

THE DEBATE ON FINE-TUNING : THE BASIC ISSUES

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'Fine-tuning' can be defined as frequent discretionary adjustments to policy instruments. This article attempts to isolate this issue from a multiplicity of criticisms directed at UK economic policy-making. The attack on fine-tuning itself by the New Cambridge and the Manchester monetarist schools is shown to be connected essentially with the view that the economy is stable (i.e. returns to equilibrium in the absence of discretionary intervention). Nevertheless, even if the economy is stable, optimal control theory suggests that policy adjustments could be desirable, essentially because they could, at least in principle, speed the return to equilibrium. A more fundamental question concerns the way in which the private sector form their expectations; if they are 'rational', that is based on information at least as good as the authorities', then the grounds for discretionary intervention by the authorities are greatly diminished. These issues all require further empirical investigation.

Introduction

In recent years, much of the comment on economic policy has been directed to 'fine-tuning'. Criticism takes the form of a general attack on attempts to fine-tune the economy and blames many of our current misfortunes on it. As is often the case, a number of separate issues have become confused in the general argument and this note attempts to clarify the essential ones.

Fine-tuning is a relative rather than an absolute description of the conduct of economic policy, but a widely accepted definition would be 'frequent discretionary adjustments to policy instruments'. Those who criticise fine-tuning are arguing that policy adjustments are too frequent. (A rule-governed approach to economic management, e.g. 'let the money supply grow by 2 per cent a quarter', might involve frequent adjustments but they would not be discretionary as far as the money supply was concerned.) Fine-tuning in this sense is generally but not necessarily associated with the attempt to minimise fluctuations in target variables (for example, unemployment). As practised in the United Kingdom it reached an extreme form in the two years between the spring budgets of 1973 and 1975 when there were five major fiscal packages (quite apart from changes in monetary policy and the successive stages of the policy against inflation).

Criticisms of the general idea of fine-tuning should be clearly distinguished from criticisms of particular policy decisions. For the general question there are two sources of debate. The first relates to the choice of objectives, the second relates to beliefs about how the economy behaves. We can examine the two separately and then consider the significance in this context of two recent contributions to the discussion of economic policy—the 'New Cambridge' views and

the revival of 'monetarism'. We shall see that the essential debate concerns whether the economy is stable or not.

The objectives of economic policy

Disagreements about objectives can relate to the utility trade-off between different objectives at a particular time or to the trade-off of outcomes through time. Both can lead to disputes about the desirable frequency of policy changes.

The simplest case arises when there is disagreement about the cost associated directly with policy changes. Those attaching high costs to such changes will oppose fine-tuning. A second straightforward case arises when opponents of fine-tuning attach less importance to fluctuations in a particular economic variable than do the policy makers. To give an over simplified example, critics might be indifferent to the level of unemployment over a range of 1 per cent whereas policy makers may attach a cost to all deviations from the desired level.

Associated with the criticism of fine-tuning is the view that policy makers devote too much attention to the short-term. For example, the Expenditure Committee commented in its Ninth Report:

'Nevertheless we gained the impression that short term considerations still predominate in Treasury thinking and we are inclined to believe that they predominate too much, with adverse effects on the economy.'⁽²⁾

Yet an objective function which attached greater weights to future outcomes would only lead to less frequent adjustments of policy instruments *if* the model is stable, since only then would more distant outcomes respond less to shocks than nearer outcomes. Hence this criticism is critically linked to the view that the economy is stable and the apparent dispute about

⁽¹⁾I am grateful for helpful comments to Michael Beenstock and Patrick Minford.

⁽²⁾'Public expenditure, inflation and the balance of payments', *Ninth Report from the Expenditure Committee, Session 1974*. HC 328, para 22. Italics in original.

objectives is secondary. It is also unlikely that there is serious disagreement about objectives generally.

The behaviour of the economy

If the policy makers are basing their interventions on a mistaken model of the economy they are unlikely to achieve their policy objectives. They may indeed be increasing the instability of the economy and harming economic performance. Most critics of fine-tuning claim that the policy makers do have a mistaken model. However, for the general debate on fine-tuning, the relevant questions on the behaviour of the economy are how predictable it is and how stable it is.

One source of criticism arises from the belief that we know too little about the behaviour of the economy to control it, more precisely that the costs associated with fine-tuning are greater than the benefits from improved economic performance. Yet in practice most economists would agree that in the short run (i.e. over a 1–2 year horizon) their preferred relationships had a degree of unpredictability. The disagreement is about the stability of the economy. If the economy will adjust to its equilibrium state of its own accord (according to the 'official model'⁽¹⁾ it will not, except by chance), then intervention is *prima facie* unnecessary and could make matters worse.

Both the predictability and the stability of the economy are of course issues to be resolved empirically.

The 'New Cambridge' School

The versions of the New Cambridge economics and of monetarism to be discussed are those presented in evidence to the Expenditure Committee in 1974 by Mr W. A. Godley and his associates and by Professor D. Laidler. They are not necessarily the final or the only version of either approach, but that particular presentation was important since it was directly related to the conduct of economic policy and the Committee's report (which endorsed their views) received wide attention.

The evidence presented by Mr Godley and his associates⁽²⁾ centred on a criticism of official forecasting. They argued that official forecasters have failed to recognise the existence of a stable relationship between the disposable income of the private sector *as a whole* (i.e. the personal sector and the

company sector) and its expenditure (excluding stockbuilding). The relationship⁽³⁾ was presented as a contrast to the way in which official forecasters are assumed to view the economy. Mr Godley drew attention in particular to the implications for the company sector. The equation states that if the disposable income of companies is changed by 100, and nothing else is changed, there will be a change in total private expenditure (not necessarily by companies) of 95 within two years. Mr Godley asserted that official forecasters, by contrast, treat company expenditure separately from personal expenditure and believe that changes in company income have little effect on company expenditure (and hence little effect on total private expenditure).

If Mr Godley is right on this point and the official forecasters are wrong, policy mistakes will be made. However, we are concerned here with the general implications for fine-tuning and we can assume, for the purposes of argument, that Mr Godley's aggregate relationship is correct and that it forecasts aggregate private expenditure better than methods hitherto used by official forecasters. The two key properties of the relationship are that the marginal propensity to spend out of private disposable income is close to one, and the process of adjustment of expenditure to income (or *vice versa*) is substantially completed within two years. The conclusion drawn is as follows:

'The proposition that private expenditure as a whole is dependent on private income as a whole necessarily implies that no component of private expenditure exerts an independent ('exogenous') net influence on the level of output or fluctuations in it.'⁽⁴⁾

Further Mr Godley argues that, by chance, past fluctuations in world trade have not generally caused fluctuations in domestic output. Thus government policy has been the main destabilising force.

Thus Mr. Godley's equation provides two grounds for attacking the conduct of economic policy. The first is that official forecasters have the wrong model, the second is that the economy is in fact stable (apart from the admitted possibility of changes in world trade). It is the second that is relevant to a general attack on fine-tuning. The equation suggests that autonomous changes in private investment, for example, have not caused fluctuations in output.

It can immediately be argued that the equation does not itself establish that the economy is stable. An important omission from the system is stockbuilding.

'Changes in the book value of stocks were tried as an additional variable because of the possibility that stocks generate, more or less automatically,

⁽¹⁾See H. P. Evans, C. J. Riley and J. R. Shepherd, 'The Treasury short term forecasting model', *Government Economic Series Occasional Paper*, no. 8, 1974, reprinted in G. A. Renton (ed.), 'Modelling the Economy', S.S.R.C., Heinemann, 1975.

⁽²⁾The written evidence was given in 'Public expenditure and the management of the economy', memorandum by Francis Cripps, Wynne Godley and Martin Fetherston. For brevity the views are henceforward attributed to Mr Godley alone, though he would be the last to claim sole authorship.

⁽³⁾The precise equation is to be found on p. 40, in Mr Bispham's article (Editor's note).

⁽⁴⁾Godley, para. 15.

(net) borrowing. The co-efficient was very significant and close to unity suggesting a significant exception to the principle that changes in total expenditure will closely follow changes in private disposable income.⁽¹⁾

Stockbuilding is, of course, one of the most volatile items of expenditure and has been regarded as one of the dominant factors in the business cycle. One could equally argue that changes in bank advances and hire purchase can be an independent source of fluctuations in expenditure though in the past they have been very much under the control of the authorities. Still within the framework of the single equation it could be argued that changes in the relationship between wages and prices can, because of the differences between company taxation and personal taxation, generate fluctuations in disposable income, and hence in expenditure.

In the wider context of a complete economic system cycles could be generated through the overseas sector even if world trade grew steadily. Changes in domestic inflation could (with a fixed exchange rate) cause changes in export volume which could in turn cause changes in domestic output and inflation. The lags could readily generate a cycle in domestic output.

However, if fine-tuning in the past has been directed towards stabilisation of the private sector and if Mr Godley is correct in arguing that it has its own built-in stability, he has provided an important general argument against fine-tuning.

Manchester 'monetarism'

The evidence presented to the Expenditure Committee by Professor Laidler, like that of Mr Godley, centred on the argument that officials misunderstand the behaviour of the economy; it is based on extensive work carried out over the past five years in the Manchester Inflation Workshop.⁽²⁾ In brief he argued that official forecasting concentrates on the direct effects of variations in fiscal policy, i.e. the changes in the government's demands for goods and services and the changes in tax-payers' demands, but neglects the indirect effects of the monetary changes that usually accompany such variations in fiscal policy.

This appears to be a straightforward case of disagreement about the behaviour of the economy. As we have suggested earlier, this would not necessarily provide an argument against fine-tuning as such. Professor Laidler, however, made a specific point

about the effects of monetary variables. They are subject to 'long and difficult-to-predict time lags and involve a complex dynamic interaction of income, employment, inflation and the balance of payments, the processes involved in which are only crudely understood.'⁽³⁾ We thus have a criticism of fine-tuning which is different from that made by Mr Godley. Professor Laidler's conclusions were:

'Such policies [towards macroeconomic stability] should rely heavily on controlling the rate of monetary expansion and they should also be based on a clear recognition that it is impossible in the current state of knowledge to 'fine-tune' the economy on a year by year basis.'⁽⁴⁾

No one expects fine-tuning to succeed exactly; Professor Laidler's remark that it is impossible presumably means that the errors will be considerably larger than policy makers are led to expect. Hence the actual benefits from fine-tuning may be considerably smaller than the cost. However, it seems doubtful that short-term forecasting errors are as much at issue as errors in recognising the longer-term path of the economy.

In the longer-term context the Manchester school of monetarism argues that the economy is stable provided the money supply is itself not destabilised by the authorities' attempt to hold unemployment below the 'natural' rate (if this does occur, this school would predict eventual hyperinflation, followed by a return to the natural rate through the route of economic collapse). As mentioned earlier, this does provide a general argument against fine-tuning, but if the return to the natural rate of unemployment is extremely slow, frequent intervention may still be justified to accelerate it.

Optimal control

The framework in which economic policy is conducted for short-term demand management generally involves a conditional forecast on the basis of unchanged policies, evaluation of the outcome according to the policy makers' utility function and adjustment of policy instruments, if necessary, to achieve a preferred outcome. The use of optimal control methods for economic management would involve two changes to this approach.⁽⁵⁾ First, the policy makers' utility function would be embodied explicitly in the forecasting model and would determine the choice of instruments; second, the choice of

⁽¹⁾Godley, para. 14.

⁽²⁾For an account of some recent work, see Malcolm R. Gray, Michael Parkin and Michael T. Sumner, 'Inflation in the United Kingdom: causes and transmission mechanisms', paper for University of Manchester S.S.R.C. Research Programme, 'Inflation: its causes, consequences and cures', 1975.

⁽³⁾A brief note on fiscal policy, inflation and the balance of payments', memorandum submitted by D. E. Laidler, *Minutes of Evidence*, p. 50.

⁽⁴⁾Laidler, p. 50.

⁽⁵⁾For a discussion in the UK context, see D. A. Livesey, 'Optimising short-term economic policy', *Economic Journal*, vol. 81, 1971, p. 525.

instruments would explicitly take account of the uncertainty of the forecasts.

The technical problems in making this approach operational are massive but it could provide a framework for resolving some of the issues related to fine-tuning. The control approach could in principle incorporate the current official model or either of the rival models described here. Differences about objective functions and about the degree of uncertainty could be made explicit. The control approach as such might or might not involve a change in the frequency of instrument changes for a particular model but it would allow a more precise examination of the rather vague assertions that fine-tuning is wrong because there is 'too much concentration on the short term' or because 'there is too much uncertainty'.

Rational expectations and the rationale for intervention

Up to this point the discussion has proceeded on the assumption that it is necessarily desirable for policy makers to increase the economy's stability if they are able to do so. The important question about the behaviour of the economy is then as we have seen whether and at what speed it returns to equilibrium; both the New Cambridge economics and Manchester monetarism present models which could on this assumption justify intervention to speed the return to equilibrium. Yet the assumption itself depends critically on the notion that, while the policy makers armed with the model can recognise the equilibrium and the path to it, the actors in the economy cannot. In other words economic agents other than the Government do not have 'rational expectations'.⁽¹⁾ Yet, if on the contrary private agents have information as good as the policy makers they will make their own (optimal) adjustments to such shocks as changes in world trade. Macro-economic intervention can

⁽¹⁾In the sense of John F. Muth, 'Rational expectations and the theory of price movements' *Econometrica*, vol. 29, no. 3, 1961, p. 315, that expectations are based on all the available information, including that about the workings of the economic system itself. Thomas J. Sargent, 'Rational expectations, the real rate of interest, and the natural rate of unemployment', *Brookings Papers on Economic Activity*, no. 2, 1973, p. 429, shows how a macro-economic model in which expectations are formed rationally, may be solved and manipulated.

then only be justified where private costs diverge from social costs as a result of cyclical developments; and such divergences are not easy to establish. The appropriate role of Government is then to minimise the unpredictability of its actions (as would occur for example by following a monetary rule), because greater uncertainty will slow down the return to equilibrium. Hence the acceptance of rational expectations, while it leaves open the possibility that intervention could increase the stability of the system, critically weakens the normative case for intervention. The view that expectations are rational has now been adopted by the Chicago school of monetarism,⁽²⁾ whereas according to the Manchester school expectations are formed 'adaptively' on the basis of current and past values of the variable to be forecast. Whether expectations are rational or adaptive is another question requiring empirical investigation,⁽³⁾ though it is theoretically implausible that economic agents should deliberately ignore information that is generally available and this would suggest that expectations are at the very least partly rational.

Conclusions

The arguments about fine-tuning begin from a fundamental disagreement about the stability of the economy in the absence of any government intervention. The critics, whether New Cambridge or Monetarist, maintain that it is stable; the defenders that it is not. Optimal control theory suggests however that even if it is stable instruments should be adjusted at intervals to increase its natural stability. But more fundamentally still, if expectations in the private sector are based on information as good as that available to the authorities, and so are 'rational', then the case for discretionary intervention is seriously weakened. The issues raised require further empirical investigation for their ultimate resolution.

⁽²⁾See for example, Milton Friedman, 'Unemployment versus inflation', *Institute of Economic Affairs Occasional Papers*, no. 44, 1975. For a British view antedating this, see A. A. Walters, 'Consistent expectations, distributed lags and the quantity theory', *Economic Journal*, June 1971.

⁽³⁾See Eugene F. Fama, 'Efficient capital markets: a review of theory and empirical work', *Journal of Finance*, May 1970, for a review of some of the evidence.