SWEDISH ECONOMIC POLICY REVIEW 5 (1998) 353-382

The interaction of aggregate-demand policies and labour market reform

Charles R. Bean *

Summary

The paper considers the interaction between aggregate demand policies and labour market reform. We first argue that a modestly accommodating macroeconomic policy stance can help ensure that the gains from structural reform accrue quickly, and note that it will be difficult for countries that will be adopting the euro to pursue such a policy unilaterally. We then consider how the change in macroeconomic policy regime, implied by European monetary union, affects the incentives for structural reform. We note that there are arguments running both ways, so it is unclear whether on balance monetary union will increase or decrease the incentive to initiate reform. However, we also argue that the inability to pursue a suitably complementary macroeconomic policy and to ensure that the gains from reform come through as quickly as possible will definitely make it politically harder to implement reform. Finally we note that different reforms are more likely at different stages of the business cycle.

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The causes of, and cures for, Europe's horrendously high unemployment have led to an extensive theoretical and empirical literature[1]. Whilst there are still many unresolved and contentious issues in this area, it is generally accepted that part of the solution must be structural reform to labour markets, such as less generous unemployment benefits (particularly the duration for which they are payable), lower firing costs, and so on. But reform, although perhaps desirable on efficiency grounds, is often not so easy to implement because it almost invariably has distributional consequences that are unfavourable for some. Furthermore the pains of reform usually precede the gains, making it even harder to push through the needed reforms.

In this paper I explore how the macroeconomic environment affects the incentives for, and the feasibility of, labour market reform, and what monetary and fiscal policies might be conducive to reform. In particular, I focus on whether the introduction of the euro next January will hasten or retard reform in the countries concerned.

The plan of the paper is as follows. Section 1 discusses the scope for macroeconomic policy to support labour market reform by ensuring that the gains accrue as quickly as possible. Section 2 considers how the EMU affects the economic incentives for governments to undertake reform. Section 3 looks at how the EMU affects the political feasibility of reform. Section 4 explores how the state of the business cycle probably affects the timing of particular reforms. Section 5 briefly concludes.

* *All views are personal and do not reflect any official position whatsoever. I am grateful for helpful comments from Lars Calmfors and Urban Bäckström and for advice on the simulations from Rod Whitaker.*

[1] See Layard, Nickell and Jackman (1991) or Bean (1994a) for further discussion of this literature and references.

1. Macroeconomic policies to support labour market reform

We begin by asking how demand policy should be pursued to ensure that the gains from a program of reform materialise as rapidly as possible, assuming of course that monetary and fiscal policies are sufficiently unconstrained, which need not be the case for some members of the euro zone.

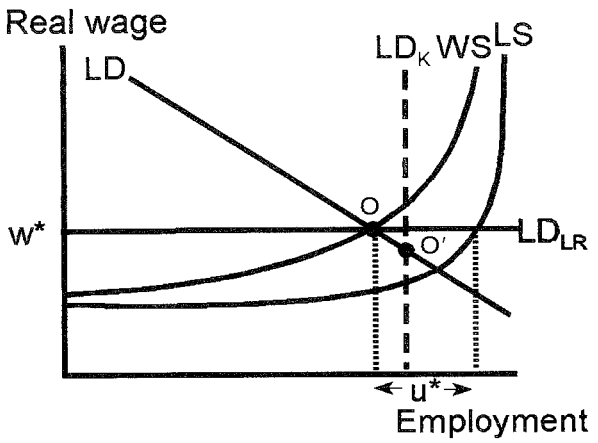
1.1. The determination of unemployment

To answer this question, it helps to first recall the simplest model of equilibrium unemployment in Figure 1. LS is a competitive labour-supply curve, whilst WS is a wage-setting or *pseudo* labour-supply schedule that describes how wages are set as the (un)employment level varies. Here, the idea is that the tighter the labour market, the higher the mark-up of the wage over the competitive wage. This might arise either because firms set wages taking account of the beneficial effect of higher wages on productivity as well as the adverse effects on wage bill (efficiency wages) or because wages are the outcome of collective bargaining between the firm and its workers. Equilibrium occurs where this wage-setting schedule intersects the labour-demand schedule (LD) with associated equilibrium unemployment u^*. Note that this is a point of equilibrium, but certainly not one of market clearing, because the unemployed would be willing to work at the equilibrium real wage, w^*, which is higher than their reservation wage. With a conventional production technology that exhibits a diminishing marginal product of labour, and with a given capital stock inherited from the past, this labour-demand schedule will be downward sloping assuming that output prices are flexible. In the long run, the capital stock will be variable and with constant returns to scale in capital and labour together, the long-run labour-demand schedule will be horizontal as in LD_{LR}.

In the short run, if nominal wages are pre-set (say because of long-lived, nominal-wage contracts) and output prices are flexible, then increases in nominal-aggregate demand will be associated with an increase in prices and a decline in the real wage, and thus a movement down LD (abstracting for the moment from costs of adjusting labour inputs). Note that because the equilibrium real wage exceeds the competitive wage and there is job rationing in equilibrium, there will still be unemployed workers who are willing to work at the new

lower real wage. So there is no difficulty in ensuring this increase in the demand for labour can be matched by a rise in actual employment. Thus starting from equilibrium, an increase in nominal-aggregate demand might take us to a point such as O'.

Figure 1. Basic model of unemployment



If short-run nominal rigidities stem from the goods, rather than the labour market and output prices are fixed as in New Keynesian thinking (say because *menu* costs lead to prices only being revised periodically), then output and employment would be determined purely by the nominal-demand level as in the simplest fix-price Keynesian IS-LM model. Employment will then be given by the vertical labour requirement schedule LD_K obtained by simply calculating the associated real-demand level at the given-price level and then finding what labour-input level is necessary to produce that output level.

1.2. A two-handed approach

Labour market intervention can take a variety of forms, but policies can be broadly classified into four types: [2] (1) those that protect the living standards of those out of work, i.e., unemployment benefits; (2) those whose objective is to increase the outflow rate of the unemployed back into jobs—active labour market policies (ALMPs),

[2] Competition policies and such affect pricing, the rate of innovation, etc., and thus will also affect the equilibrium unemployment rate, but they are not our main concern here.

such as help with job search, (re)training, marginal employment subsidies, and public-sector employment schemes; (3) those that improve the job security of those in work by regulating and financially penalising dismissals and layoffs, and (4) those that regulate wages, e.g., by setting a minimum wage or establishing the basis under which collective bargaining occurs.

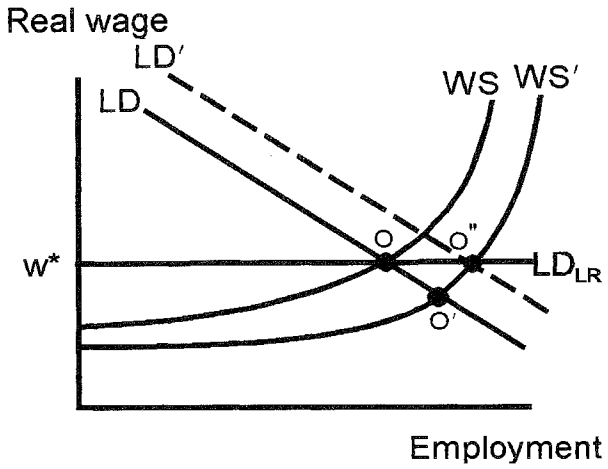
So types (1) and (2) are directed primarily at the unemployed, whilst (3) and (4) are directed at the employed, although indirect effects mean that all policies affect both categories of worker to some degree, e.g., a high level of unemployment benefits will place an effective floor on wages.

For our simple model, the impact of policies under (1) and (4) is most obviously on the shape and location of the wage-setting schedule, so that reductions in unemployment benefits, minimum wages or the bargaining strength of unions will all shift the wage-setting schedule down. Policies under (2) and (3) are more complex in their effect. The object of ALMPs is to help the unemployed to compete effectively for jobs, and this should tend to shift the wage-setting schedule out. If the ALMPs are badly designed, their presence may also make those presently in work more willing to risk unemployment and thus more aggressive in their wage demands; this will tend to shift the wage-setting schedule up, offsetting the direct beneficial effect. But job-security provisions affect the dynamics of labour demand, reducing firing during downturns and reducing hiring during booms. And by protecting the insiders from the consequences of aggressive wage demands, they may also shift the wage-setting schedule upwards.

Consider then a labour market reform that shifts the wage-setting schedule from WS to WS', resulting in an increase in the equilibrium level of employment and output in the economy (see Figure 2). Assuming that it takes time for the capital stock to rise, the new equilibrium will be at O' with higher employment and a lower real wage. At O', profits are higher, and this induces increased capital formation that pushes the labour-demand schedule LD out until it passes through the intersection of LD_{LR} and WS' at O''. That is, there is no fall in the long-run, real, product wage because of the reform.[3] But a fall is probably required in the short run to boost investment.

[3] Assuming that domestic and foreign goods are imperfect substitutes there will, however, need to be a fall in the real *consumption* wage, i.e., a real depreciation, to

Figure 2. Labour market reform



Now the question arises as to what sort of macroeconomic (monetary and/or fiscal) policy should be pursued beside this reform. To this question, a classically inclined economist would answer that the stance of macroeconomic policy is immaterial. For example, suppose that nominal-aggregate demand is fixed, say because the money supply is fixed and the velocity of circulation is independent of the activity level and interest rates. With flexible nominal wages and prices, the increase in the equilibrium supply of output that follows from the structural reform generates an equi-proportionate decline in prices, and a slightly greater decline in nominal wages, so that real wages fall as required. In this world the increase in supply brings forth the required increase in (real) demand—Say's law operates.

More realistically the velocity of circulation will not be constant, but the same idea holds. The expansion in supply drives down wages and prices. And the consequent decline in prices will boost demand directly through increasing competitiveness and net exports and through raising real wealth and consumption (the real balance effect), and indirectly through depressing interest rates by increasing the real quantity of money in circulation thus boosting investment. Even if interest rates are left unchanged, rather than the money supply, say

ensure that the extra output is absorbed on the world market. But a higher level of activity will also boost tax revenue, and this could lead to a rise in the *post-tax* consumption wage.

because there is a fixed exchange rate and a high degree of international capital mobility, the first two channels will still operate, whilst investment will still rise because of the increase in profitability. In addition the increase in incomes will in due course boost consumption.

But in reality such an immediate decline in nominal wages and prices may not happen, and the increase in supply will then not bring a commensurate increase in demand. So if nominal-aggregate demand is unchanged and prices are predetermined, as in the simplest Keynesian story, then output and employment will also be left unchanged. Even with flexible output prices, if money wages are predetermined, there is no way simultaneously to engineer the required decline in the real wage and an increase in output and employment, because that would be associated with rises in the price level and output, and therefore with an increase in nominal aggregate demand.

More generally, of course, we might initially be in an inflationary environment, in which the rate of nominal demand growth outstrips the rate of real growth. In this case obviously wages and prices might not need actually to *fall* because of the structural reform, only to rise more slowly than they otherwise would have done. But, so long as there is inertia in wage and price inflation, essentially the same argument will still go through.

So with nominal inertia in wage and/or price inflation, the increase in potential employment and output associated with the structural reform can only occur immediately if macroeconomic policy is sufficiently expansionary to permit a large enough increase in nominal (and therefore also real) aggregate demand to absorb the extra workers. Otherwise the increase in employment and output enabled by the structural reform will only come through gradually as the excess supply in goods or labour markets puts downward pressure on price and wage inflation. This process takes time, and possibly quite a long time, to operate. Furthermore the decline in the inflation rate will lower expected inflation, raise real interest rates, and thus tend to reduce real aggregate demand. In some cases this less-than-complete price flexibility can actually be destabilising (see, e.g., De Long and Summers, 1986). In these circumstances it will make sense to pursue a two-handed approach, in which an appropriate expansion of nominal (and thus also real) aggregate demand is made beside the structural reform to ensure the increase in output and employment comes through as smoothly and swiftly as possible.

1.3. Characterising an accommodating macroeconomic policy

The question then arises as to how to characterise such an appropriately accommodating macroeconomic policy stance. Assuming that the structural reform is a permanent phenomenon, then under the permanent income hypothesis, consumption will eventually increase pretty much in line with the increase in output and income[4]. If the reform is properly anticipated and credible, and consumers are not credit constrained, then consumption would rise immediately. But it is more likely that such an immediate increase in consumption will not occur because of uncertainty about the size of any income gains, and capital-market imperfections that prevent households borrowing against the future increase in income. If the reform involves reductions in the generosity of unemployment benefits, lower minimum wages or reductions in worker bargaining strength, it may be associated with a short-run *decline* in consumption as labour income falls. Similarly, while investment should increase in the medium run because of the reduction in wage pressure and the consequent increase in profitability, it is unlikely that such an increase in investment will occur immediately, especially if investment is irreversible, because there is an option value to waiting to see what happens (Dixit and Pindyck, 1994). So any increase in aggregate demand would need to come from either the public or foreign sectors, i.e., a fiscal expansion or a monetary relaxation leading to a currency depreciation and an improvement in competitiveness (assuming that one or other of these is possible, of which more below).

If the nominal inertia in the economy arises in domestic goods markets, then neither of these expansionary policies would be associated with an increase in domestically generated inflation. But if there is a currency depreciation that leads to an increase in import prices there could be a temporary increase in imported inflation and therefore also a *temporary* acceleration in the consumer-price inflation rate, which the monetary authorities should be willing to tolerate.

If by contrast the nominal inertia arises in the labour market, then an accommodating monetary policy necessarily involves a decline in

[4] I assume that the extra income accrues entirely to households. Of course, it is possible that the government might choose to use some of the extra revenue that will accrue through higher taxes to finance higher government spending. But the assumption that the national savings rate is close to zero for a permanent change in *national* income will not change the main result.

the own-product real wage (although this will in due course be reversed as higher profitability induces more capital formation) to get firms to take on the extra labour. With complete inertia in the money wage, this would require a *temporary* increase in domestic inflation, and *a fortiori* in consumer-price inflation (for a formal analysis of optimal monetary policy in the face of a supply side reform with nominal-wage rigidity, see Bean, 1994b). More generally, if there is *some* amelioration in wage inflation, but not enough to restore equilibrium by itself, the combination of lower nominal-wage growth and nominal exchange-rate depreciation might be consistent with either higher or lower consumer-price inflation.

This discussion refers to short-run demand management. In the medium run, the problems may be of the opposite variety, namely excess demand rather than supply. As noted, a successful supply side reform will be associated with an increase in profitability, and this should in due course lead to an investment boom. When this materialises, there will tend to be a worsening of the current account and upward pressure on inflation. In these circumstances some tightening of fiscal and/or monetary policy would be appropriate, together with a real appreciation of the currency.

To get a handle on quantitative magnitudes, I ran a few simulations of a labour market reform using the Treasury's macroeconometric forecasting model of the UK. Table 1 summarises the results. The labour market reform is one that reduces the long-run equilibrium unemployment rate by about 140,000 or about one-half percentage point. The reform costs about £3bn in terms of extra public expenditure.[5] This is roughly what might be expected from the new Labour government's New Deal programme, which requires the young unemployed either to undergo training, or accept a subsidised private-sector job, or take a job in the charitable sector, or take a public-sector job[6]. Of course there are other reforms, such as changes to the bargaining environment that might have no direct

[5] The presence of important persistence, or hysteresis, mechanisms within the model implies that the short-run equilibrium unemployment rate is not necessarily the same as the long-run one.

[6] The cost of the New Deal is actually about £5bn. But the simulations should not be thought of as representing an attempt to model that programme explicitly. Rather the simulations are supposed to give an idea about the impact of a *representative* labour market reform under various macroeconomic policy regimes.

budgetary cost, and still others, such as a cut in unemployment benefits that may lead to a fall in government expenditure.

Table 1. Simulations of a labour market reform under alternative macroeconomic policies (difference from base).

	CPI inflation (percentage points)			Unemployment (thousands)		
Year	*Sim A*	*Sim B*	*Sim C*	*Sim A*	*Sim B*	*Sim C*
1	-0.5	0.0	0.3	30	12	-38
2	-1.0	-0.4	0.1	71	25	-38
3	-1.4	-0.6	-0.0	106	30	-37
4	-1.5	-0.7	-0.1	112	15	-46
5	-1.2	-0.6	-0.2	78	-23	-65
6	-0.3	-0.3	-0.1	7	-79	-89
7	0.7	0.2	-0.0	-86	-141	-113
8	1.8	0.6	0.1	-180	-193	-130
9	2.6	0.8	0.1	-252	-220	-138
10	2.9	0.8	0.1	-283	-220	-139

The first simulation (Sim A) shows what happens with a fixed exchange rate and fixed interest rates, and when varying direct taxes keep the ratio of the public deficit to GDP constant. This pretty much represents what would happen as a member of the euro zone, if the Stability and Growth Pact bites. Unemployment actually rises in the short run; this is because of the fall in demand due to the extra taxes necessary to balance the budget. Eventually this rise in unemployment generates a large enough moderation in wage and price inflation to induce a fall in unemployment. The intrinsic dynamics of the model lead to considerable overshooting as after about eight years unemployment falls below its new equilibrium rate, leading then to a rise in inflation. This unsustainable boom carries the seeds of its own destruction, and beyond the horizon of the simulation unemployment rises back toward its new equilibrium rate, i.e., a decline of about 140,000 relative to base. The steady-state change in inflation is zero in this case, because the fixed exchange-rate assumption ensures that inflation is ultimately pegged down by monetary policy abroad.

The second simulation (Sim B) shows what happens maintaining the same assumption about fiscal policy, but allowing a free float of the exchange rate, i.e., an independent, albeit passive, monetary policy. Uncovered interest parity holds and exchange-rate expectations

are fully rational, so that the model essentially behaves like a gigantic version of the Dornbusch model. Here the reform leads to a depreciation, a boost to competitiveness, but higher import prices so that (consumer price) inflation declines less than in Sim A. As can be seen, although unemployment still rises in the short run, the effect is far more muted than before, as is the *boom-bust* cycle that follows.

The third simulation (Sim C) shows what happens when monetary and fiscal policy are somewhat more accommodating, with a permanent increase in the monetary base of 1% leading to a larger initial depreciation of the real exchange rate and extra bond-financed government spending of £1bn in each of the first two years. As can be seen, unemployment now falls even in the short run,[7] whilst the *boom-bust* cycling of the two other simulations is also avoided. Note that the path of inflation is virtually unchanged from the base, suggesting an accommodating policy like this would be reasonably consistent with a regime of inflation targets.

1.4. Practicalities

Is all this too clever by half? One likely objection is that such an accommodating macroeconomic policy would require considerable knowledge of the way the economy is developing. In addition policy makers will be uncertain about the extent of any excess supply created by the structural reform. The impact of uncertainty about policy multipliers on policy decisions has been well understood since Brainard (1967), who showed that uncertainty about policy multipliers generates a bias toward conservatism because larger movements in policy instruments increase the amount of uncertainty in the economy. But in the present case, the policy multipliers are not uncertain, so the Brainard argument is not relevant.

An argument for conservatism can be advanced, however, if there are important non-linearities on the supply side. Many central bankers take the view that the Phillips curve is convex rather than linear. So the extra inflation that results from an excess-demand period requires a larger countervailing recession to squeeze that extra inflation out of the economy again. (This is assuming that expectations in labour markets are at least to a degree backward looking, e.g., if next

[7] The dynamics of the model are such that it is impossible to engineer a short-run fall in unemployment of 140,000 without extreme and explosive movements in the policy instruments.

period's expected inflation is equal to the most recently observed actual inflation rate.) In that case a prompt increase in interest rates to nip incipient inflation in the bud avoids having to make a larger increase later—a monetary *stitch in time saves nine.* There is mild evidence for such a non-linear relationship; see, e.g., Clark, Laxton and Rose (1995). If the amount of excess demand or supply is uncertain, then on average the activity level will be below the equilibrium or natural rate, and the optimal policy is conservative in the sense of aiming to achieve a small excess supply of goods/labour rather than zero excess demand/supply.

For a simple accelerationist Phillips curve with an empirically relevant degree of non-linearity and a standard deviation for the one-year uncertainty about excess demand/supply of 1% of GDP—a reasonable number for normal times based on the past forecasting record of organisations such as the UK Treasury—the optimal policy requires aiming to keep output about one-fourth percentage point below the estimated potential level. If that uncertainty was to rise to 2% of GDP, then policy should aim about ½% below; see Bean (1996) for details. Now uncertainty about the effectiveness of structural reforms designed to raise the equilibrium level of output, say, 2%, might lead to such a doubling in uncertainty, and therefore that the authorities should only seek to match about three-quarters of the possible increase in supply by a deliberate expansion in demand.

Against this argument for conservatism, one can argue that if the exact efficacy of the structural reforms is unknown, then a degree of experimentation to find out the limits to expansion might be desirable; see Bertocci and Spagat (1993) for a formal analysis of this.

After all, if one buys a new car, the easiest way to find out how fast it goes is to put one's foot down on the accelerator. But just as one would not want to lose control of that new car and force it off the road, any experimentation with the limits to expansion of the economy ought to be judicious, rather than bold. Recent decision-making by the Federal Reserve Board seems to provide a model of just how to do this. But note that such cautious experimentation will be more easily undertaken without loss of counter-inflationary credibility if the monetary authorities already have a well-established reputation for prudent monetary policies.

2. The EMU and incentives for reform

The impending introduction of the euro in 11 countries next January represents an important change in the backdrop against which labour market reform must occur. In the next two sections we will consider how this change in the macroeconomic policy regime might affect the incentives for reform and its political feasibility. Of course, given that reform is costly in political and possibly also budgetary terms, the incentive to undertake reform will be affected by how quickly the gains accrue and by how easy the government of the day finds it to build political support for reform, so that these two questions inevitably interact. Nevertheless, for didactic purposes, it is useful to separate them. We consider the incentives for reform first.

We start by recalling how the EMU will affect those economies that participate. From a macroeconomic perspective each country loses the ability to conduct an independent monetary policy and thus to change the exchange rate. This tool will be useful if an economic shock occurs, which affects it differentially. So the discussion of whether the benefits of a single currency (reduced transaction costs, greater price transparency, reduced exchange-rate volatility, etc.) outweigh the costs has revolved around whether countries are similar enough to constitute an *optimum* currency area. In principle, asymmetric shocks will be unlikely and/or small if, amongst other things, countries are highly integrated in terms of trade in goods and services, and have similar production structures and strongly correlated business cycles. Moreover, the impact of any adverse asymmetric shock on the affected region will be less significant if nominal wage and price flexibility is high or else labour mobility is high, so that the unemployed workers can move to presently booming areas. Because the EU scores rather poorly under the latter two criteria, an important question is the likely future prevalence of asymmetric shocks.

The EMU will occur against the background of the completion of the single market, which should lead to increased integration through the removal of remaining barriers to intra-EU trade and through compulsory competitive tendering in public procurement. The EMU will reinforce this process by further reducing foreign-trade transaction costs and eliminating exchange risk, although in my view the role of the euro in fostering further EU integration is probably rather small compared to the effect of the single-market programme. But there are certainly those who believe that the EMU will be a significant factor in promoting integration. In any case, what effect can we

expect increased integration to have on the frequency of asymmetric shocks?

The *new economic geography* has led to a revival of interest in the question of where industry locates. When consumers are distributed evenly, there are no economies of scale and there are no important interactions among firms, then firms will distribute their activities evenly throughout a region to economise on transport costs. But the presence of economies of scale, particularly because of beneficial spillovers from being located close to other similar firms (so-called agglomeration externalities, an example of which might be easy access to supplier firms or to a pool of specially qualified labour) leads to pressures for regional concentration. Now due to past barriers to intra-EU trade, economic activity in the EU tends to be less regionally specialised than in a fully integrated economy like the US. The removal of these barriers to trade is then likely to lead to production in Europe becoming more, rather than less, regionally specialised; see Krugman (1991). This in turn will tend to make differential movements in business conditions more likely, and independent monetary policy more, rather than less, useful.

Against this, however, increased integration will spur intra-EU trade, thus strengthening demand linkages between national economies and tending to make business cycles more, rather than less, synchronised, which suggests that asymmetric shocks might become less of a problem. Frankel and Rose (1997) find that differential shocks seem to have become less, rather than more frequent during the 1959-1993 period, suggesting the latter effect dominates. But this need not also hold true for the future. As we will see, whether asymmetric shocks become more or less frequent has some bearing on the likelihood of structural reform.

Now there are essentially two opposing views on the likely impact of the introduction of the euro on the pace of structural reform: the optimists who see it as hastening reform and the pessimists who argue the opposite. We begin with the former.

2.1. TINA and the optimists

The discussion of Section 1 was predicated on a view of the policymaker as a benevolent despot pulling the levers of macroeconomic policy to maximise social welfare. But today, economists are far more aware of the limitations to this view than they used to be. As emphasised by Saint-Paul (1996) and reiterated below, reforms such as cut-

ting benefits or reducing firing costs are usually painful for at least some of the electorate. According to the optimists, a government seeking popularity will tend to shrink from implementing such politically painful reforms if there are other policies available to reduce unemployment. If expansionary macroeconomic policy can lower unemployment below the equilibrium rate, albeit only temporarily, governments with a short-time horizon will have an incentive to combat high unemployment by expansionary macroeconomic policy rather than structural reform. Of course, this cannot be effective as a long-term solution, but it might be efficacious over the sort of short-term horizon that preoccupies many politicians. Immobilising macroeconomic policy then leaves the policymaker with little option but to undertake reform—in the immortal words of Mrs Thatcher: "there is no alternative" (TINA).

This argument suffers from two flaws. First, if governments consistently try to use expansionary macroeconomic policies to fight high-equilibrium unemployment in this way, the result will simply be increasing inflation until the inflation rate is high enough to dissuade the government from trying to push unemployment below the equilibrium rate. This corresponds to the full rational expectations equilibrium in the time inconsistency model of inflation discussed in Section 2.2. At that point structural reform to lower the equilibrium rate of unemployment becomes the only viable policy anyway. Second, under the EMS, countries could not maintain divergent inflation rates for any significant period so that the scope for systematic behaviour of this sort of has in any case been somewhat limited of late.

But there is a variant of the TINA argument that is perhaps more convincing. Most labour market reforms will reduce not only the equilibrium unemployment rate, but also the *sacrifice* ratio—the amount that unemployment must rise to reduce inflation. The EMU removes the option of smoothing adjustment to asymmetric shocks by altering the exchange rate, forcing it instead to come via a boom or recession. This will be a more painful process, the larger is the sacrifice ratio. Consequently the EMU raises the return to reducing the sacrifice ratio through structural reform. Furthermore if economic integration leads to greater regional specialisation and more frequent asymmetric shocks—the Krugman view—then the more important it will be that the economy can adjust without relying on an independent monetary policy. In that case the incentives for reform would be even greater. Conversely if business cycles become more, rather than

less synchronised, then the incentive for reform would be correspondingly reduced.

A second argument as to why the EMU might hasten reform can be framed in terms of the Lucas Critique. Many people argue that the EU is not an optimal currency area because of its inflexible labour markets and low migration (e.g., Obstfeld and Peri, 1998). But the optimists argue that the creation of a common currency will leave neither private-sector behaviour nor other government policies unchanged. To the extent that the euro *does* increase price transparency and fosters EU economic integration more generally, it will make businesses more willing to switch production to localities where labour costs—including the explicit and implicit costs of regulation, and direct wage costs—are lower. This will effectively raise the cost of running an elaborate system of social protection through high firing costs, generous benefits paid for by high labour taxes, etc.[8]

Governments will then each have an incentive to try to encourage inward flows of capital by making the environment attractive for business, e.g., by reducing labour regulations or lowering business taxes. Not only could this be good for the owners of capital, it could be good for labour too, if the inward flow of capital results in the marginal product of labour, and with it the wage, rising enough. But the consequence of this is a decline in employment and wages in other countries—and in all likelihood charges of social dumping.

One response to this would then be for other countries to retaliate by loosening their labour market regulations. If they do, then the result could be a race to the bottom, for example, in business taxes and labour regulations as each country tries to outdo the other in reducing the costs on internationally mobile factors of production. The possibility of such a race to the bottom is precisely why countries—particularly those such as France, which favour relatively high levels of social protection—seek to enforce a degree of co-ordination through the imposition of minimum standards and such.

Labour market regulations, unemployment benefits, and the like can play two roles. On the one hand, they may seek to counteract

[8] There is a view (see, e.g., the Ohlin report: International Labour Office, 1956) that the effect of these regulations is ultimately always borne by labour because wages will just adjust downward to offset the extra costs imposed by the regulation. But this will occur in only rather special circumstances. See Bean et al. (1998) for an extensive discussion of the impact of social protection policies and their implementation in an integrated economy.

market failures. An example is mandatory unemployment insurance: a private market in unemployment insurance may fail to exist because of adverse selection problems, and individuals may not be able to adequately self-insure because of credit-market imperfections, which prevent them borrowing in bad times. On the other hand, they often serve to protect rents and redistribute income. When this redistribution is from the rich to the poor that may be an entirely reasonable objective, even though virtually all regulations have some adverse efficiency effects. But often regulations benefit the not-so-poor, in which case they become rather less justifiable. For example, unemployment insurance has the incidental side effect of underpinning the wages of those in work and of seeking to tackle market failure in the insurance market. Most commentators would agree that regulations in continental Europe's labour markets are excessive and often not well designed. But remember: some regulation is often desirable and that even where it is not, it will still benefit some individuals (an issue we return to later in the context of the political feasibility of reform).

Now co-ordination to prevent a race to the bottom will be good if the regulations, etc., are in themselves desirable. But *competition between rules* will be a good thing if labour regulations are excessive to begin with. In effect, a second-best outcome reduces the losses from the existing distortions. To the extent that the EMU *is* a significant factor in enhancing European economic integration and increasing factor mobility, which is certainly debatable, then the change in regime should increase the incentive for structural reform, provided, of course, that it is not prevented by the imposition of binding EU-wide minimum standards or regulations.

Finally, the EMU may have beneficial effects on the institutions of wage bargaining. Typically, the best unemployment performance in the OECD has been found in countries with either very decentralised wage-bargaining structures, such as the US or Canada, or very centralised ones, such as the Scandinavian countries. This has been rationalised in a celebrated paper by Calmfors and Driffill (1988).

Decentralised collective bargaining generally leads to inefficiently high unemployment because wage bargainers ignore the effects of their settlements on the decisions of other bargaining units and on the general price level. By contrast, a competitive, decentralised labour market and a centralised one, in which all externalities from wage settlements are internalised, should work well. This leads to the

famous Calmfors-Driffill hump relationship between the degree of centralisation and the equilibrium level of unemployment.

Now, to the extent that the EMU leads to closer integration among the European economies, it has the effect of shifting countries along the hump in the direction of greater decentralisation; see Danthine and Hunt (1994). This is because more of the externalities from bargaining will spill over onto other countries. Centralised bargaining in each country will be fine so long as the countries are relatively closed to each other, but as integration proceeds so more of the externalities leak outside national borders and are not taken account of in the centralised bargaining process. This will be bad for countries that are presently centralised, but may be good for countries initially located in the worst of all positions at the top of the hump, i.e., with strong, but decentralised unions as they are effectively pushed into a more competitive environment. For the presently centralised economies, there are then two ways to tackle this: either seek to centralise bargaining at the EU level to re-internalise the externalities or else move toward greater decentralisation.

Recent experience suggests that centralisation of wage bargaining has been rather less beneficial to individual EU countries' employment performance as integration has proceeded. In addition, much stronger wage compression characterises centralised labour markets.

The widely differing productivity levels in the different parts of the EU make it impossible to imagine that centralised wage bargains could have the same beneficial effects at the EU level as they arguably did within the more homogeneous labour markets of the Scandinavian countries. Hence, any boost to economic integration from the EMU will probably spur labour market reforms in the direction of more decentralised systems of wage determination. According to the European Commission, the increased intra-EU competition following the completion of the single-market programme has already induced greater decentralisation in collective bargaining across the EU, with greater scope for local negotiations and a greater degree of subsidiarity at company level and has made businesses and employees aware of the need to link pay more closely to company-level productivity; see European Commission (1996).

2.2. Time inconsistency and the pessimists

An alternative viewpoint is that the EMU reduces, rather than increases, the incentive to governments to undertake reform. One argument, due to Calmfors (1998) and Sibert and Sutherland (1997), relies on the now standard model of time inconsistency in monetary policy originally due to Kydland and Prescott (1977) and Barro and Gordon (1983). In that model unemployment is only below (above) the natural rate in so far as inflation is above (below) expected inflation. There is then an exploitable short-run trade off between inflation and unemployment because monetary policy decisions are taken after inflation expectations have been formed. The authorities' objective is to get inflation as close as possible to zero and unemployment as close as possible to some notion of full employment. But the equilibrium rate of unemployment is higher than this target level. This is usually rationalised as being caused by imperfections in product or labour markets (such as excessive regulation or union power). Then, starting from zero inflation, the monetary authorities would have an incentive to try to exploit this short-run trade off, generating a bit more inflation to deliver lower unemployment. But the private sector will know the authorities face such an incentive to inflate and will build this into their expectations. The equilibrium inflation rate then will have to be high enough to ensure that the authorities do not exploit the short-run trade off because the increase in welfare associated with the fall in unemployment is exactly offset by the fall in welfare associated with the rise in inflation. The result is that unemployment is still at the equilibrium rate, but the inflation rate is needlessly high.

This model has been influential in providing an intellectual justification for delegating monetary policy to an independent central bank. And much academic ingenuity has been directed at ways to ensure that the central bank does not succumb to the same temptation to inflate, e.g., by installing a conservative central banker (Rogoff, 1985) or by making the pay of the bankers inversely related to inflation (Persson and Tabellini, 1993; Walsh, 1995).

How does this relate to the incentives for structural reform? A key implication of the Kydland-Prescott/Barro-Gordon model is that, other things equal, the equilibrium inflation rate is higher, the higher is the gap between the natural rate of unemployment and the target rate of unemployment, i.e., the worse are the distortions. One way of reducing the inflationary bias is to install an independent conservative

central banker, but another is to reduce the gap between the natural and target rates of unemployment through structural reform. Thus, according to Calmfors and Sibert and Sutherland, the incentives for structural reform will be greater when this time inconsistency problem has not been solved by any of the clever ways in the literature. Now under the EMU, inflation—decided by the European Central Bank—effectively becomes exogenous, even for larger countries such as Germany. So the effect on the euro-wide inflation rate of reform in any one country becomes negligible. The incentive for reform is thus less than where a country determines its own inflation rate.

Is this argument reasonable? I see two problems with it. The first is an empirical one, namely that most countries joining the euro zone converged on low inflation some years back as a consequence of the hardening of the EMS. So if the incentives for labour market reform are reduced by adopting institutions that generate low inflation, that happened a while ago.

The second is a more fundamental problem with the whole literature. The Kydland-Prescott/Barro-Gordon model has always seemed to me a rather good paradigm for thinking about the incentives facing politicians if they are in charge of monetary policy (as was the case in the UK until just 12 months ago). But the literature continues to assume that even after delegation, the independent central banker has an incentive to inflate. This is a consequence of the way the authorities objective function is rationalised, in particular that the reason the target rate of unemployment lies below the natural rate is the presence of structural rigidities. My observations of various former UK Chancellors of the Exchequer suggest another rationalisation. Politicians are judged by their success at generating a high level of economic activity because of their whole range of policies (monetary, fiscal, and structural). A government, particularly before an election, has every incentive to loosen monetary policy, arguing that it is entirely justifiable because of the success of their other policies in raising the sustainable economic-activity level. But once monetary policy has been delegated to an independent agency there seems no compelling reason for the central bank to pursue anything other than zero (or at least suitably low) inflation and the natural rate of unemployment, *provided* that it is properly independent of political pressures. In other words it is the act of delegation *per se* that solves the time inconsistency problem that leads to the positive bias in in-

flation. For a similar view from someone who has been involved at the coalface, see Blinder (1997).

There is a second line of argument as to why the start of the EMU may reduce, rather than enhance, the incentive for reform. An important ingredient of the convergence process laid out in the Maastricht Treaty has been the requirement to reduce budget deficits to below 3% of GDP and to ensure that public debt is at least heading down toward the reference value of 60% of GDP. Whatever the merits of these criteria, there is no doubt that countries such as Italy and Spain have made considerable progress in consolidating their budgetary positions to qualify to be in the first wave of countries adopting the euro. When a country tries to reduce its budget deficit, one obvious target is social security spending, and most of the limited reductions in the generosity of unemployment benefit systems that have occurred in the European economies seem to have been associated with coping with immediate budgetary pressures rather than reform for its own sake (Schwanse, 1996). To the extent that these pressures for fiscal consolidation subside once the EMU has started, then there will be less pressure for reform.

There are two remarks to be made about this view. First, it is not clear if pressures for fiscal consolidation will subside soon. If the members of Euroland are to give themselves room to use national fiscal policies to counteract idiosyncratic shocks without triggering fines under the Stability and Growth Pact, they will need to tighten fiscal policy further. Even allowing room just for the automatic fiscal stabilisers to operate would require a cyclically corrected budget balance of around zero, which is way below where countries such as France and Italy presently are. So pressures for further reductions in the social security budget will remain, for a while at least.

Second, it is not clear that these budgetary pressures are entirely benign in their effect. While they encourage reductions in the generosity of unemployment benefits (which will tend to reduce the equilibrium rate of unemployment), they also discourage spending on ALMPs, which tends to raise equilibrium unemployment (see Calmfors, 1994, for an analysis of the effects of ALMPs, including why they might not *always* reduce unemployment). So budgetary pressures are a two-edged sword regarding their likely impact on the labour market.

A third argument as to why the change in monetary regime could reduce the incentive for reform runs as follows. It is not only asym-

metric shocks that create a useful role for independent national monetary policies, but also differential responses to shocks that are common across countries. So suppose that France and the UK are hit by an adverse demand shock (such as a fall in the world demand for manufactures) that initially has very similar effects in the two countries; if nominal wages and prices are slow to adjust then expansionary macroeconomic policies will be called for in both countries. But if wages and prices respond more quickly in the UK with its now relatively flexible labour market, then a looser monetary or fiscal stance would be appropriate for only a short time in the UK, but for a longer time in France. So it is desirable, other things equal, that the European economies respond to common shocks at a similar speed. If all countries start with relatively rigid labour markets, then unilateral reform by any one country becomes a somewhat less attractive option under the EMU, and what is ideally called for is some co-ordination/harmonisation in the pace of labour market reforms to overcome this problem. But in practice, is difficult to see this third argument carrying very much weight.

So who wins, the optimists or the pessimists? As far as the incentives for reform are concerned, the arguments seem to be quite finely balanced. On the one hand, the effect of the euro on economic integration may not be as great as the optimists have suggested. On the other hand, the arguments of the pessimists are not that convincing either. So I am pretty agnostic. But it is a different matter when we consider the political feasibility of reform.

3. The EMU and political feasibility of reform

If structural reform is so obviously needed to reduce the horrendously high levels of European unemployment, why hasn't it already happened? The answer, quite simply, is that the political support for the necessary policies is generally not there. As noted earlier, supply side reforms usually create losers and gainers, and the losers are often numerous. Consider, for example, reducing the generosity of unemployment benefits. Ultimately this should lower wage pressure and increase the demand for labour. As Section 1 showed, the extra investment brought about by the increase in profits can ensure that in long-run equilibrium there is no decline in real wages, and all that happens is a fall in equilibrium unemployment.

However, voters do not normally look that far ahead. The unemployed will see a direct attack on their living standards, while those in

work, who are open to the possibility of job loss, will also see a worsening in their prospects. About the only people who can be expected to support such a policy unreservedly are the owners of capital. Similarly, high firing costs protect those in work, both reducing the probability of job loss and enabling them to press for higher wages. So even though a reduction in firing costs might help the unemployed by encouraging firms to open up more vacancies, particularly in the upswing of the business cycle, the broad mass of the labour force can be relied upon to object.

The usual economist's objection to this line of argument is that if a reform improves overall economic efficiency, then the gainers should be able to compensate the losers. But in practice, such compensating transfers are difficult to implement because of the difficulties of identifying and targeting the losers. In addition, if ongoing transfers are required, subsequent policymakers will have an incentive to terminate them, i.e., there is a time-inconsistency problem present. For further discussion of this see Alogoskoufis et al. (1995) or Saint-Paul (1996).

So securing labour market reform is a matter of building a large enough coalition of interests that will support reform. This is more likely if reform is part of a grand package including carrots (e.g., in the form of ALMPs to help the unemployed find jobs) and sticks (e.g., reduced generosity and particularly, shorter duration of unemployment benefits), because in that case it is more difficult for individual interest groups to block individual parts of the package without unravelling the whole thing.

How does all this interact with aggregate-demand policies? As noted in Section 1, many reforms will only have a beneficial effect some way down the road: the pain precedes the gain. But support for reform will be greater the shorter is that period of pain. This suggests that reform, particularly where it involves cuts in support for the unemployed or weakening of employment-protection legislation, is more likely to gain political support in an environment of strong economic growth, where the rate of job creation is correspondingly high. As Section 1 argued, this is possible if macroeconomic policies are suitably supportive of the supply side reforms.

Now although desirable, most members of the euro zone will find it difficult to pursue such complementary macroeconomic policies. Whilst there is a growing consensus amongst EU governments that labour (and product) market reforms are required to reduce the hor-

rendous unemployment levels, simultaneous *co-ordinated* structural reforms across several countries are most unlikely. Reform in a single country is then just a particular form of idiosyncratic or asymmetric shock and in such circumstances, independent use of national and perhaps fiscal policies is desirable. But for the 11 countries adopting the euro, independent monetary policy will no longer be an option, whilst the scope for expansionary fiscal policy will also be constrained in many of them by the Stability and Growth Pact until budget deficits are brought close to balance over the cycle.[9] Governments in these countries will then find it difficult, if not impossible, to ensure that aggregate-demand growth is high enough to ensure that unemployment falls rapidly in the wake of reform. This in turn will make it much harder to get the reforms through in the first place (a conclusion shared by the Swedish Government Commission on the EMU: see Calmfors et al., 1997). Countries outside the euro zone, such as Sweden and the UK, of course suffer no such handicap.

A second reason why reform might become politically harder because of the change in regime is that the *demand* for social protection may rise if asymmetric shocks and differential movements in national economies become more significant, as suggested by the Krugman thesis that the euro and the single-market programme more generally, will lead to greater regional specialisation. In that case the demand for labour will also tend to become more variable, and this should encourage workers and unions to seek more, not less, employment protection. More frequent or more prolonged spells of unemployment might also increase the demand for increased levels of unemployment insurance and for more extensive ALMPs.

Whether reform becomes more or less likely because of the EMU thus seems to hinge on if the (possibly) increased incentives for reform are greater or less than the extra obstacles to reform imposed by the limited scope for using national macroeconomic policies in a supportive role and the possible increase in demand for social protection. It is not obvious what the overall effect will be, but getting broad political support for reform will be more important in polities that operate on the basis of consensus, especially where parliamentary seats are allocated by proportional representation. By contrast, reform may be easier in first-past-the-post electoral systems, where

[9] An excellent discussion of the rationale and implications of the Stability and Growth Pact can be found in Eichengreen and Wyplosz (1998).

such broad support will not be required. While there are many reasons why the UK has been at the forefront of labour market reform in Europe during the last two decades, not least its closer affinity to the American way, it is surely the case that the Conservative governments of Margaret Thatcher and John Major would have had a very much harder time undertaking reform if they had also had to worry about keeping parties such as the Liberals on board.

4. The business cycle and the timing of reform

In the final section of this paper we consider how the state of the business cycle might affect the timing of the different possible labour market reforms. As noted in Section 1.2., labour market policies can be broadly classified into four types: passive policies of income support for those out of work; active policies to help the unemployed into jobs; policies to enhance the job security; and policies that directly regulate wages or the legal framework for wage setting. Clearly, these four broad types of policies are targeted at different constituencies. So the first two primarily help the unemployed, while the last two protect the employment and incomes of those in work. But because there are always people flowing from employment to unemployment, and vice versa, other things equal,[10] workers should always like the unemployed to be treated better because they may one day become unemployed, whilst the unemployed will also like policies that help to keep wages high so their income is also high when they get jobs. In addition, the policies also interact: for example, as noted earlier, high firing costs also enhance the bargaining power of labour.

Different countries have different levels and a different balance between these policies of social protection. In particular, some of the continental European countries have relatively high levels of job security, but relatively low levels of support for the unemployed (e.g., Italy and Spain), whilst those with lower levels of job security tend to have more generous support for the unemployed (e.g., the Scandinavian countries). The group of Anglo-Saxon countries also seem to exhibit an inverse relationship between job security and support for the unemployed, but at a generally lower level than the continental

[10] In practice, other things will not generally be equal, because more generous unemployment benefits mean higher taxes on those in work, whilst higher wages mean fewer job opportunities.

European economies, reflecting the lower social protection provided in the Anglo-Saxon group; see Buti, Pench, and Sestito (1998).

Now in thinking about when a particular reform might be easier to achieve, first note that the constituency in support of generous unemployment benefits and ALMPs will always tend to be greater when unemployment is high, and most particularly when it is *rising*. It is then that those in work are most at risk of losing their jobs and transiting into unemployment, i.e., at the start of a recession. Those in jobs would also be reluctant to see restrictions on firing relaxed at that point of the cycle.

However, when unemployment is high and stable or falling, the constituency of those in work are going to be rather less concerned about support for the unemployed, and to the extent that they perceive a link between high expenditures on the unemployed and their own high taxes they may be willing to see unemployment benefits and expenditure on ALMPs cut. We noted earlier that many of the cuts in support for the unemployed seem to have been the result of budgetary pressures, which will, of course, be worst at the bottom of a recession. There is general agreement that well-designed ALMPs are a better way of helping the unemployed than unlimited passive handouts, and so to the extent that some EU countries need to move further in this direction, the incentive to find ways of curtailing benefit expenditure is good. What is less good will be the pressure to run ALMPs on the cheap to save money, something that was rather evident in the plethora of rather ineffective schemes for the unemployed introduced in the UK during the 1980s.

During the upswing of the cycle, those in work ought to be less concerned about reductions in job security, because the rate of job destruction will be low then, while the rate of job creation will be at its highest. So this will be the most propitious time for governments to seek reforms in this area. It should also be easier to reduce the generosity of benefits, tighten availability-for-work requirements, etc., because the outflow rate from unemployment will be in any case high at this time. This is also a very good time to switch/increase expenditure on ALMPs for marginalised groups because budgetary pressures will be eased.

A boom is the ideal time to undertake cuts in support for the unemployed and reduce firing costs as the constituencies in support of these will be less vociferous, whilst budgetary constraints are less likely to constrain expenditures on ALMPs. Furthermore if such

policies are successful they will allow the boom to continue longer without leading to an acceleration in inflation. The danger is that precisely because unemployment has been falling steadily, policymakers will be inclined to relax, thinking that labour market reform is no longer necessary. This should also be a propitious time to push through reforms to the wage-setting process, because the effect on wages will tend to be muted during the boom when labour is in any case relatively scarce. Reform of the wage-setting process could also be carried through into the early stages of the downswing, because at this time, those in work would be most threatened by the possibility of layoff.

The canonical reform package required for many EU countries involves a switch from passive to active support for the unemployed, reductions in firing costs, and possibly some reform to wage-setting institutions. Our discussion then suggests that the most practical sequence is as follows: reduce the generosity of benefits toward the bottom of the recession or early on in the upswing; then reduce firing costs and increase expenditure on ALMPs during the upswing and into the boom; finally during the boom reform wage-setting institutions. Above all, efforts at reform must not be relaxed just because the economy is booming, for the next recession will surely be just around the corner making reform of any kind difficult.

5. Concluding remarks

Macroeconomic policies can play an important role in complementing the structural reforms that are essential if European unemployment is to be reduced to acceptable levels. By hastening the positive returns to reform, they can make it easier to sell the required reform in the first place. The EMU may or may not increase the incentive for reform, for there are arguments cutting both ways. But even if the EMU does on balance increase the incentive for reform, the impossibility of active independent monetary policy and in many countries also fiscal policy might make it harder to achieve. Whatever benefits a single European currency will bring, it is most regrettable that the momentous efforts made to facilitate the introduction of the euro have not been matched and preceded by similarly strenuous efforts aimed at reforming Europe's labour markets, for reform will certainly be even harder to achieve in the future.

References

Alogoskoufis, G., C.R. Bean, G. Bertola, D. Cohen, J.J. Dolado and G. Saint-Paul (1995), Unemployment: Choices for Europe, Centre for Economic Policy Research, Monitoring European Integration 5.

Barro, R.J. and D. Gordon (1983), A Positive Theory of Monetary Policy in a Natural Rate Model, Journal of Political Economy 91, 589-610.

Bean, C.R. (1994a), European Unemployment: A Survey, Journal of Economic Literature XXXII, 573-619.

Bean, C.R. (1994b), The Role of Demand Management Policies in Reducing Unemployment, in: Reducing Unemployment: Current Issues and Policy Options (Federal Reserve Bank of Kansas City) 99-132.

Bean, C.R. (1996), The Convex Phillips Curve and Macroeconomic Policymaking Under Uncertainty, Mimeo, London School of Economics.

Bean, C.R., S. Bentolila, G. Bertola and J.J. Dolado (1998), Social Europe:....One for All? Centre for Economic Policy Research, London.

Bertocci, G. and M. Spagat (1993), Learning, Experimentation and Monetary Policy, Journal of Monetary Economics 32, 169-83.

Blinder, A. (1997), What Central Bankers Can Learn From Academia—and Vice Versa, Journal of Economic Perspectives 11, 3-19.

Brainard, W. (1967), Uncertainty and the Effectiveness of Policy, American Economic Review 57, 411-25.

Buti, M., L.R. Pench and P. Sestito (1998), Contending Theories and Institutional Complexities, European Commission, Working Paper, Brussels.

Calmfors, L. (1994), Active Labour Market Policies and Unemployment—A Framework for the Analysis of Crucial Design Features, OECD Economic Studies 22, 7-46.

Calmfors, L. (1998), Unemployment, Labour-Market Reform and Monetary Union, Institute for International Economic Studies, Seminar Paper No. 639, Stockholm.

Calmfors, L. and J. Driffill (1988), Bargaining Structure, Corporatism and Macroeconomic Performance, Economic Policy 6, 14-61.

Calmfors, L., H. Flam, N. Gottfries, J.H. Matlary, M. Jerneck, R. Lindahl, C. Nordh-Berntsson, E. Rabinowicz and A. Vredin (1997), EMU—A Swedish Perspective (Kluwer Academic Publishers, Dordrecht).

Clark, P., D. Laxton and D. Rose (1995), Capacity Constraints, Inflation and the Transmission Mechanism, IMF Working Paper, July.

Danthine, J.-P. and J. Hunt (1994), Wage Bargaining Structure, Employment and Economic Integration, Economic Journal 104, 528-541.

De Long, B. and L. Summers (1986), Is Increased Price Flexibility Stabilising? American Economic Review 76, 1031-1044.

Dixit, A. and R. Pindyck (1994), Investment Under Uncertainty (Princeton University Press, Princeton).

Eichengreen, B. and C. Wyplosz (1998), The Stability Pact: More than a Minor Nuisance? Economic Policy 26, 65-114.

European Commission (1996), The 1996 Single Market Review, Brussels, Sec(96) 2378.

Frankel, J.A. and A.K. Rose (1997), The Endogeneity of the Optimum Currency Area Criteria, Swedish Economic Policy Review 4, 487-512.

Krugman, P. (1991), Geography and Trade (MIT Press, Cambridge, Massachusetts).

Kydland, F.E. and E.C. Prescott (1977), Rules Rather Than Discretion, Journal of Political Economy 87, 473-492.

International Labour Office (1956), Social Aspects of European Economic Cooperation, Report by A Group of Experts, Geneva.

Layard, P.R.G., S.J. Nickell and R. Jackman (1991), Unemployment. Macroeconomic Performance and the Labour Market (Oxford University Press, Oxford).

Obstfeld, M. and G. Peri (1998), Regional Non-adjustment and Fiscal Policy, Economic Policy 26, 205-260.

Persson, T. and G. Tabellini (1993), Designing Institutions for Monetary Stability, Carnegie-Rochester Conference Series on Public Policy 39, 53-84.

Rogoff, K. (1985), The Optimal Degree of Commitment to an Intermediate Monetary Target, Quarterly Journal of Economics C, 1169-1189.

Saint-Paul, G. (1996), Exploring the Political Economy of Labour Market Institutions, Economic Policy 23, 263-315.

Schwanse, P. (1996), The Effectiveness of Active Labour Market Policies: Some Lessons From the Experience of OECD Countries, in: Lessons From Labour Market Policies in the Transition Countries (OECD, Paris) 17-36.

Sibert, A.C. and A. Sutherland (1997), Monetary Regimes and Labour Market Reform, Centre for Economic Policy Research, Discussion Paper No. 1731.

Walsh, C.E. (1995), Optimal Contracts for Central Bankers, American Economic Review 85, 150-167.