statements, positions and speeches is therefore very far from unanimous that fiscal policy was conducted on Keynesian lines even in the period from 1945 to the early 1970s, while it is clear-cut that a marked shift away from Keynesianism occurred in the mid-1970s. But the analysis so far has been literary and textual. Like all such analysis, it has required selection from a wider mass of statements, and it has involved judgements about different actors' tone of voice and their balance of priorities. Necessarily, the selection has been to a degree arbitrary, and the judgements could be criticized as imprecise and subjective. An alternative approach is to review policy actions in statistical terms, which should put the analysis and conclusions on a more objective plane.

The broad meaning of the phrase 'Keynesian fiscal policy' is well known. If fiscal policy is on Keynesian lines, the budget deficit is increased when unemployment is 'high' and reduced when it is 'low'. The statistical test should therefore be designed to answer the question, 'Did policy-makers vary the deficit inversely with the level of unemployment?' But several statistical series could be deployed to handle this question. What are the right concepts of 'the budget deficit' and 'the level of unemployment'?

Several competing notions of the budget deficit are candidates. As already demonstrated, for much of the 1950s and 1960s the Treasury continued to frame budgetary decisions in accordance with the principle that the budget should be balanced 'above the line'. The above-the-line central government position is, however, too narrow to serve as a valid indicator of the underlying thrust of fiscal policy. It excludes many capital items and the effect of public corporations' transactions, yet some Keynesians insist that capital spending, particularly capital spending by the nationalized industries, ought to be a prime instrument of countercyclical fiscal policy.[40] On the other hand, the public sector borrowing requirement, which came to dominate public discussion of fiscal policy from the mid-1970s onwards, is too broad. It is affected by 'financial transactions', such as nationalization,

privatization and government lending to industry and for house purchase. Such transactions do not constitute net injections into or withdrawal from aggregate demand.

According to most authorities, the best compromise between narrow and broad measures of the budgetary position is 'the public sector's financial deficit'.[41] This covers the entire public sector, but excludes the effect of purely financial transactions. It approximates to the difference between the flow of the public sector's receipts and expenditures, and this difference is usually taken to mean the addition to or subtraction from the circular flow of income which lies at the heart of the Keynesian theory of income determination. A complication is that the public sector's financial deficit is both an influence on and is influenced by the cyclical course of the economy. (Social security spending rises and falls with unemployment, while tax receipts vary inversely with it.) So discretionary policy action is best understood as and measured by its effect on the cyclically adjusted estimate of the deficit, not on the unadjusted deficit. In the statistical work in the appendix fiscal policy decisions are therefore measured by the change in the cyclically adjusted public sector financial deficit. (Various methods of cyclical adjustment are possible. See the appendix for the method adopted in this essay. Two sets of assumptions are used to obtain two separate estimates of the cyclically adjusted fiscal policy. The estimation of two such series helps in checking whether the conclusions are special and depend on the assumptions, or are more general and robust.)

The identification of the appropriate unemployment variable is also difficult. In the 1950s 'full employment' was widely thought to mean an unemployment rate, measured by the count of benefit claimants as a ratio of the workforce, of under 2 per cent.[42] But in the 1970s and 1980s economists stopped thinking about full employment as a single number, while various institutional changes to the structure of the labour market caused an increase in the level of unemployment consistent with a stable rate of price change (the so-called 'natural rate of unemployment'). In the late 1980s and 1990s the Conservative government's measures to increase labour-market flexibility may have reduced the natural rate. These ambiguities suggest that no long-run series for unemployment is altogether reliable as a guide to the state of the labour market.

A more general measure of activity in the economy is provided by 'the output gap', defined as the upwards or downwards deviation of output from its trend and usually expressed as a percentage of that trend.[43] Like assessments of the 'fullness' of full employment, calculations of the output gap depend partly on the analyst's methods. But the temptation and opportunity to manipulate the numbers is less with politically neutral GDP figures than with politically charged unemployment statistics. Further,

cross-checks can be made between several different techniques for calculating output gaps, which limits the scope for the analyst to impose his own hunches and prejudices. Comparison is also possible with calculations made by, for example, the Organisation for Economic Co-operation and Development. (The method of calculating the output gap in this essay is explained in the appendix.)

The discussion has pinned down the statistical test more exactly as an attempt to answer the question, 'Did the cyclically adjusted public sector financial deficit (PSFD) vary inversely with the output gap?' If fiscal policy was Keynesian, the deficit ought to have increased when the level of output was beneath trend and declined when it was above trend. Table 4.1 in the appendix shows the output gap, the unadjusted PSFD/GDP ratio, and both the level and change in the cyclically adjusted PSFD/GDP ratio, estimated on one set of assumptions about the cyclical adjustment, and Table 4.2 the same numbers, but estimated on an alternative set of assumptions about the cyclical adjustment. Table 4.3 compares the numbers used here with separate estimates of the cyclically adjusted PSFD/GDP ratio given by the Treasury. This essay's estimates of the adjusted PSFD/GDP ratio are close to each other and the Treasury's figures. Very similar conclusions emerge on both sets of assumptions, with the encouraging implication that they are genuine and not an artefact of the chosen method of cyclical adjustment. Using the first set of numbers (that is, those in Table 4.1), three years (1963, 1976 and 1986) saw hardly any change in fiscal stance, while the output gap itself was close to zero. They can therefore be eliminated from the sample as having no clear message for the matter in contention. Of the remaining 43 years between 1949 and 1994 there were 22 years when the fiscal stance changed in a Keynesian manner (that is, inversely to the output gap), but 21 years when it did not. Keynesian fiscal policy was more common in the period to 1974 than afterwards, which is consistent with the view that the conduct of fiscal policy changed in the mid-1970s. Fiscal policy was contra-cyclical in 14 of the relevant 25 years to 1974 (that is, over 55 per cent of the years), but in only eight of the relevant 20 years from 1975 to 1994 (that is, in 40 per cent of the years).

More rigorous econometric tests have also been performed, with the change in the cyclically adjusted PSFD regressed on the level of the output gap. It turns out that in virtually all of the equations – no matter which cyclical-adjustment assumptions or period are chosen – the coefficient on the output gap is not significantly different from zero. In other words, fiscal policy was not 'Keynesian', in the usually received sense, in the period from 1949 to 1994 as a whole or in the two sub-periods, 1949 to 1974 and 1975 to 1994. On the face of it, there was no such thing as 'the Keynesian revolution'. (See the appendix for a fuller statement of these results.)

V

The great majority of British economists undoubtedly believe that something called 'the Keynesian revolution' did happen. There is room for discussion about its precise meaning, for example, on the question of whether 'fiscal policy' is best defined as the change or the level of the budget deficit. But the essence of the supposed 'revolution' – that in and after the 1940s British fiscal policy (however defined) was used contra-cyclically in order to dampen fluctuations in output and employment, and maintain a high average level of employment – is well known.

This chapter has cast doubt on the historical accuracy of this widely held view. First, it has denied that Britain ever had a Keynesian revolution in the usually understood sense. In the 30 years from 1941 fiscal policy was not in fact conducted in a Keynesian manner, whatever leading politicians and economists claimed at the time. Much policy thinking in this era certainly was Keynesian, but theory and practice were a long way apart. Second, the chapter has tried to describe the shift in policy thinking away from Keynesianism in the mid-1970s. There is little controversy that a shift of some sort occurred, although again its exact nature can be discussed. As has been shown, the government's rationale for action to restrict the PSBR varied over the years. Sometimes the official argument relied on a presumed relationship between the budget deficit and monetary growth; at others it reflected more traditional concerns about the accumulation of excessive debt which would be expensive to service. But official references to fiscal policy as an instrument for cyclical stabilization were perfunctory or frankly dismissive.

The majority of British academic economists were unsympathetic to the shift in thinking about fiscal policy, with their discontents registered most famously in the letter of 364 economists to *The Times* after the 1981 Budget. The frankness of policy-makers' rejection of Keynesian precepts by the early 1980s ought perhaps to have encouraged these economists to examine the substance of 'the Keynesian revolution' with care and scepticism. Whether the official ending of the Keynesian period (if it deserves the title) is dated as happening in 1975, 1976 or 1979, the statistical evidence is that the unresponsiveness of fiscal policy to the state of demand was much the same before as afterwards.

At any one period a great variety of personalities are involved in economic policy-making. As they often come with different perspectives, it would be naïve to expect them to propound a single monolithic view of policy-making. Moreover, when the period of analysis is extended to a few decades, the cast of personalities changes, and no one canonical statement of theory and practice can bind them all. Keynes was a great man and a

benign influence on British economic policy, and it is understandable that British economists should want to pay homage to his *General Theory*. But the substance of policy-makers' actions may have little connection with their advisers' descriptions of strategic intent. More bluntly, what people do may be quite different from what they believe they are doing. The UK is the homeland of Keynesian thought, but in the actual conduct of British fiscal policy 'the Keynesian revolution' is and always has been an illusion.

NOTES

1. J.C.R. Dow, *The Management of the British Economy 1945–60* (Cambridge: Cambridge University Press, 1964), p. 178.
2. H. Stein, *The Fiscal Revolution in America* (Chicago, IL and London: Chicago University Press, 1969), p. 165.
3. Part of the explanation for the differences between Keynes and the Keynesians is to be sought in the complexity and obscurity of *The General Theory*. For example, while there can be little doubt that Keynes wished to promote fiscal policy relative to monetary policy, *The General Theory* says almost nothing about how exactly fiscal policy should be conducted. The American economist, Abba Lerner, tried to formalize the fiscal prescriptions implicit in *The General Theory* in his idea of 'functional finance' (that is, to run a deficit in a downturn and a surplus in a boom). But Keynes was critical of Lerner's proposals, asserting that functional finance 'runs directly contrary to men's natural instincts . . . about what is sensible'. R. Skidelsky, *John Maynard Keynes*, vol. 3, *Fighting for Britain 1937–46* (London: Macmillan, 2000), p. 276.
4. E.E.B. (Lord) Bridges, *The Treasury* (London: George Allen and Unwin, and New York: Oxford University Press, 1964), p. 90.
5. 'The Economy Report' and 'The Economy Bill', in D. Moggridge and Mrs E. Johnson (eds), *The Collected Writings of John Maynard Keynes*, vol. IX, *Essays in Persuasion* (London: Macmillan, 1972, originally published in 1931), pp. 101–5 and 145–9, originally based on articles published in *New Statesman and Nation* on 15 August and 19 September 1931.
6. B.E.V. Sabine, *British Budgets in Peace and War* (London: George Allen and Unwin, 1970), p. 300.
7. Ibid.
8. Dow, *Management of British Economy*, p. 198.
9. White Paper on *Employment Policy* (London: HMSO, 1944), pp. 25–6, paragraphs 77–9.
10. Bridges, *The Treasury*, pp. 93–4. The quotation is from p. 93.
11. Dow, *Management of British Economy*, p. 198.
12. I.M.D. Little, 'Fiscal policy', in G.D.N. Worswick and P.D. Ady (eds), *The British Economy in the Nineteen-Fifties* (Oxford: Oxford University Press, 1962), ch. 8, pp. 231–91. The quotation is from p. 251.
13. Dow, *Management of British Economy*, p. 161.
14. Little in Worswick and Ady (eds), *British Economy in Nineteen-Fifties*, p. 275.
15. Dow, *Management of the British Economy*, pp. 183–8. The quotations are from p. 183 and p. 187 respectively.
16. H. Brittain, *The British Budgetary System* (London: George Allen and Unwin, 1959), pp. 53–4. Brittain and Keynes clashed at meetings held in the Treasury in 1945 to prepare papers for the National Debt Enquiry. According to Peden (citing James Meade's papers, collected by Mrs Elizabeth Johnson and Donald Moggridge), Keynes told Brittain to his face that he was 'intellectually contemptible'. As Peden notes, the Sinking Fund for national debt – of which Brittain was apparently a defender – was not phased out until

1954, while the above-the-line/below-the-line distinction survived until the publication of an official paper on *Reform of the Exchequer Accounts* (Cmnd. 21014) in 1962. (See G.C. Peden, *Keynes and his Critics: Treasury Responses to the Keynesian Revolution 1925–46* [Oxford and New York: Oxford University Press for the British Academy, 2004], p. 12, p. 331 and pp. 349–50.) Peden also emphasizes in his book on the Treasury the durability of a doctrine introduced by Asquith in 1906 and 1907, that the only investments which should be financed by borrowing were those expected to produce a money return, and which would not rely on future taxation for the servicing of the borrowing involved. (Peden, *The Treasury and British Public Policy 1906–59* [Oxford: Oxford University Press, 2000], p. 39.) Tomlinson has said that in the 1950s 'day-to-day discussion of economic issues in government departments' was 'notable for extraordinary crudity'. (J. Tomlinson, *Public Policy and the Economy* [Oxford: Clarendon Press, 1990], p. 256.)

17. Brittain, *British Budgetary System*, p. 56.
18. Brittain, *British Budgetary System*, p. 43.
19. R.C.O. Matthews, 'Why has Britain had full employment since the war?', *Economic Journal*, vol. 78, September 1968, pp. 555–69. The quotation is from p. 556.
20. B. Hansen, *Fiscal Policy in Seven Countries 1955–65* (Paris: Organisation for Economic Co-operation and Development, 1969).
21. S. Brittan, *Steering the Economy* (Harmondsworth: Penguin, 1971), p. 455.
22. Dow, *Management of the British Economy*, p. 384.
23. S. Brittan, *The Price of Economic Freedom* (London: Macmillan, 1970).
24. W. Beckerman (ed.), *The Labour Government's Economic Record 1964–70* (London: Duckworth, 1972), p. 25.
25. D. Healey (later Lord Healey), *The Time of My Life* (London: Michael Joseph, 1989), p. 380.
26. Ibid., p. 382.
27. Ibid., p. 383.
28. See the papers, 'Monetarism and the budget deficit' and 'The analytical foundations of the Medium-Term Financial Strategy', in Tim Congdon, *Reflections on Monetarism* (Aldershot, UK and Brookfield, US: Edward Elgar for the Institute of Economic Affairs, 1992), pp. 38–48 and 65–77. A growing interest in a medium-term perspective can also be noticed in A. Budd, 'Economic policy and the medium term', in G.D.N. Worswick and F.T. Blackaby (eds), *The Medium Term: Models of the British Economy* (London: Heinemann, 1974), pp. 133–42.
29. See 'How Friedman came to Britain', in W. Parsons, *The Power of the Financial Press* (Aldershot, UK and Brookfield, US: Edward Elgar, 1989), ch. 6, pp. 172–202.
30. See the paper, 'The relationship between fiscal and monetary policy in the London Business School model', by A.P. Budd and T. Burns, in M.J. Artis and M.H. Miller (eds), *Essays in Fiscal and Monetary Policy* (Oxford: Oxford University Press, 1981), pp. 136–63. The quotations are from p. 136.
31. See 'Implementation and results of the strategy', in G. Maynard, *The Economy under Mrs. Thatcher* (Oxford: Basil Blackwell, 1988), ch. 4, pp. 58–92. But the claim on p. 65 that the MTFS had as its 'stated objective' a 'progressive . . . return to budget balance', is not correct. The balanced-budget goal surfaced in official statements much later, in 1988.
32. Maynard, *Economy under Mrs. Thatcher*, p. 66.
33. The quotation is from p. 56 of M. Friedman, 'Response to questionnaire on monetary policy', in House of Commons Treasury and Civil Service Committee (Session 1979/80), *Memoranda on Monetary Policy* (London: HMSO, 1980), pp. 55–62. As explained in note 11 to the Introduction, the author disagrees with Friedman's views on public finance.
34. HM Treasury, *The Next Ten Years: Public Expenditure and Taxation into the 1990s*, Cmnd 9189 (London: HMSO, 1984).
35. Nigel (later Lord) Lawson, *The View from No. 11* (London: Bantam Press, 1992), p. 812.
36. A. Budd and G. Dicks, 'A strategy for stable prices' *Economic Outlook* (Aldershot: Gower Publishing for the London Business School), July 1983, pp. 18–23.
37. Lawson, *View from No. 11*, p. 811.

38. Sir Terence Burns, *Managing the Nation's Economy – the conduct of monetary and fiscal policy*, given as South Bank Business School annual lecture (London: HM Treasury, 1996), p. 5. Burns's 1995 lecture – in which interest rates and fiscal policy were taken to be independent instruments – was a long way from his London Business School papers of the late 1970s in which the interdependence of fiscal and monetary policies had been emphasized.
39. '[T]here are very few practitioners who would argue that fiscal policy has no role to play at all in influencing demand . . .'. Burns, *Managing the Economy*, p. 5.
40. See, for example, S. Howson (ed.), *The Collected Papers of James Meade, vol. 1: Employment and Inflation* (London: Unwin Hyman, 1988), pp. 6–25, 'Public works in their international aspect', originally published in 1933.
41. A. Britton, *Macroeconomic Policy in Britain* (Cambridge: Cambridge University Press for the National Institute of Economic and Social Research, 1991), p. 215, but note Britton's warning on p. 217 that the cyclically adjusted public sector financial deficits 'do not identify policy acts, that is deliberate choices by government as distinct from the passive response of the system to events'.
42. F.W. Paish, *Studies in an Inflationary Economy* (London: Macmillan, 1962), p. 327.
43. For the introduction of the concept of the output gap, see the appendix to the Introduction. In the late 1980s and early 1990s the Organisation for Economic Co-operation and Development in Paris devoted some effort to preparing historical estimates of these gaps in its member nations. See C. Giorno et al., 'Potential output, output gaps and structural budget balances', *Economic Studies*, no. 24 (Paris: OECD, 1995).

STATISTICAL APPENDIX

The author would like to acknowledge the help received from Professor Kent Matthews of Cardiff Business School and Mr Stewart Robertson, senior economist at Aviva, in the preparation of this statistical appendix which is, in effect, a joint product of three authors. (Mr Robertson was working with the author at Lombard Street Research when the estimates were prepared.)

1. Collection and Estimation of the Data

Estimates of the 'output gap', the difference between the actual and trend level of national output expressed as a percentage of trend output, were the first requirement. The actual level of national output was measured by the office for National Statistics' series for gross domestic product at factor cost in 1990 prices, starting in 1948. Trend output was estimated by assuming that it was determined by the quantity and productivity of inputs of labour and capital. (This is sometimes known as the 'production function method', as production is represented as a function of inputs. The relative importance of the two inputs is calculated by assuming that their return is determined by their marginal products and their share in national output is equal to their quantity multiplied by the return. The income share in national output is assumed also to be their contribution to output. See C. Adams and T. Coe, 'A systems approach to estimating the natural rate of unemployment and potential output for the USA', published in the June 1990 *IMF Staff Papers*, for further discussion.)

Data for the labour force and the capital stock were supplied by the Organisation for Economic Co-operation and Development from 1963 onwards. A trend rate of growth of 'total factor productivity' (that is, the increase in the productivity of the two inputs) was obtained by smoothing the original figures by use of the Hodrick–Prescott filter. The use of the filter generates a potential output series with the characteristic that deviations of actual output from it sum to zero over the period as a whole. (Trend and actual output were equal in 1963. For years before 1963, when the OECD data for the capital stock and labour force were not available, trend output was estimated by taking a moving average.)

The Office for National Statistics publishes a series for the public sector's financial deficit back to 1948. In the chapter this deficit series was divided by gross domestic product at current market prices and multiplied by 100 to obtain the PSFD as a percentage of GDP. To calculate the change in the deficit/GDP ratio after cyclical adjustment, it was of course necessary to

estimate a cyclically adjusted series for the level of the deficit/GDP ratio. As explained in the text, two distinct sets of assumptions were used to estimate this series. In both cases it was assumed that the difference between the actual and cyclically adjusted deficit depended on the output gap, for which a calculated series had already been prepared. (See the previous paragraph for this calculation. If output is beneath trend, tax revenues are also beneath trend, whereas various items of public expenditure, notably social security expenditure, are above trend.)

The first assumption was that the PSFD was affected by the output gap only in the same year. For the years 1948 to 1979 the cyclically adjusted PSFD/GDP ratio, expressed as a percentage, was lower (higher) than the actual PSFD/GDP ratio by 0.4 per cent of GDP for each 1 per cent of GDP less than (above) trend; for the years from 1980 to 1994 the coefficient was increased from 0.4 to 0.5, to reflect the increased size of the state sector. The second assumption was that the PSFD was affected by the output gap in the current and previous year, because, for example, of delays in tax payments. The coefficients 0.25 and 0.45 were assumed to hold for the first- and second-year effects from 1948 to 1979, while in the period from 1980 to 1994 the coefficients became 0.33 for the first year and 0.7 for the second year. The formula for the calculation was

$$\left(\frac{DEF}{Y}\right)_t = \left(\frac{DEF}{Y}\right)^*_t - aGAP_t - (b-a)GAP_{t-1} \tag{4.1}$$

where DEF is the deficit, Y is gross domestic product, GAP is the output gap, a and b are the coefficients for the first- and second-year effects, and the asterisk denotes the cyclically adjusted value of the deficit/GDP ratio.

The estimates of the cyclically adjusted deficit/GDP ratio using the first set of assumptions are set out in Table 4.1; the estimates using the second set of assumptions are set out in Table 4.2. The justification for the sets of assumption used in the cyclical adjustment were provided in two studies. First, Bredenkamp (1988) suggested that the first- and second-year effects of a change in GDP relative to trend on the PSFD (as a percentage of GDP) were 0.25 per cent of GDP and 0.45 per cent of GDP. (See H. Bredenkamp, *The Cyclically-Adjusted Deficit as a Measure of Fiscal Policy*, Government Economic Working Paper, no. 102, April 1988.) Second, the Treasury updated Bredenkamp's paper in the winter 1990/91 issue of the *Treasury Bulletin* in an article on 'Fiscal developments and the role of the cycle', where it increased its estimates of the cyclical sensitivity of public finances and suggested the higher values of the coefficients, 0.33 and 0.7. (A further paper, *Public Finances and the Cycle*, was published as the *Treasury Occasional Paper No. 4* in September 1995.)

Table 4.1 PSFD as a percentage of GDP, both unadjusted and after cyclical adjustment according to first set of assumptions described in text

Year	Output gap as % of trend GDP	PSFD as % of GDP	Cyclically adjusted PSFD/GDP ratio, %	Change in adjusted PSFD/ GDP ratio, %
1948	−2.6	−2.3	−3.3	
1949	−3.3	−2.5	−3.8	0.5
1950	−1.6	−2.7	−3.3	−0.5
1951	−1.3	1.6	1.1	−4.4
1952	−3.0	3.5	2.3	−1.2
1953	−1.2	4.2	3.7	−1.4
1954	0.6	2.4	2.6	1.1
1955	1.9	2.0	2.8	−0.2
1956	0.5	2.6	2.8	0.0
1957	−0.3	2.4	2.3	0.5
1958	−2.7	2.0	0.9	1.4
1959	−1.0	2.3	1.9	−1.0
1960	1.5	2.7	3.3	−1.4
1961	1.0	2.7	3.1	0.2
1962	−0.8	2.8	2.4	0.7
1963	0.0	2.7	2.7	−0.3
1964	2.1	2.8	3.6	−0.9
1965	1.5	2.2	2.8	0.8
1966	0.3	2.2	2.3	0.5
1967	−0.7	3.6	3.3	−1.0
1968	0.8	2.1	2.4	0.9
1969	0.6	−1.0	−0.8	3.2
1970	0.1	−1.3	−1.3	0.5
1971	−0.6	0.6	0.3	−1.6
1972	0.0	2.4	2.4	−2.1
1973	5.2	3.7	5.8	−3.4
1974	1.8	5.6	6.4	−0.6
1975	−0.7	7.2	6.9	−0.5
1976	0.2	6.7	6.8	0.1
1977	1.1	4.2	4.6	2.2
1978	2.3	5.0	5.9	−1.3
1979	2.1	4.4	5.2	0.7
1980	−1.7	4.5	3.8	1.4
1981	−4.8	3.1	0.7	3.1
1982	−5.2	2.7	0.2	0.5
1983	−3.7	3.4	1.6	−1.4
1984	−3.9	4.0	2.0	−0.4

Table 4.1 (continued)

Year	Output gap as % of trend GDP	PSFD as % of GDP	Cyclically adjusted PSFD/GDP ratio, %	Change in adjusted PSFD/ GDP ratio, %
1985	−2.0	2.9	1.8	0.2
1986	−0.1	2.1	2.0	−0.2
1987	2.2	1.1	2.2	−0.2
1988	5.0	−1.4	1.1	1.1
1989	5.3	−1.0	1.7	−0.6
1990	3.8	0.3	2.2	−0.5
1991	−0.3	2.5	2.3	−0.1
1992	−3.3	6.3	4.6	−2.3
1993	−3.9	7.6	5.7	−1.1
1994	−3.0	6.6	5.1	0.6

Source: Office for National Statistics and see text.

Table 4.2 *PSFD as a percentage of GDP, both unadjusted and after cyclical adjustment according to second set of assumptions described in text*

Year	Output gap as % of trend GDP	PSFD as % of GDP	Cyclically adjusted PSFD/GDP ratio, %	Change in adjusted PSFD/ GDP ratio, %
1948	−2.6	−2.3	−2.9	
1949	−3.3	−2.5	−3.8	0.9
1950	−1.6	−2.7	−3.7	−0.1
1951	−1.3	1.6	1.0	−4.7
1952	−3.0	3.5	2.5	−1.5
1953	−1.2	4.2	3.3	−0.8
1954	0.6	2.4	2.3	1.0
1955	1.9	2.0	2.6	−0.3
1956	0.5	2.6	3.1	−0.5
1957	−0.3	2.4	2.5	0.6
1958	−2.7	2.0	1.2	1.3
1959	−1.0	2.3	1.5	−0.3
1960	1.5	2.7	2.9	−1.4
1961	1.0	2.7	3.3	−0.4
1962	−0.8	2.8	2.8	0.5
1963	0.0	2.7	2.7	0.1
1964	2.1	2.8	3.3	−0.6
1965	1.5	2.2	3.0	0.3

Table 4.2 (continued)

Year	Output gap as % of trend GDP	PSFD as % of GDP	Cyclically adjusted PSFD/GDP ratio, %	Change in adjusted PSFD/ GDP ratio, %
1966	0.3	2.2	2.6	0.4
1967	−0.7	3.6	3.4	−0.8
1968	0.8	2.1	2.2	1.2
1969	0.6	−1.0	−0.7	2.9
1970	0.1	−1.3	−1.2	0.5
1971	−0.6	0.6	0.4	−1.6
1972	0.0	2.4	2.3	−1.9
1973	5.2	3.7	5.0	−2.7
1974	1.8	5.6	7.1	−2.1
1975	−0.7	7.2	7.4	−0.3
1976	0.2	6.7	6.7	0.7
1977	1.1	4.2	4.5	2.2
1978	2.3	5.0	5.8	−1.3
1979	2.1	4.4	5.4	0.4
1980	−1.7	4.5	4.7	0.7
1981	−4.8	3.1	0.9	3.8
1982	−5.2	2.7	−0.7	1.6
1983	−3.7	3.4	0.3	−1.0
1984	−3.9	4.0	1.3	−1.0
1985	−2.0	2.9	0.7	0.6
1986	−0.1	2.1	1.3	−0.6
1987	2.2	1.1	1.8	−0.5
1988	5.0	−1.4	1.1	0.7
1989	5.3	−1.0	2.6	−1.5
1990	3.8	0.3	3.6	−1.0
1991	−0.3	2.5	3.8	−0.2
1992	−3.3	6.3	5.1	−1.3
1993	−3.9	7.6	5.1	0.0
1994	−3.0	6.6	4.2	0.9

Source: Office for National Statistics and see text.

The figures for the cyclically adjusted deficit/GDP ratio in the regression work (described below) related to calendar years and, as already noted, extended back to 1948. The Treasury has published its own estimates of the cyclically adjusted PSFD/GDP ratio on a fiscal year basis from 1963/64 to 1986/87. These estimates are compared with those of the authors in Table 4.3. The differences in the estimates are due to revisions to the data, different assumptions about the cyclical adjustment factor and different assumptions about the output gap.

Table 4.3 Public sector financial deficit estimates used in essay compared with the Treasury's own estimates

Year	Treasury unadjusted	Treasury cyclically adjusted	CSO unadjusted	Adjusted by first set of assumptions	Adjusted by second set of assumptions
1963/64	3.3	3.0	2.7	2.9	2.9
1964/65	2.3	2.8	2.7	3.4	3.2
1965/66	1.7	2.1	2.2	2.7	2.9
1966/67	2.6	2.6	2.6	2.6	2.8
1967/68	4.2	4.6	3.2	3.1	3.1
1968/69	0.8	0.9	1.3	1.6	1.5
1969/70	−1.7	−1.5	−1.2	−0.9	−0.8
1970/71	−0.4	−0.4	−0.8	−0.8	−0.8
1971/72	1.1	1.1	1.1	0.8	0.9
1972/73	3.0	2.8	2.8	3.3	3.0
1973/74	4.6	5.5	4.2	6.0	5.5
1974/75	6.7	7.4	6.0	6.5	7.2
1975/76	7.3	6.8	7.1	6.9	7.2
1976/77	5.7	5.1	6.1	6.3	6.2
1977/78	4.4	4.2	4.4	4.9	4.8
1978/79	4.8	5.1	4.9	5.7	5.7
1979/80	3.9	4.9	4.4	4.9	5.2
1980/81	5.0	5.2	4.2	3.0	3.8
1981/82	2.0	1.2	3.0	0.6	0.5
1982/83	2.9	2.3	3.0	0.6	−0.5
1983/84	3.7	3.5	3.6	1.7	0.6
1984/85	4.0	3.8	3.7	2.0	1.2
1985/86	2.3	2.1	2.7	1.9	0.9
1986/87	2.5	2.4	1.9	2.1	1.4

Note: All figures are percentage of GDP.

2. Statistical Relationships between the Change in the Cyclically Adjusted PSFD/GDP Ratio and the Level of the Output Gap

As argued in the text, fiscal policy would have been Keynesian if the cyclically adjusted PSFD/GDP ratio had increased when output was beneath trend (that is, there was a negative 'output gap') and decreased when output was above trend. The test is therefore to regress the change in the cyclically adjusted PSFD/GDP ratio on the level of the output gap for both estimates of the PSFD/GDP ratio and for all three time periods, that is, 1948–94, 1948–74 and 1975–94.

(a) Regression results using the first estimate of the cyclically adjusted PSFD/GDP ratio (that is, the PSFD is affected by the output gap in the current year only)

1948–94

$$DUND_t = 0.03 * OGAP_t + 0.293 * DUND_{t-1} \quad (4.2)$$

R-squared = 0.074; only the coefficient on the lagged dependent variable is significant.

Note that here and in the other equations $DUND_t$ is the change in the underlying (that is, cyclically adjusted) public sector financial balance (expressed as a percentage of GDP at market prices) and $OGAP_t$ is the output gap as a percentage of potential output. (If the public sector financial deficit falls from 2.3 per cent to 1.6 per cent of GDP, then $DUND_t$ takes a value of 0.7).

1948–74

$$DUND_t = 0.048 * OGAP_t + 0.358 * DUND_{t-1} \quad (4.3)$$

R-squared = 0.095; only the coefficient on the lagged dependent variable is significant.

1975–94

$$DUND_t = 0.022 * OGAP_t + 0.149 * DUND_{t-1} \quad (4.4)$$

R-squared = 0.031; only the coefficient on the lagged dependent variable is significant.

In none of the three equations for the different periods was the coefficient on the output gap term significant.

(b) Regression results using the second estimate of the cyclically adjusted PSFD/GDP ratio (i.e. the PSFD is affected by the output gap in the current and previous year)

1948–94

$$DUND_t = 0.112 * OGAP_t + 0.319 * DUND_{t-1} \quad (4.5)$$

R-squared = 0.141; only the coefficient on the lagged dependent variable is significant.

1948–74

$$DUND_t = 0.09 * OGAP_t + 0.448 * DUND_{t-1} \tag{4.6}$$

R-squared = 0.163; only the coefficient on the lagged dependent variable is significant.

1975–94

$$DUND_t = 0.148 * OGAP_t + 0.055 * DUND_{t-1} \tag{4.7}$$

R-squared = 0.17; neither coefficient is significant.

Again, in none of the three equations for the different periods was the coefficient on the output gap term significant. (It is curious that the six coefficients on the output gap terms are in fact all positive, whereas they ought to have been negative if policy had been on Keynesian lines. But, as the coefficients are all small and none of them is statistically significant, not too much should be made of this.)