MACROECONOMICS AND HISTORY

Andrew Britton*

The *Review* is pleased to give hospitality to CLARE Group articles, but is not necessarily in agreement with the views expressed. Members of the CLARE Group are M.J. Artis, T. Besley, A.J.C. Britton, W.A. Brown, W.J. Carlin, J.S. Flemming, C.A.E. Goodhart, J.A. Kay, R.C.O. Matthews, D.K. Miles, C.P. Mayer, M.H. Miller, P.M. Oppenheimer, M.V. Posner, W.B. Reddaway, J.R. Sargent, P. Seabright, Z.A. Silberston, S. Wadhwani and M. Weale. Drafts of this article have been discussed among members of the Group, but responsibility for the views expressed rests with the author alone.

Macroeconomic behaviour varies according to the character of the policy regime. There is therefore no truly 'general' theory which will apply at all times and in all places. Over the past hundred years, one model may be appropriate to the period of the gold standard, another to the interwar years, another to the so-called 'Golden Age' after the Second World War, and so on. Expectations, which depend on confidence in the regime, determine the stability of both prices and output. Institutions also adapt in ways that may support, or ultimately undermine, the foundations of the policy regime.

Introduction

The relation between economics and history was keenly debated a hundred years ago (Keynes, 1891). According to the historical school at that time the laws of economics are different in different countries and in different historical periods. The analytical school, however, sought to build economic theory on axioms of individual rationality which might be of very general application. So far as microeconomics is concerned, or Walrasian general equilibrium theory, it was the neoclassical axiomatic approach which prevailed, and it has constituted the mainstream of economics to this day. Yet the history of the twentieth century demonstrates again and again that economic behaviour can vary fundamentally from one time to another.

The contention of this paper, and of the book on which it is based (Britton, 2001), is that macroeconomics must relate to a particular time and place if it is to be of practical value. There are no answers to the most important questions posed in this branch of economics that are generally correct. The macroeconomics of America or of Europe is not the same as that of Japan, Russia or China. The macroeconomics of the 1930s, or even of the 1970s, is not the same as the macroeconomics of today.

It will, no doubt, be readily agreed that the behaviour of economies will depend on institutional differences: on the openness to trade, the size of the public sector, the influence of trades unions and so on. The particular point to be made here is that economic behaviour reflects the character of the policy regime. It will be argued that the stability of the economy depends crucially on perceptions of the regime in place. Institutions adapt to the regime in ways which may either support or weaken it. This will be illustrated with examples from the history of the past hundred years.

For much of that century, battle was joined between the Keynesians and the monetarists. They held very different views both about the behaviour of the macroeconomy and about the appropriate policy regime. It looked as if the debate might in principle be settled if research could uncover a better understanding as to how the economy in fact always behaves. One side would be proved right, and the other proved wrong. If, however, the behaviour of the economy itself adapts to the regime in place, then it is quite possible to say of the Keynesian and the monetarist school that each is right in its own context – and that in the other context each is wrong.

This methodological issue is very important when assessing the possible implications of a change in policy regime, asking whether the existing or the alternative regime is more appropriate to a particular economy. If the new regime would be very different in character from the old one, then one must look beyond the consequences which could be foreseen if the behaviour of the economy remained the same. One must ask how expectations will change, and how well the new regime will be trusted. How will institutions adapt to the new policy environment? These are highly topical questions at the

* E-mail: Andrew@britton55.fsnet.co.uk

present time, as Britain debates whether to join the European monetary union.

Macroeconomic theory

For present purposes macroeconomics is defined to include the determination of inflation and of nominal exchange rates, of fluctuations in the level of output and employment over the cycle, but not the determination of productive potential and the trend of output in the longer term. Macroeconomic policy means the use of monetary and fiscal instruments to achieve objectives for macroeconomic variables, principally inflation and unemployment.

The character of macroeconomics, as a distinct and separate branch of economics, reflects its origins in the 1930s. It began as a revolt against the failure of classical theory to explain the dramatic and disastrous events of the interwar years. It became a distinct sub-discipline, having its own method as well as its own subject area. It tended to view the economy as a kind of machine, capable of control by an expert engineer. It was not committed to the axioms of rationality or to the methodological individualism of the classical tradition.

When he wrote the *Tract on Monetary Reform*, Keynes (1923) expressed this revolt very eloquently in an often-quoted aphorism. It is worth quoting the passage more fully:

> 'If, after the American civil war, the American dollar had been stabilised and defined by law at 10 per cent below its present value, it would be safe to assume that [the quantity of money] and [the price level] would now be just 10 per cent greater than they actually are and that the present values of [the velocity of circulation and the reserve ratio] would be entirely unaffected. But this *long run* is a misleading guide to current affairs. *In the long run* we are all dead. Economists set themselves too easy, too useless, a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again.'

Later, when he wrote the *General Theory*, Keynes concluded that the classical long run would never come at all. He came to regard involuntary unemployment as consistent with a kind of equilibrium, although one characterised by market failure. He then regarded classical theory, not just as incomplete and irrelevant, but actually as wrong.

It was not until the 1960s that macroeconomists generally felt it necessary to re-unify economics by building the 'micro-foundations' of their models. Macroeconomics was then understood as a theory mainly about disequilibrium, about the behaviour of the economy when adjustment was incomplete. As this work continued, it reached the point where some questioned the need for macroeconomics to be treated as a distinct topic at all. By the 1980s Lucas (1987) could write:

> 'The most recent developments in macroeconomic theory seem to me describable as the re-incorporation of aggregate problems such as inflation and the business cycle into the framework of 'microeconomic theory'. If these developments succeed the term 'macroeconomics' will simply disappear from use and the modifier 'micro' will become superfluous. We will speak simply, as did Smith, Ricardo, Marshall and Walras, of economic theory.'

Such economic theory derives a simple but profound conclusion from the rationality of consumer and producer behaviour: the level of prices, and even its rate of change, is of little or no significance for real variables like output, employment and relative prices, once adjustment is complete and all agents have full information. Beyond that, it has to be said that no great progress has been made in answering the questions that most concern macroeconomists, about the interaction of real and monetary variables when adjustment is not complete.

We still have no satisfactory theoretical account of nominal inertia – the time that it takes for the price level to adjust in proportion to a policy-induced change in the quantity of money or the exchange rate. We cannot give an adequate account of wage setting, within a framework of rationality and individual optimisation. We cannot describe how expectations of inflation are formed at times of radical uncertainty, when agents have no means of calculating the likelihood of different outcomes. We do not have a fully articulated model which shows what turns a recession into a lasting depression. We have many rival theories of the origin of trade cycles, all based on orthodox microeconomic accounts of producer and consumer optimisation, but none which has won general support.

Applied macroeconomics

In place of a full understanding of the determination of economic aggregates securely based on reliable theory,

we have developed a great deal of 'expertise'. We have plenty of experience to draw on, derived from the very different behaviour of different economies at different periods of time. We can say, of a stock market crash, that this is more or less severe than that of 1929; we can say how a rise in oil prices compares with that of 1974. We can categorise events even if we cannot explain them. We can also report that, as a rule, inflation tends to rise in years when unemployment falls; sometimes, at least, a rise in interest rates seems to deter consumers from spending, and so on. Such observations are the basis for applied, as opposed to theoretical, macroeconomics. The danger is that such 'rules of thumb' come to be regarded as if they were unchanging laws of nature – until such time as they are broken.

The problem is that the economy does not stay the same long enough for one to estimate its properties reliably. Most applied macroeconomics uses time series rather than cross-section data. The methods used really require many decades, perhaps centuries, of data generated by an unchanging structure. The parameter estimates keep changing, perhaps because they are inaccurate, being based on samples that are too small, but also because the true values themselves change during the estimation period. Estimated models provide a very necessary framework for a practical discussion of the outlook and policy options, but at the best they tell us how the world has worked in the recent past; they do not necessarily tell us how it will work in the future.

Economic history

Unlike most economists, most historians do not claim to provide an account of events which is grounded either in axiomatic theory or in the discovery of empirical laws. Instead they offer a narrative, a story which gives shape to the past and perhaps an interpretation of some of its mysteries. One could certainly do that for macroeconomics, and it is the most that many people would expect to be possible. It is important that each new generation, especially each new generation of policymakers, should know what has happened before.

This does not mean, however, that all macroeconomics should or can be reduced to history. It needs to remain an analytical subject, but one with a historical base. In more formal language, what is sought is a theory that treats economic institutions and macroeconomic policy as, in part, endogenous (Hood, 1994). The truly exogenous events which determine macroeconomic outcomes would then include political developments, wars, technological change, and so on. One could then ask why some macroeconomic regimes proved robust whilst others did not, and whether institutional adaptations favour the survival of regimes or not.

This paper, accordingly, continues with a historical account of the sequence of policy regimes in the twentieth century. This is followed by two more analytical sections, devoted to expectations and to the ways in which institutions can adapt.

To 'Utopia' and back: policy regimes of the twentieth century

The account here will concentrate on events in Britain and in America, with reference where appropriate to events elsewhere in the world. Charts 1 and 2 show the course of inflation and of unemployment through the century in those two countries.

The Gold Standard

At the start of the twentieth century, before the First World War, all the main currencies of the world were defined (directly or indirectly) in terms of gold. Their exchange rates were therefore fixed. Governments did not have, or need to have, any macroeconomic policies, or even monetary policies, at all. America did not even have a central bank until 1913. The prevailing philosophy was 'laisser faire'. The economy, national or international, was largely left to run itself.

Rates of inflation were generally low: the trend of the price level after 1900 was gradually upwards, but in some years it fell. Interest rates hardly moved from year to year. Output was rising, especially in America, as industrialisation was still under way. Unemployment levels were around 5 per cent, with some variation from year to year. Economic conditions were not perfect, but it is not surprising that this period was viewed for much of the twentieth century with a good deal of nostalgia.

These were the years when neo-classical economics was formalised and codified. It described an equilibrium system with self-correcting properties. It was demonstrated that, within this framework, 'supply creates its own demand', so that persistent 'under-consumption' is not possible. There were those who questioned this proposition, but they were regarded as heretics and troublemakers (Hutchison, 1953).

The main opposition to this consensus came from the

Chart 1. Unemployment

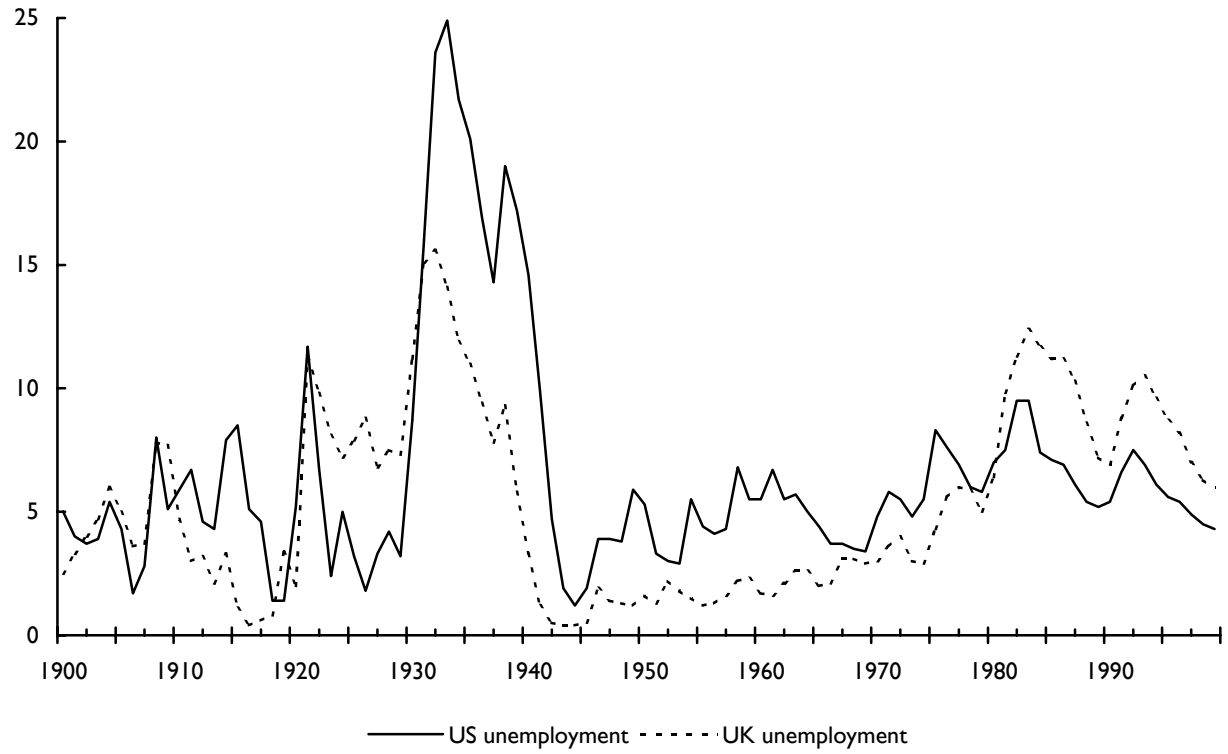
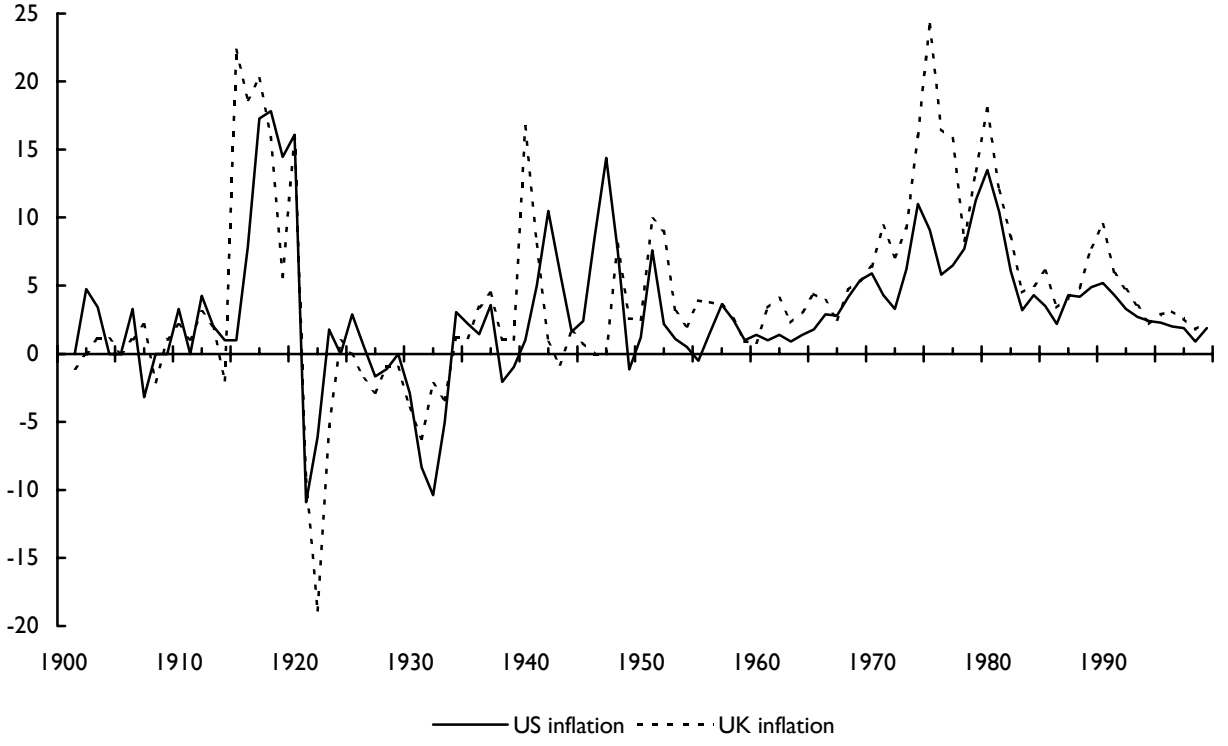


Chart 2. Inflation



radical socialists, who did not believe in the market at all. In general, criticism was muted because the market system could be seen to work so well. It showed that it could survive despite wars and growing international tensions, despite industrial disputes and banking panics. In their famous monetary history of the United States, Friedman and Schwartz (1963) had this to say about the years before the first World War:

> 'The blind, undesigned, and quasi-automatic working of the gold standard turned out to produce a greater measure of predictablity and regularity – perhaps because its discipline was impersonal and inescapable – than did deliberate and conscious control within institutional arrangements intended to promote monetary stability'.

Certainly the experience of those years suggests that, in some circumstances at least, macroeconomic policies are not essential.

The First World War and after

The First World War changed all this. Governments took powers to mobilise their economies in total. The gold standard was effectively suspended and most countries, even non-belligerents, experienced rapid inflation. Unemployment fell close to zero. Some economists immediately welcomed the wartime regime and hoped it would continue in peacetime. Denis Robertson (1915) added these words to the preface of his book on the trade cycle, completed just as the war broke out:

> 'The start of war is awakening men to a sense of the economic realities which, unless the nation and civilisation perish in the interval, may form the prelude to a less thoughtless and anarchic industrial age.'

In the event, the end of the war was followed by a period of economic upheaval for the victors and chaos for the vanquished. After a period of extreme political instability, Germany, in the early 1920s, descended into hyperinflation. Speculation in currency and other financial markets became a way of life for some, and a necessity for others. It was several years before any semblance of order was restored. Then the determination almost everywhere was to restore the pre-war regime, not to make permanent the planned economy which had been invented so as to win the war.

The revived gold standard of the 1920s could not operate in quite the same way as the 'classical' model, but it did work rather well for a short time. Price levels stabilised, after a sharp fall in most countries. Output grew and employment expanded in some countries. There was no reason to suppose that the market system was heading for disaster.

The Great Depression

Yet disaster came in the 1930s. The Wall Street crash may have been the trigger for recession, but the depth and duration of the depression probably owed more to the banking failures in America and in Europe. One wave of panic after another hit the world economy. The market system failed, at a macroeconomic level. Unemployment reached 25 per cent in America, 30 per cent in Germany. The self-correcting mechanisms seemed to be out of action. It was as if the whole world was caught in a giant trade cycle that had no recovery phase. Nothing in classical or neo-classical economics had warned that this could happen. It was out of this experience that Keynesian macroeconomics was born.

The policies of demand management advocated by Keynes (1936) in the 'General Theory' were intended to preserve the free market, not to replace it. Unlike many other writers of his time, he was not an advocate of comprehensive economic planning or regulation. One quotation makes this clear:

> 'Whilst, therefore, the enlargements of the functions of government, involved in the task of adjusting to one another the propensity to consume and the inducement to invest, would seem to a nineteenth-century publicist or to a contemporary American financier to be a terrific encroachment on individualism, I defend it, on the contrary, both as the only practicable means of avoiding the destruction of existing economic forms in their entirety and as the condition for the successful functioning of individual initiative.'

A very clear distinction is being made here between macroeconomic and microeconomic policy, one not made by all of Keynes' disciples, or perhaps even by Keynes himself on all occasions. The market is still to be free to allocate resources, whilst the state takes care of aggregate demand.

Keynes supported his policy programme with a new theory to replace classical and neo-classical economics, which he claimed was applicable to all circumstances, not just those of his own time. The economy could be in

equilibrium without full employment; indeed full employment could be maintained only by a happy accident if governments did not take control. The level of output depended on effective demand, on the propensity to consume and on the inducement to invest. A new set of diagrams, or equations, was invented to formalise the new model by Keynes' interpreters. It was this 'new economics' which became the new orthodoxy after the Second World War.

The Second World War and after

Where most progress in fact took place towards restoring full employment in the 1930s it was due more to rearmament than to any new economic theories or to 'casting off the fetters' of the gold standard (Eichengreen, 1995). Then came World War Two. As before, war ensured jobs for all in a regulated and planned economy. As before, there were those who said that these regulations and plans should be continued after the war was won. This time they had their way, at least in Britain and some other European states. Indeed, not long after the war it seemed to many as if nearly all the world was being run by socialists. This is how Paul Samuelson (1948) put it in the first edition of his college textbook:

> 'After World War I, democratic governments were set up all over Europe. By 1927 the future of the capitalistic way of life appeared serene and assured. After World War II, the outlook is radically changed. Socialist governments are in power in England, in France, in all of Scandinavia, in all the Balkans and Eastern Europe. . . . Only the United Stares remains as an island of capitalism in our increasingly totalitarian and collectivised world. Even here the scene is drastically changed in the direction of strengthened powers of government over economic activities. The capitalistic way of life is on trial . . .'

He revised that text substantially in the next edition, but it shows how the world looked to a reasonably detached observer in 1948. There were those who expressed much deeper foreboding. In 1944 Hayek had published 'The Road to Serfdom', in which he argued that democracy and personal freedom would inevitably be lost if the state took control of the economy. He referred to socialism as 'the great Utopia', and warned that increasing the powers of government, however good the motive for it, would result in the end in a Fascist tyranny. Happily events proved him wrong.

Demand management was part of this postwar policy regime. Governments learnt the techniques of economic forecasting and national income accounting. They were committed, more or less precisely, to the maintenance of full employment by means of monetary or fiscal policy. They subscribed to the 'new economics' being taught in the universities. But, ironically, one looks in vain for any examples of incipient recessions being corrected by vigorous expansionary measures. Demand was adequate most of the time, indeed it was sometimes excessive. The danger was one of inflation, or balance of payments deficit, much more often than of deficient demand.

In this new policy environment, classical economics was being declared obsolete. In the second edition of Samuelson's textbook, the quantity theory was relegated to an appendix. It was, at best, of historical interest. The theoretical case for the neutrality of money was nowhere explained. The long run, in that sense, would never arrive.

The Golden Age

The years from 1950 to 1965 have often been called 'The Golden Age'. Full employment was maintained, along with rapid growth in output and improvement in living standards. A contemporary verdict by Christopher Dow (1964) was:

> 'In terms of its fundamental aim – the desire so to manage the economy as to prevent the heavy unemployment that accompanied the pre-war trade cycle – modern economic policy has clearly been a success.'

Few would deny today that economic performance (taking the West as a whole) was, for whatever reason, better at that time than at any other in the twentieth century.

There was, it is true, increasing anxiety at the steady rise in the price level. Inflation was not very high in any major country, but it was persistent and tending, very gradually, to speed up. The 'new' economics of the time did not associate this with the growth of the money supply, but with the pressure of demand in the labour market. The way to hold back inflation, without sacrificing full employment, was to require or persuade trades union leaders to moderate their claims.

There was, moreover, a monetary discipline still in place, which may have done much to keep the consensus in being. The Bretton Woods international monetary

system was a compromise between fixed and floating exchange rates, intended to get the best of both regimes. But national monetary authorities usually resisted pressure to devalue, ensuring that inflation above that of other countries would result in a loss of competitiveness, and a threat to jobs.

It was believed by many at this time that there existed a stable relationship between the level of unemployment and the rate of inflation – generally known as the Phillips curve. Policymakers faced what they thought might be a stable 'trade-off'.

It was in accord with the view of economics as engineering which prevailed at the time and it became the centrepiece of econometric models. It was, in subsequent years, to prove hopelessly unreliable.

Policy failure

In popular belief the troubles of the next decade are sometimes blamed on the action of OPEC in raising the price of oil. But the adverse trends were evident some years earlier. The underpinnings of the prosperity in the 1950s and 1960s had been removed by the beginning of the 1970s: the political consensus had been broken, by polarisation both to the left and to the right; the discipline of Bretton Woods had also been relaxed.

The result was a failure of macroeconomic policy on all fronts at once. In the 1970s inflation went over 10 per cent in America, over 20 per cent in Britain; and unemployment rose by about 5 percentage points in both countries. In 1977 the OECD published the report of an international group of experts, chaired by Paul McCracken, who had led the US Council of Economic Advisors (OECD, 1977). They said:

> 'It will be difficult to combine rising employment and capacity utilisation with a further reduction in the rate of inflation . . . To bring inflation progressively down to an acceptably low level will therefore require skilful and determined use of monetary and fiscal policy and, where appropriate, of prices and incomes policy.'

Increasingly the view was being expressed that the combination of full employment and price stability was actually *impossible* to secure, no matter how much skill and resolve the fiscal and monetary authorities might possess. The use of prices and incomes policies to bring the two targets into line was looking less and less promising.

This was the background to the monetarist 'counter-revolution' in macroeconomics. Keynesian economics did not give an adequate account of the process of inflation. The fundamental propositions of classical economics about the difference between nominal and real quantities had to be recognised again. The rate of inflation is a nominal variable, determined by other nominal variables, not by real variables like the level of unemployment. The 'long run' had arrived at last.

The neo-liberal restoration

The postwar regime crumbled in the 1970s and was replaced by a new regime in the 1980s. The main emphasis was on reducing, even eliminating, inflation. This was to be done by keeping the money supply under strict control. The growth and fluctuations of output, the level of unemployment, and all other real variables were to be left to take care of themselves, or else to be addressed by policies better described as microeconomic than macroeconomic.

This re-design of macroeconomic policy was one part of a much wider movement in political philosophy. Just as the beginning of demand management coincided with the nationalisation of parts of industry, so its end went with a programme of privatisation.

The trades unions, which had been partners in the 'corporate' approach to government, were now viewed as hostile. The heated controversy within the economics profession at this time has to be seen as an expression of a more general debate going on about what governments can and ought to do.

Monetarist doctrines proved difficult to apply in practice. The theory might be convincing, but where was the real-world counterpart to the concept of money? The classical economists of the nineteenth century had recognised the difficulty, but it mattered much less to them as, under the gold standard, no-one was actually required to control the quantity of money, or even to measure it. In the complex and sophisticated financial markets of the late twentieth century any number of different monetary aggregates could be monitored, and their movements proved very different from one another. When one definition was selected in preference to the others, it proved very difficult to keep it under control.

These technical problems were not quite fatal to the new regime. It was possible to save the philosophy of mon-

etarism whilst shifting the emphasis away from actual control of the money supply. Instead, monetary policy could be directed towards targets for some other nominal variable which was easier to define and observe. This might be an exchange rate, as in the European exchange rate mechanism, or the rate of inflation itself, as in the United Kingdom and elsewhere.

At first the new regime seemed to bring worse disaster than the one that it replaced. In the 1980s inflation remained a serious problem, whilst the trend in unemployment went on up. Yet, at the end of the century a much brighter picture could be drawn. With the exception of Japan, the major economies of the world were enjoying a period of exceptional prosperity. Inflation was no longer a serious problem, even if price stability in the strict sense had not been fully achieved. Unemployment had at last come down in America and in Britain. It remained very high, over 10 per cent on average, in Europe as a whole. The explanation often given for this continuing failure was that trades unions were still too powerful, and social security systems too generous: that the new 'liberal' approach had not been applied rigorously enough in the labour market (OECD, 1994).

This approach to economic policy, even when it was called 'the third way', relied on the efficiency of the market. Governments should work with the market, not attempt to replace it. Often, indeed, the purpose of intervention should be to make the market work better. The alternative philosophy which had been dominant for much of the century, whether it was called 'socialist', 'Keynesian' or 'Utopian', was widely seen as discredited. The heat had gone out of the argument, because the new regime seemed to be working so well.

Confidence and expectations

The success and failure of regimes

In the twentieth century there were two, possibly three, peacetime periods when the macroeconomy seemed to be running smoothly, two when it was not working well at all. The good years were before the First World War, and for a generation after the second. One could add the closing years of the century to that list, although it is too soon to say how long this period of prosperity will last. The bad years were between the two world wars, and the period of policy failure which followed the postwar Golden Age.

It is immediately obvious that one cannot associate the good times with one kind of policy regime and the bad times with another. One cannot, for example, say that the free market succeeds whilst planning and controls do not – but the converse is not true either. Within our very small sample of policy regimes we have examples of free market success and free market failure, of planned economy success and planned economy failure. History does not seem to support the more enthusiastic advocates of either class of regime.

The lesson of history might rather be that the macroeconomy works well at times when a regime is well established, unquestioned and expected to continue. It works badly in periods of transition and uncertainty. It does not seem to matter so much what kind of regime is in place, or the direction in which transition is heading. There may well be a reinforcing feedback involved here. If a regime is working well then it is less likely to be questioned, and it will be expected to endure. The confidence that this promotes will itself make the regime more successful. On the other hand, a regime which is in trouble will lose support, and the resulting loss of confidence will further damage economic performance. Such ideas, very familiar from other aspects of individual and social behaviour, may deserve a more central place in macroeconomics than they have now.

Confidence and trust

The concept of trust is, of course, familiar to economists in many different contexts. One will only engage in trade if one has a minimum of trust in the honesty of other parties. Principals need to place some trust in their agents, and employers need to trust their employees – and so on. Confidence in a policy regime is related to such trust, although clearly it is not quite the same thing.

One element in macroeconomic confidence is, indeed, the expectation that the authorities will do as they say. If they promise to keep the money supply under control, then they can and will succeed in doing so. If they say that they will use fiscal and monetary measures to manage aggregate demand, then this is their true intention and they have the means to carry it out.

Another element depends on beliefs about how the economy itself behaves: the severity of the shocks that are likely to hit it, and how robust it will be in responding to them. This can be modelled as a problem of rational decision making under uncertainty. If agents are averse to risk, as is commonly assumed, then they will

be more cautious in their behaviour the greater the margin of error around macroeconomic forecasts. Sometimes it may seem more appropriate to speak of public moods of general optimism or pessimism. Consumer confidence may be dented by some shocking event, even if there is no logical connection between that and their own future incomes. The world just seems to be a more threatening place.

We need also to distinguish an element in macroeconomic confidence which depends on popular perceptions of economics itself. The beliefs of economists, however arcane the language in which they are first expressed, do become public knowledge, particularly amongst those whose perceptions can most influence market behaviour. A regime benefits from having a good economic theory to support it, a plausible account of how it will work.

Confidence in financial markets

In financial markets, analysts distinguish between confidence factors and the fundamentals, the former tending to dominate in the short term and the latter in the long term. This may correspond, if only loosely, with the distinction between equilibrium and disequilibrium made in most economic theory. Thus the fundamentals for the stock market would be the discounted value of future dividends, whilst the confidence factors include misapprehensions, irrational sentiments and speculative bubbles. At least in the case of the stock market the fundamentals can be securely built on a general equilibrium model of real variables. The ground may be less secure when nominal magnitudes are involved.

The determination of exchange rates is a notoriously difficult issue, both in theory and in practice. Yet it is at the centre of open economy macroeconomics. Here the distinction between confidence factors and fundamentals can be difficult to make, and equilibrium may be difficult to define. The history of the twentieth century provides many examples of regimes which were supposed to fix exchange rates, but did not do so in fact, and of attempts to influence exchange rates which were supposed to be floating.

The equilibrium value of a real exchange rate depends on real variables, related to the balance of trade or real rates of return. Thus a currency may be described as under- or over-valued. But real rates may adjust either by movement in nominal rates or by movement in relative domestic prices. The implication of classical theory is that relative prices will eventually adjust to validate any level of the nominal exchange rate if it is really fixed for ever.

The fundamentals in the case of nominal exchange rates relate to the determination of the monetary authorities. Since no central bank has sufficient reserves of foreign exchange to resist the market for ever, or no concern at all at the implications for their domestic economy, the sustainable nominal rate must be a rate that the market will believe is sustainable – in other words a matter of confidence. Under floating exchange rates similar considerations apply. Equilibrium depends on the commitment of the authorities to a target for the price level or a monetary aggregate, and on the credibility or perceived realism of the domestic monetary regime.

Confidence and the rate of inflation

One could say that in some financial markets confidence is all. Taking monetary policy as endogenous, the same could be said of the rate of inflation, and of the level of prices and wages set in the markets for goods and for labour. Relative prices, of course, are real variables, but pricing decisions have also to take account of nominal variables and monetary conditions. In some circumstances, a general expectation of inflation can be self-fulfilling, as is demonstrated by many episodes in the last hundred years.

The reverse can also be true. A general expectation of lower inflation can help to bring it about. Thus the requirement of inflation convergence as the European monetary union came into being, coupled with the political will to bring it about, changed perceptions of what was possible in some countries within a remarkably short time.

The proposition that the growth of the money supply is the sole determinant of inflation is not incompatible with this emphasis on confidence and trust. Often it expresses a belief about how monetary policy should be conducted, rather than an observation of how it has been conducted in fact. It is easy to control the money supply when inflation is low, sometimes impossible when inflation is high. There are examples of monetary reforms which have been successful, and of others which have not. Credibility, or confidence, is again of the essence.

Today, central banks have targets for the rate of inflation at which they aim when setting short-term interest rates. The methods are described in mechanical terms,

similar to those once used to describe demand management in the Keynesian tradition. Forecasts are made, and the necessary adjustment of the instrument variable is calculated from a behavioural model. Yet, one suspects that the effects of interest-rate changes depend largely on how they are perceived, and on how they affect expectations. It is more a matter of sending the right signal than of pulling a lever or turning a dial to the correct setting.

Confidence and the business cycle

The equilibrium values of real variables such as unemployment and the level of output depend on real factors, on the 'fundamentals'. But the amplitude of the fluctuations in these same variables within a business cycle depends on confidence and on business sentiment. This suggests an interpretation of Keynesian economics as an account of real and monetary disequilibrium, in which confidence is of paramount importance.

In the *General Theory* confidence is recognised to be crucial. Investment depends, perhaps on the rate of interest, but much more on expectations about the prospect for recovery, and even on something quite irrational, called 'animal spirits'. The rate of interest may not adjust to clear the market for savings and investment because it is governed by norms and expectations about what rate will be sustainable in the future. A fall in money wages may help to restore employment – if only to the extent that it 'produces an optimistic tone in the minds of entrepreneurs'.

The problem with this as a truly 'general' theory is that recessions are so often followed by recoveries; for many years the economy functioned well enough without any intervention by governments to manage aggregate demand. Descriptions of the business cycle written before the First World War emphasise confidence factors in explaining both the rise and the fall. The downturn often followed what was called a commercial crisis, and this could at first threaten the stability of the system as a whole, as for example in 1906. But provided that enough people kept their nerve the crisis would pass and conditions would be calm again.

One finds a similar analysis of cycles in much more recent times. Christopher Dow (1998), for example, attributed the downturn in Britain in the early 1990s mainly to a loss of confidence following the over-expansion of bank lending in the preceding boom. That crisis was also followed by a strong recovery.

How then does one explain the Golden Age, when full employment was maintained with such modest fluctuations in output? It was not just the extra demand resulting from reconstruction, not just the removal of barriers to trade. Neither was it the skill of a new generation of economists advising governments. It was rather the confidence which most people felt in the ability of governments to stabilise activity, even though that ability had never been put to the test (Matthews, 1958). The analogy with financial markets is quite close. A commitment that is sufficiently credible will be easy to fulfil.

Confidence and rational expectations

This treatment of confidence as being crucial to macroeconomics draws on the extensive discussion of commitment in the literature about monetary policy of the last twenty or thirty years, associated with the hypothesis of rational expectations. The problem with that hypothesis has always been that agents must be assumed to have access to a true model of the economy, even though few professional economists would make that claim for themselves.

Suppose, however, that the crucial features of the macroeconomy depend *only* on confidence. Suppose that the exchange rate, the price level and the rate of economic activity will all be stable if, and only if, they are confidently expected to be so. Then there is, in this context, no uniquely true and independent model of the economy for agents to discover. If they believe, for whatever reason, that the economy will be stable, then they will make it so. If they doubt its stability, then a period of trouble and turbulence will follow until a new regime can be established, complete with a new model of the economy to back it up. There is no unique equilibrium if the policy regime is itself regarded as endogenous. If the new theory is believed, then it may well, in its most important respects, become the truth.

The 'Lucas critique', as originally stated, made the point that the parameter values of an estimated macroeconomic model would change if a new regime was established (Lucas, 1976). Those values reflected the way in which expectations about policy had been formed in the estimation period. Thus expectation about inflation could be determined by the growth of the money supply under one regime, by the exchange rate under another. The argument can be taken further. Expectations about the behaviour of the economy are regime-dependent as well as expectations about policy itself. The so-called 'deep parameters', which are said to be unchanged

across regimes, may be so very deep as to be irrelevant to most of the questions that macroeconomists ask. One reason for this is that institutions, as well as expectations, adapt.

The adaptation of institutions

All the key relationships which make up a macroeconomic model must reflect the institutions of the economy that they describe. The consumption function will depend on the access that households have to credit; the wage equation will depend on the degree of unionisation in the labour market; the price equation will depend on the degree of competition amongst manufacturers and amongst retailers – and so on. The central questions of macroeconomics, concerning the interactions of real and nominal variables, must be answered differently for different times and places. It seems right therefore for macroeconomists to devote attention to the way in which institutions themselves change and adapt. That should, in some very broad sense, be part of their model.

A formal theory might in principle be devised to show what forms of institution and contract would be optimal in different circumstances from the point of view of each of the parties involved. This might be shown to depend on such factors as different rates of time preference and different attitudes to risk. This will not be attempted here. The approach will instead be historical, drawing on the many examples of institutional change that can be found in the last century. We shall be particularly interested in the way in which institutions adapt to different policy regimes.

History is important, not least because some of the changes may be irreversible. Sometimes the response to a new situation is like a new invention, or the learning of a lesson that will not be forgotten. The experience of the First World War could be described in this way. The world could never be the same again. No-one knew beforehand how a modern economy could be organised for warfare, or how the citizens could co-operate to deliver the maximum war effort. New ways of doing business were discovered. It would not be possible after the war was over to revert to the old patterns as if nothing had happened at all.

This section of the paper will concentrate on four areas of adaptation, by no means covering all the possible topics, but indicating the importance of this approach. The areas chosen are indexation, banking practices, wage bargaining and globalisation. In each case the question will be asked whether adaptations have been such as to strengthen or to weaken the regime in place.

Indexation

It is assumed in theory that expectations of inflation will be taken into account when the terms are agreed for any contract extending into the future. The price level, of itself, is of no significance to the well-being of any individual, so bargains will be struck in real terms. There is, however, relatively little evidence of this happening in the first half of the twentieth century. The general expectation may have been that prices were as likely to go up as to go down.

The indexation of wages such as existed at this time was designed to protect employers. Wages in some trades were set on a scale related to the selling price of output, miners' wages for example being related to the price of coal. As output prices fell, nominal wages were in fact cut, a development widely regarded as unfair. The concept of indexation was somewhat discredited, and the downward rigidity of nominal wages was seen as a reasonable aspiration.

Attitudes changed as inflation became more persistent after the Second World War. Wage indexation, at first informal, became a regular feature of bargaining in the latter half of the century. A cost-of-living increase came to be expected each year, although its size might still be a matter for negotiation. As inflation speeded up in the 1970s, compensation was sometimes written into contracts in advance, or the gap between settlements became shorter. The 'threshold' agreements introduced into wage bargains in Britain in 1972 were held responsible for a particularly rapid subsequent wage–price spiral.

Did this adjustment help or hinder the regimes under which it took place? In the interwar years it was much debated whether the downward flexiblity of wages could preserve full employment. Certainly the requirement to cut the wages of miners could be presented as a means of preserving their jobs. But it could also be argued that an increase in the real value of wages would help to restore demand by boosting consumer incomes. It must remain an open question whether the inertia of wages prior to the Second World War made the market system more or less stable.

The verdict may be easier to reach in relation to the Golden Age. It was generally agreed in the postwar

years that full employment could be maintained only if wage settlements were moderate, that is lower than market conditions might have allowed. The danger of a wage–price spiral was never far away. It was reduced by the practice of giving compensation for inflation in a form that was delayed, and not always complete. Estimates at the time suggested that a general increase in prices (other things being equal) caused an increase in wages which was less than one-for-one (Brown, 1985, chapter 8). As indexation became more formal that coefficient crept up towards unity. Once exchange rates were allowed to float the feedback from wages to prices was complete. The consequent rise in inflation brought that regime to an end.

Banking

The inter-relation of institutions and policy regimes is especially close in banking and related activities. The method by which the authorities can control the money supply (however defined) or dictate interest rates must depend on the structure of money markets. Thus it was argued in Britain in the early 1980s that monetary base control was technically impossible (Britton, 1991).

Under a free market regime, competition amongst banks and other financial intermediaries should provide an efficient market for the determination of relative interest rates and a reliable transmission mechanism by which monetary measures can affect output or the price level. Under a regime of planning, the banks become partners with the authorities in controlling the quantity of credit and even its destination. This collaboration is simpler if the banks are few in number and not too actively in competition with each other. Accordingly the history of banking in the twentieth century is broadly one of increasing regulation in the first forty years and one of decreasing regulation in the last forty years.

In practice competitive banking is not always an unmixed blessing under a free market regime. It cuts the costs of transactions, but this facilitates lending which may be imprudent or destabilising. Writing in 1935, Hicks said that by reducing costs of speculation, 'capitalism is its own worst enemy, for it imperils the stability without which it breaks down' (Hicks, 1935). The behaviour of the banking sector frequently threatened macroeconomic stability in the nineteenth century, and on at least one occasion in the 1900s. It led to a call for greater regulation, and in the United States to the creation of the Federal Reserve System. But there were signs that institutional adaptation might have taken place even without government intervention. As small banks failed, they were taken over by bigger and safer banks. The very big banks were learning to co-operate in a crisis, for example through the clearing house in New York.

Yet, despite the invention of the Federal Reserve, despite a perceived need for prudence and co-operation, the collapse of banks in America and in Continental Europe was a major factor in the length and depth of the Great Depression. It is significant that in Britain, where the structure of banking was different, the depression was not so severe. The exposure of banks to macroeconomic risk is greater the more closely they are involved with business and commerce. This relationship had been very effective in providing finance for innovation and growth in the nineteenth century. It was an initially favourable adaptation to the regime which ultimately proved disastrous.

Turning to the later part of the twentieth century, the deregulation of credit was followed by renewed concern over the stability of banks and their role in the stability of the economy as a whole. In domestic economies, for example in Britain, banks competed vigorously to lend to households and firms in the 1980s. There may not have been major bank failures in the subsequent recession, but harsh cutback in the availability of credit and the high level of private bankruptcy clearly increased its severity.

Is there then a risk of repeating the banking crises of the 1930s? The problems of international banks in the 1980s were potentially serious enough for that. Some very large institutions came close to failure as a result of imprudent lending to governments overseas. The crisis was contained on this occasion and lessons were learnt which might reduce the likelihood of a recurrence. It required the intervention of both national and international agencies. Prudential control of financial institutions was adapting to the new, more liberal, macroeconomic regime. It is still too soon to say whether that adaptation has been a complete success

Labour markets and trades unions

The economics of labour markets is a subject in its own right, but their structure and behaviour are also of great importance to macroeconomics. Clearly an economy working according to the principles of neoclassical general equilibrium theory needs labour markets which clear. Such flexibility means that workers have to ab-

sorb some at least of the shocks to which the economy is subject: in bad times their wages will fall, or else they will be out of work whilst they look for another job. Macroeconomic risk is thus passed to individuals and households which may be ill-placed to face it, having neither assets to run down nor good access to credit. They may well conclude that the market system does not work well for them.

The growth of the trades union movement in the nineteenth century can be seen as a reaction against the free market regime by some of those who saw themselves as its victims. But it also owed much to the particular circumstances of the time: a particular phase of industrial development required large groups of workers to combine in teams; an increase in the concentration of ownership suggested that workers needed more than just local representation. There seems no reason to conclude that increasing unionisation is a universal or inevitable result of a free market regime. In the twentieth century it has, in fact, been most marked in the public sector, where market forces are least in evidence. It has been encouraged by the practice of negotiation with labour representatives at government level during two world wars.

Certainly the effect of unionisation has been to make the labour market less responsive to macroeconomic conditions. By the middle of the century, wages were very 'sticky', at least in a downwards direction. Unionisation also made it more difficult to lay off workers when demand was weak. Thus the reaction of employment to the cycle became more gradual and less pronounced.

It was suggested in the 1930s that the growth of unionisation had made the market system less robust, and hence had contributed to the Great Depression. Alvin Hansen (1932), before he became a Keynesian, blamed the instability of the American economy on increased 'organization' and 'social control':

> 'Control of certain aspects of economic life, whilst at the same time other fields remain quite unregulated, may throw the whole machinery out of gear and cause violent disturbances in the economic system. The tension and strain placed on the internal price structure, in consequence of a general fall in prices, is increased in the measure that institutional arrangements and government regulations prevent, or render difficult, the adjustments without which a new equilibrium in the entire price system cannot be reached.'

That seems to mean, amongst other things, that unions should not be allowed to hold wages up in a recession.

Trades unions may or may not have contributed to the failure of the market economy in the 1930s, but they certainly gained from its replacement, in some countries, by a more regulated regime. Indeed the co-operation of the trades unions was probably indispensable in what has been called the Golden Age. If real wages had been left to find their own level in the labour market, the demand for labour would have been cut back. The national leaders of trades unions in Britain and elsewhere were consciously accepting lower real wages for their members in the interests of full employment, perhaps even of persistent excess demand.

The withdrawal of this co-operation was one reason why the Golden Age came to an end. Perhaps the government promise of maintaining full employment became so credible that unions no longer felt that it required their help. Certainly something like that was being argued in the 1970s. The increasing industrial and political power of trades unions was an institutional change resulting from a planned regime. This adaptation, like some others, proved in the end to be damaging to the regime itself.

Globalisation

The macroeconomics of an open economy is not the same as that of one which is closed. This is one case in which the institutional environment is generally acknowledged to be crucial to the theory. But the degree of openness is usually treated as something fixed, dependent on geography, culture or politics, rather than something which might itself adapt to a particular policy regime. This assumption might be reassessed in a historical context.

In the early years of the twentieth century the expansion of world trade was considerably faster than the growth of world output. Investment capital was very mobile: the British were financing railway construction in Latin America, the French in Russia, for example. Money moved easily across national boundaries, notably across the Atlantic – or rather under it, using the new telegraphic cable.

All this went into reverse from the beginning of the First World War until the end of the Second. The response of national governments to the global Great Depression was to restrict trade and regulate capital flows. Trade

partners were redefined as competitors. Each government could be responsible only for its own unemployment.

From the 1950s, as restrictions were lifted, world trade again outpaced the growth of world output. The term 'globalisation' came into use towards the end of the century, claiming that the process of integration had been completed over much of the world. The barriers to trade and capital flows had indeed been lowered, if only for some products and between some countries. It remains true, however, that the barriers to labour migration are still very high, higher than they were in the nineteenth century.

To what extent has this pattern of opening, closing, and then re-opening, been the consequence of changes in regime? It is very likely that the gold standard operating before the First World War did much to encourage both trade and capital flows. The fact that exchange rates were fixed must itself have been a great convenience. It also eliminated one of the major risks associated with investment overseas. The well developed world market for commodities must also have helped to stabilise some national economies, as well as the world economy as a whole. One could at this time see the growth of international linkages as an institutional development tending to reinforce the regime.

The contraction of trade in the interwar years was due to political as much as economic events. Microeconomic policy measures, notably trade restrictions, were introduced in an attempt to cope with a macroeconomic policy failure. It may well, however, have been in part a reaction by firms to the uncertainty of exchange rates, as well as the threat of capital controls. It seemed the patriotic thing to do to buy locally when one could.

Nowadays it is argued by some that the existence of a single currency is necessary if Europe is really to be one market. Again, the degree of openness of national economies depends on the choice of regime. The degree of economic integration within the monetary union then justifies its existence and increases its benefit. The more closely the member countries are connected by trade, the less likely it is that they will get out of phase in the business cycle, suggesting a need for different countercyclical interest rate moves.

The globalisation of capital markets provides unlimited funds for speculation against vulnerable currencies. As controls were lifted this hastened the downfall of the Bretton Woods system. It also frustrated attempts to manage exchange rates once they were set free to float. By the end of the century, the effectiveness of intervention in exchange markets was questioned and 'adjustable peg' regimes were widely regarded as unworkable. The only viable options appeared to be free floating or some form of monetary union. But the movement of capital seems to limit the freedom of manoeuvre of governments, whatever exchange rate regime they adopt.

During the transition from high to low inflation in the 1980s and 1990s the need for floating, or at least adjustable, exchange rates was clear enough. Some countries progressed towards price stability with more determination and success than others. Now that all the major countries of the world have much the same low rate of inflation, the need for exchange rate flexibility on this account is much less. Those who want to see true globalisation might now be arguing for the creation of a single currency for the world. That would indeed take us back to the beginning of the twentieth century story.

Conclusions

One generalisation seems reasonably safe. In macroeconomic policymaking 'nothing succeeds like success'. A regime, whatever its character, is strengthened by a record of achievement and endurance. Failure may result from external events, internal evolution, or a combination of the two. In the twentieth century at least there were always plenty of political shocks to threaten economic stability. Sometimes they were absorbed without too much disruption, but at other times they caused a collapse of confidence that proved catastrophic to the policy regime. Some reasons for the different outcomes may well be found in institutional adaptation. Although this has sometimes strengthened an existing regime, it is at least as likely to destroy it. As a consequence one might predict that no regime will last for ever.

Macroeconomics aspires to be a scientific subject, like physics or engineering. Thus one could envisage a debate between rival political philosophies, in which the economist could take part as an objective, detached technical advisor. During the twentieth century the big question in macroeconomics was how far governments should take control, how far they should leave the economy alone. This sounds like an 'engineering' ques-

tion which an economist could answer better than anyone else.

It now appears that the role of the economist is not so simple. There is a range or spectrum of alternative patterns for the relationship between the state and the market. Each pattern implies its own institutional adaptation, so that the behaviour of the economy is not the same in each case. Moreover each regime, given a chance, will generate confidence in its own success. That confidence will also change behaviour, supporting the regime in place and making it much more robust. But once that confidence is lost, no regime can survive. One cannot say, in purely engineering terms, that one regime is any better than another.

Very similar reasoning can be applied to other policy debates. Perhaps the most profound macroeconomic question for Britain today is whether to join the European monetary union, or not. There is no simple engineering answer to that question either. If the regime changes, the British economy will adapt. There will be institutional changes, for example in banking, in labour markets and in patterns of trade, which may strengthen or weaken the new regime. The conditions set by the Treasury as the basis for a decision whether to go into the monetary union refer to features of the economy which would all change if did so. The same can be said of the criteria suggested by optimal currency area theory (Artis, 2000). There may also be a shift of opinion, after the event, such that what once seemed impossible soon seems inevitable. Whether we, as a nation, would be richer or poorer as a result no-one will ever know.

REFERENCES

Artis, M. (2000), 'Should the UK join EMU?', *National Institute Economic Review*, January.

Brown, A.J. (1985), *World Inflation Since 1950*, Cambridge, Cambridge University Press.

Britton, A. (1991), *Macroeconomic Policy in Britain*, Cambridge, Cambridge University Press.

—(2001), *Monetary regimes of the Twentieth Century*, Cambridge, Cambridge University Press.

Dow, J.C.R. (1964), *The Management of the British Economy*, Cambridge, Cambridge University Press.

—(1998), *Major Recessions*, Oxford, Oxford University Press.

Eichengreen, B. (1995), *Golden Fetters*, Oxford, Oxford University Press.

Friedman, M. andSchwarz, A. (1963), *A Monetary History of the United States*, Princeton, Princeton University Press.

Hansen, A. (1932), *Economic Stabilisation in an Unbalanced World*, New York, Harcourt Brace.

Hayek, F.A. (1944), *The Road to Serfdom*, reprinted 1986, London, Routledge and Kegan Paul.

Hicks, J.R. (1935), 'A suggestion for simplifying the theory of money', *Economica.*

Hood, C. (1994), *Explaining Economic Policy Reversals*, Milton,Keynes, Open University Press.

Hutchison,T.W. (1953), *A Review of Economic Doctrine*, *1870–1929*, Oxford, Oxford University Press.

Keynes, J.M. (1923), *Tract on Monetary Reform*, London, Macmillan.

—(1936), *The General Theory of Employment, Interest and Money*, London, Macmillan.

Keynes, J.N. (1891), *The Scope and Method of Political Economy*, London, Macmillan.

Lucas, R. (1987), *Models of Business Cycles*, Oxford, Blackwell.

—(1976), 'Econometric policy evaluation – a critique', in Brunner, K. and Melzer, A. (eds), *The Phillips Curve and Labor Markets*, North Holland.

Matthews, R.C.O. (1958), 'Why have we had full employment since the war?', *Economic Journal.*

OECD (1977), *Towards Full Employment and Price Stability*, Paris, OECD.

—(1994), *The Jobs Study Report*, Paris, OECD.

Robertson, D. (1915), *Study of Industrial Fluctuations*, London, King and Son.

Samuelson, P. (1948), *Economics*, 1st edition, New York, McGraw Hill.