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July 1986

Report of the CEPS Macroeconomic
Policy Group :
Reducing Unemployment in Europe :
The Role of Capital Formation

F. Modigliani, M. Monti, J. Drèze,
H. Giersch, R. Layard

Internal Paper



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For the third year in succession European output is rising at 2-3 per cent per annum. The problem is how to prolong and accelerate this upswing. For, despite the upswing, unemployment in Europe remains stubbornly high, at 11 per cent of the workforce. This involves a huge waste of economic resources, and much human misery. To deal with it, our last report advocated a 'two-handed approach', with supply-side measures being accompanied by demand expansion.¹ The same approach is still needed today.

But in the last year two major changes have occurred which, if handled well, can make the task a good deal easier. First, the price of oil has roughly halved. Just as the oil price rises of the 1970s increased inflation and reduced employment, so an oil price fall now can be expected to reduce inflation and increase employment. Employment will increase slightly, because a fall in oil prices raises real income in the Community (a net importer of oil) and this may increase aggregate demand more than reduced exports to OPEC countries reduce it.

The second change in the last year has been the fall in the value of the dollar. This provides a second bulwark against inflation, by reducing the ECU price of goods imported from dollar-linked currency areas. But it also reduces the competitiveness of European exports, and thus poses a threat to employment. A further threat to jobs comes from a possible fiscal contraction in the U.S. These events make the two-handed strategy of expansion in Europe even more urgent.

The risks of expansion-led inflation are now less than before on the score of both the oil prices and the new position of the dollar. Thus we have two new grounds for hope, if the opportunities are taken. But expansion still has many problems. In our last two reports we have highlighted the problems arising from rigidity in the *labour* market. In

this report we focus on the potential problems in the *capital* market. First, there is the risk of a shortage of physical capital, as the expansion proceeds. In Part II we discuss the size of this problem, and conclude that, though it is not now binding, action has to be taken to ensure that it does not become so. In the light of this, we review in Part III what scale of expansion could be hoped for and the appropriate mix of macroeconomic strategies to be adopted. In particular we focus on the question of how improved capital formation would be financed - in terms of the broad flow of funds.

On top of this, there is the important question of the microeconomic efficiency of the institutions of the capital market. In Part IV we look at how this needs to be improved within each country, and in terms of the international integration of the capital markets of the Community countries. Part V summarises our conclusions.

But first we need to review some of the basic features of the current European situation.

I. SETTING THE SCENE

As Table 1 shows, the European economy has now recovered from the inflationary shocks of the 1970s and the early 1980s, and returned towards a level of inflation similar to that of the 1960s. The rate of growth is still somewhat lower than the one observed in that period, but it is on the unemployment front that the present situation in Europe stands out as extremely serious in (a) quantity, (b) quality and (c) probable persistence:

(a) The rate of unemployment in Europe is about five times as high as it was in 1960-73; it is also much greater than the current rate in the U.S. and Japan (see Table 1).

(b) Even if it were not larger in size, European unemployment would present more problems, economically and socially, due to its qualitative structure. Youth unemployment and long-term unemployment have all substantially increased in the last few years and are much larger than in the U.S. and Japan (see Table 2).

(c) If policies are not significantly changed, the unemployment problem in Europe is likely to remain severe. According the EEC's baseline projection, the rate of unemployment in 1990 would on present policies still be as high as 10.4 per cent, almost twice the U.S. level and more than six times the Japanese level (see Table 1).

For this reason, our report will focus - like the previous one - on the issue of unemployment in Europe. It will try to identify a strategy to increase both the rate of growth of output and the employment content of growth.

The philosophy underlying our recommendations is in line with the "two-handed" approach advocated last year. We are still convinced -

TABLE 1
Inflation, growth and unemployment

	1961-73	1974-81	1982-85	1985	1986 ^a	1987 ^a	1986-90 ^b
Inflation (p.a.) (GDP deflator)							
E.C.	5.0	11.3	7.3	6.0	5.6	3.3	4.2
U.S.	3.5	8.0	4.7	3.2	3.0	4.3	5.4
Japan	5.8	6.7	2.4	1.6	0.8	0.1	3.0
Real GDP/GNP Growth (p.a.)							
E.C.	4.6	1.9	1.5	2.3	2.7	2.8	2.5
U.S.	4.2	2.3	2.4	2.2	2.5	2.7	3.0
Japan	9.9	3.9	4.0	4.6	3.2	3.2	4.3
Unemployment rate^c							
E.C.	2.2	5.3	10.4	11.1	10.8	10.5	10.4
U.S.	4.9	7.0	8.5	7.2	6.9	6.6	6.3
Japan	1.3	2.0	2.6	2.6	2.9	2.9	1.7

Sources: European Commission, growth rates are year on year i.e. 1985 means 1985 on 1984, 1961-73 means 1973 on 1960.

Notes: (a) Forecast presented in April/May 1986.

(b) Baseline projection presented in October 1985 as in *European Economy* No.26, November 1985, p.21 and 141.

(d) Average of period, except for 1986-90 (end of period).

TABLE 2

Youth unemployment and long-term unemployment

	EC(4)		U.S.A.	Japan
	1980	1985	1985	1985
Youth unemployment (% rate)	13.6	21.9	12.5	4.7
	1979	1984	1984	1984
Long term unemployment (% of total)				
6 months and over	34	61	19	38
12 months and over	28	38	12	15

Source: OECD, *Employment Outlook*, September 1985.

and developments of the last year confirm this view - that neither supply nor demand measures will by themselves create and sustain employment growth. Structural changes on the supply side are required if employment growth is to be sustained, but a boost is needed to accelerate the process. This boost must come from timely supply measures, sustained and validated by demand.

Our last report noted that high material prices, labour costs, capital deepening, labour market rigidities, and deficient demand all share some responsibility for the current employment woes in Europe. It would be ineffective to tackle only some of these aspects of the problem. Thus, our policy recommendations stressed, as a necessary condition, the importance of removing barriers to entry and rigidities in the labour market and allowing for more wage flexibility and more potential wage dispersion. At the same time we noted that measures aimed at those goals could only make a gradual contribution to employment growth. Only a set of supply incentives as discussed in our last report would make possible the extra employment needed in Europe. On the other hand we pointed out that supply measures, without accommodating demand policies, would be insufficient. If firms do not anticipate improved sales, they will not increase capacity to the extent that we deem necessary. Fiscal and monetary policies should therefore be combined with supply measures.

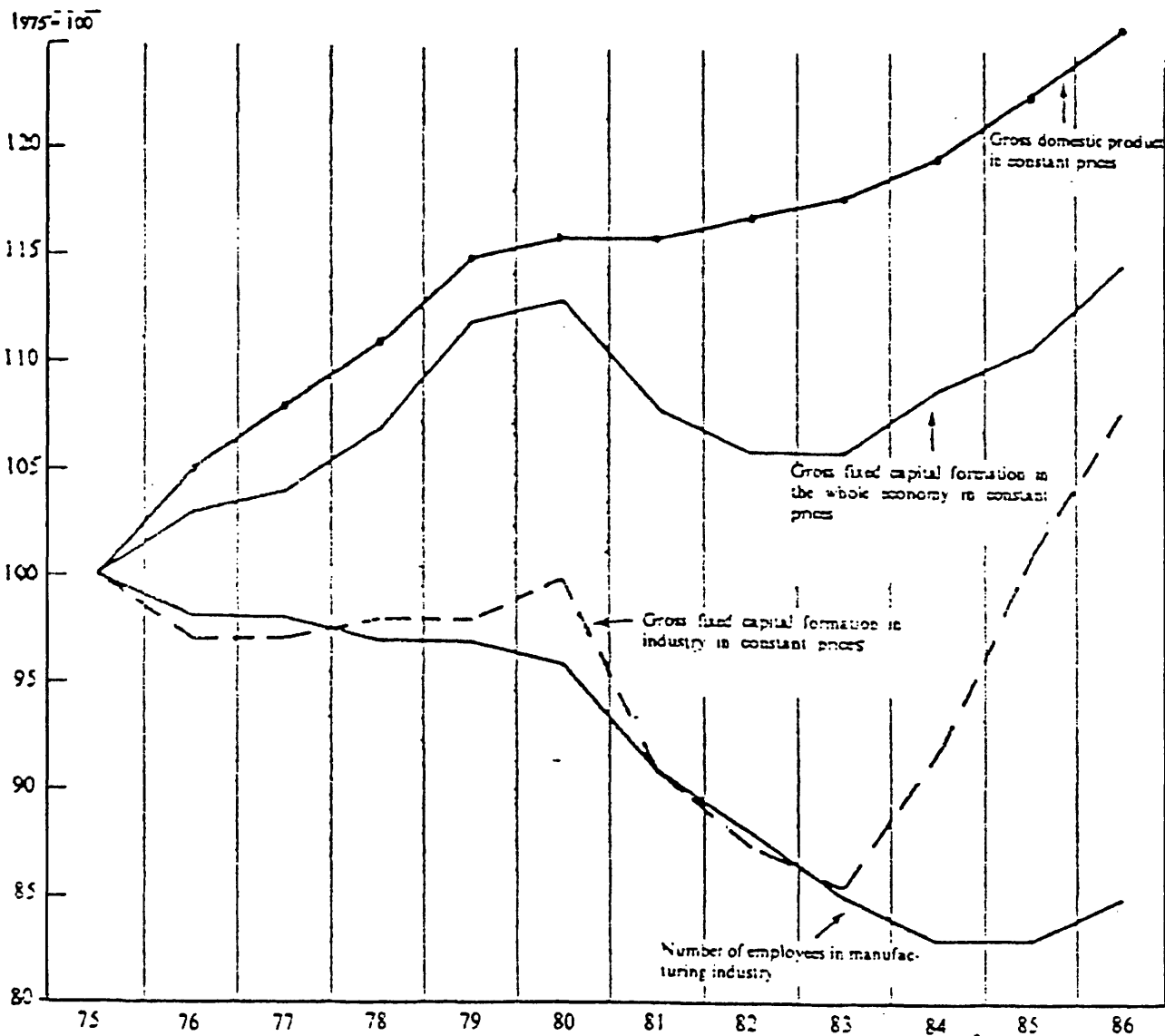
There seems to be presently a broad agreement on the merit of this approach. Official documents stress the need for a strategy of this nature.² Policy simulations provide indications of its possible effectiveness. In particular, the recent simulation by the EC Commission for the period 1986-90 shows that an expansionary fiscal policy alone would result in a relatively poor performance of the European economy, compared with a scenario of supply measures (wage moderation) and demand measures.

Not only would the latter option bring lower inflation, lower labour costs and small public deficits, but it would also lead to more significant improvements in employment and to less crowding out of investment.³ Our call for a two-handed strategy, therefore, seems to offer a genuine way out of the current difficulties.

But one key question is: "Will the expansion of capacity needed to restore employment be forthcoming?".⁴ The investment record in Europe since 1980 has been poor, as Figure 1 shows. Total investment is barely higher than in 1980. Industrial investment has recovered rather more, but the short-fall in the intervening period is so large that the existing stock of capital is still severely depleted. As noted by the Commission "the volume of investment planned by firms for 1986 is at the level which it would have reached arithmetically if the investment trend observed in the period 1976-80 had continued. However, if the severe investment shortfall in the period 1981 to 1983 is to be made up, at least in part, it will not be sufficient for investment to continue on this earlier trend in the years ahead. It needs to continue for several years to grow as buoyantly as in the period 1984-86 if there is to be any appreciable reduction in unemployment".⁵

FIGURE 1

Industrial investment in the EC, and other macroeconomic indicators



Source: EC Commission "European Economy", Supplement B, No.1, January 1986.

II. IS CAPITAL A CONSTRAINT ON GROWTH AND EMPLOYMENT?

II.1 Facts

So we first ask whether and to what extent growth of output in Europe is made impossible, or at least severely hindered, by insufficient capital.

We begin by looking at some facts relating to the availability of capital is measured by productive capacity in manufacturing industries, where the concept is relatively well defined and measures are readily available.

First we show in Figure 2 the recorded levels of capital utilisation since 1974. As can be seen, capacity utilisation has been rising for three years. It is now only slightly below its level in 1979 and 1974 (though this is not generating the normal pressure on price expectations, due to the slackness of the labour and commodity markets).

We can now use the capacity utilisation figures to produce a measure of capacity (in Figure 3).

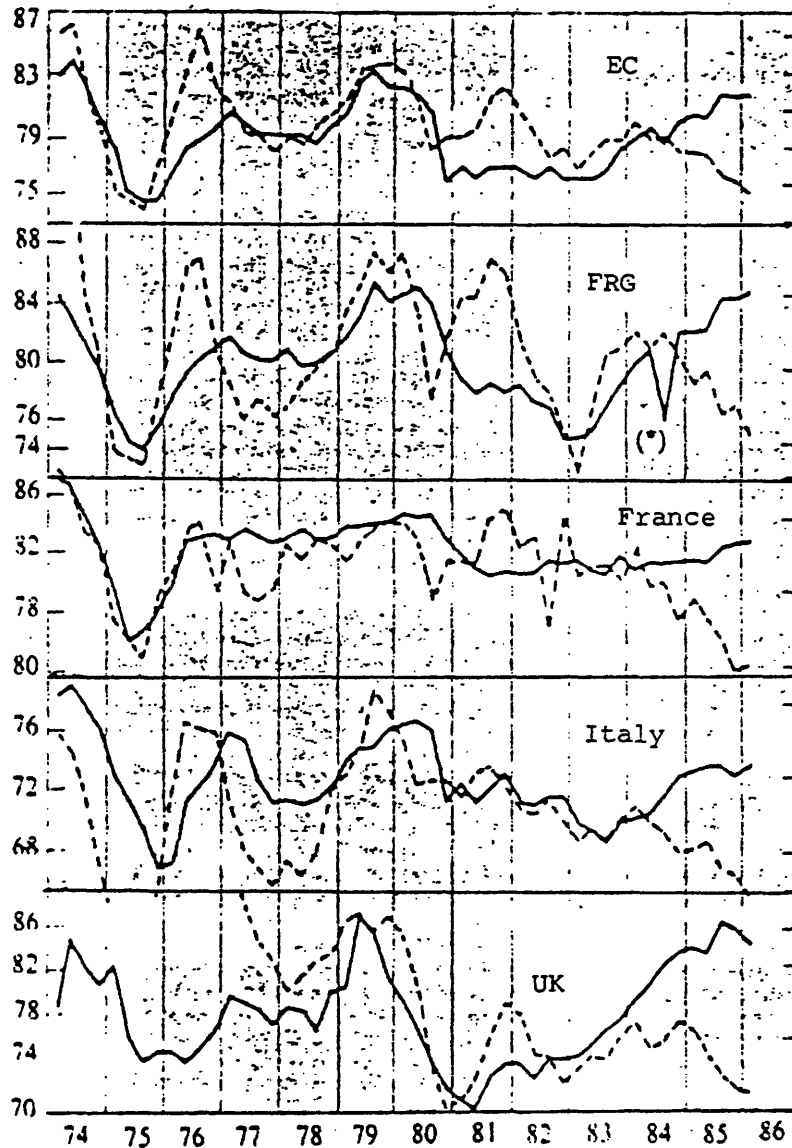
First we graph the actual level of industrial production (Y). Then we graph the level of capacity (C), measured as output divided by the rate of capacity utilisation (CU): $C = Y/CU$. This is the middle line on the graph.

This approach to measuring capacity has several advantages over measurements based on estimates of capital stock. First, to estimate the output which the existing capital stock can produce we also have to know the capital-intensity embodied in it. This in turn depends on the extent to which the investment which produced the capital was capital-widening or capital-deepening, which raises further problems of estimation.

Second our calculations get round the problem of obsolete capacity in that they rely on firms' own implicit judgements about what capacity is usable. They also circumvent problems of unmeasured scrapping of

FIGURE 2

Capacity utilisation in industry (per cent)



(*) Mainly due to metal workers' strike in Germany

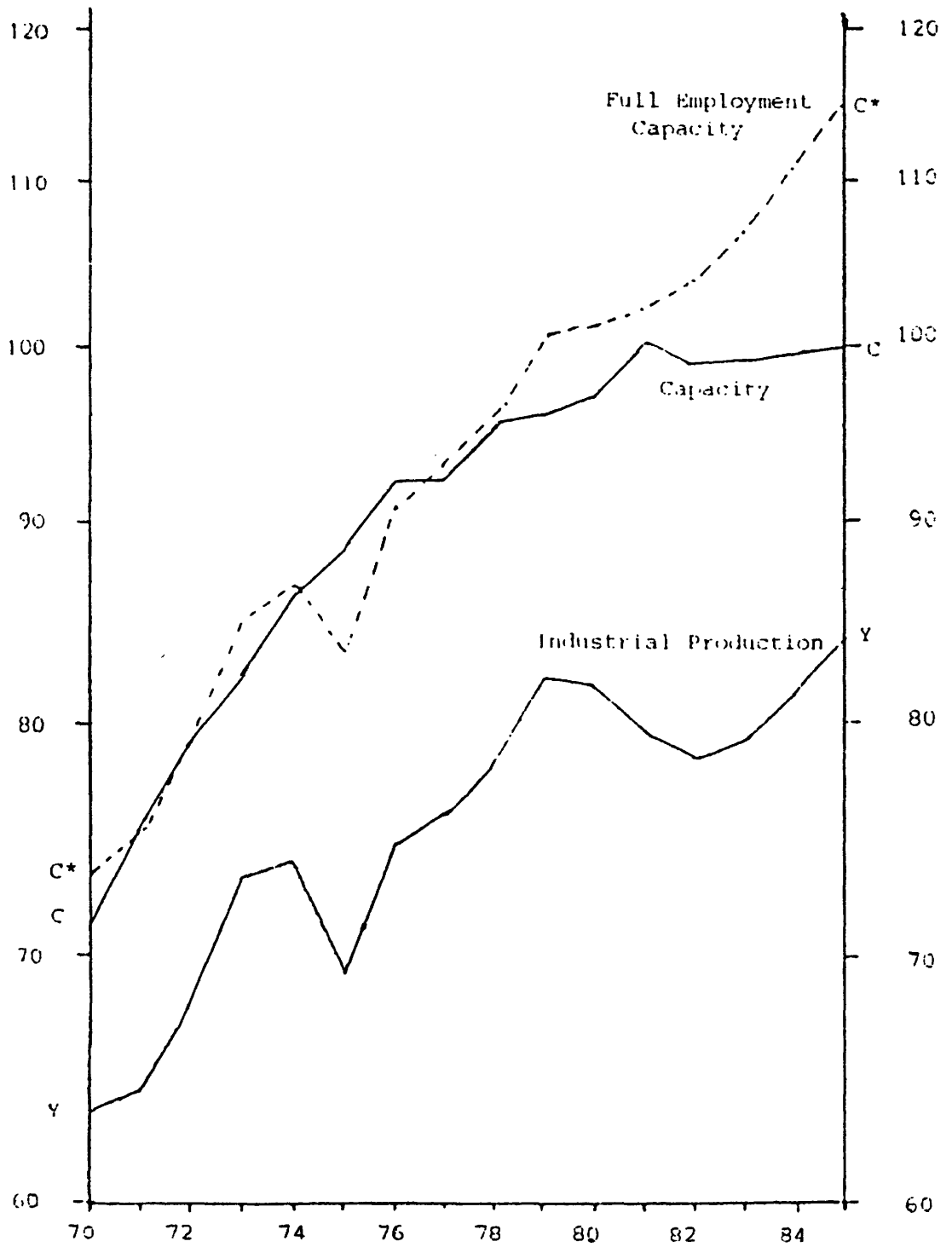
Source: European Community business surveys.

FIGURE 3

Industrial output, capacity, and full-employment capacity

log scale

(actual capacity 1985 = 100)



Source: E.C.

machinery. By dealing in terms of productive capacity, we partly circumvent these problems.

The distance between Y and C in Figure 3 measures the level of underutilisation of existing capacity. As we have said, this gap is now quite low by historic standards. So capacity is becoming relatively scarce - compared to the existing level of output.

But we need also to ask how it compares with the level of capacity that would be needed if output were sufficiently high to provide full employment. For this purpose we need to make an illustrative assumption about the level of full employment. We shall assume that it would be the average level for 1961 to 1980, namely 3 per cent. But the reader can easily see the result of different assumptions. We also need to make an assumption about the rate at which output would have to change if unemployment were to be reduced. Here, for illustration, we shall assume that, if unemployment is to be reduced by 1 percentage point, industrial output has to grow by an extra 2 per cent.⁶ This enables us to compute full-employment output as $Y(1 + 2(U - 0.03))$ where U is the unemployment rate. The corresponding capacity required has been assumed to be greater than this by a multiple of $1/0.85$, on the assumption that capacity utilisation rates of over 85 per cent are difficult to attain. Thus full-employment capacity is C* where

$$C^* = \frac{Y}{0.85} (1 + 2(U - 0.03))$$

The calculation is purely illustrative, to give some feel for what has been going on.

So what does Figure 3 suggest? Until 1978, the available capacity (C) was adequate, or more than adequate, to produce the estimated full employment output. However, beginning with 1978, it began to fall short of

the required level, and the gap increased steadily. By 1985, capacity was on this assumption 15 per cent below what is needed for full employment.⁷

II.2 Implications

Does this mean that there is no hope of returning nearer to full employment? No, for at least five reasons. First, as Figures 2 and 3 show, aggregate capacity utilisation in industry is still 4 per cent below the level of 85 per cent, which we have posited as a critical level. So *some* expansion is possible with the existing capital, used in the existing way.⁸

Second, the capital could be more fully utilised. At present much capital is only used for one shift. For example, in Britain, 86 per cent of worker-hours in manufacturing are worked between 8 am and 6 pm.

The existing stock of capital will be consistent with a larger output if capital is utilised for a larger number of hours per day or per week. Measures should be taken in the field of labour organisation - at the national level and at the level of individual firms - so as to permit and encourage this more intensive utilisation of capital. (On this problem, see J. Dreze, "Work Sharing: Why? How? How Not ...", 1985). It would be particularly helpful if longer periods of capital utilisation could be organised at firms operating in the "capacity-producing" sectors. This is not only because these sectors produce "capacity" for the others, but also because they are currently characterised by the highest degrees of capacity utilisation, as conventionally measured.⁹

Third, the fall in oil prices relative to wages and output will make profitable again a certain amount of the capital which would otherwise be unprofitable to work. This will again expand effective industrial capacity. Similarly if our policies for wage flexibility, wage restraint and removal of barriers to entry were followed, this would make it possible

for many European industries to take more advantage of any growth in world demand. Such improved profitability would again expand effective capacity.

Fourth, the calculations which we have done relate to industry, where the capacity problem is the most severe. In services, which produce much more than half the output of the Community, the physical capacity constraint is much less clear (even when there is one-shift working). For example, the capacity of a shop is highly elastic, as we experience at Christmas, and offices likewise can be used to a greater or less intensity.

But finally, and most important, capacity can be increased. This makes it essential to understand what affects capacity, and to what extent extra demand for output might generate sufficient capacity to supply it.

II.3 Determinants of capacity

There are two textbook types of explanation of changes in capacity: supply factors and demand factors.

(i) According to the supply hypothesis, the prime determinant of changes in capacity is profitability, which depends in turn on real factor prices and on other matters such as the regulations affecting the use of factors of production. On this line of thought the recent standstill in capacity has been caused by the fact that labour costs have jumped up during the 1970s, with a rise in real labour cost (in terms of product wages) faster than growth of productivity. This occurred particularly from around 1974 to the early 1980s. Aside from higher wages, growing rigidities in the structure of employment relations, tenure arrangements and so on has resulted in an increase in the effective hourly cost of labour.

Whether set in terms of a putty-clay model or a putty-putty competitive model, higher labour costs, in the short run, will tend to reduce the output worth producing. This will reduce our measure of capacity -

depending in practice on how this is calculated by employers. In the long run, it would tend to reduce the capacity worth maintaining as well as the output worth producing. This would certainly be the case if the real interest rate does not decline.

Following on this, one might expect to see a decline in domestic interest rates under the impact of the reduced investment, though the extent would depend on what happens to interest rates elsewhere and on capital mobility. If this fall occurs, there might be some tendency for the capital/output ratio to rise, thus partially offsetting the fall in investment. However, even with given saving and investment, one should find investment taking more capital-intensive forms, so that the capacity would become growingly inadequate to employ all the labour.

(ii) According to the demand explanation, on the other hand, the capacity level is set with reference to expected output. (Even though, in this model the real wage does not directly affect the level of output, it could affect it indirectly via an influence on the feasible level of aggregate demand. This holds, in particular, in an open economy when the real wage and aggregate demand determine the current account balance. Therefore, given external balance requirements, the real wage may control the level of target aggregate demand chosen by the authorities).

The two explanations are not mutually exclusive. In particular, real unit costs and other supply factors influence market shares (of Europe in the world economy) and demand factors influence market size. In the short run, the output of a firm is determined by effective demand (given its costs and world prices), subject to the limit of physical capacity. In the longer run, net investment tends to bring physical capacity into line with effective demand, both at the level of the firm and in aggregate. Equilibrium degrees of capacity utilisation reflect both the relative costs

of capital and labour, and the (relative) short-run variability of both demand, productivity and factor availability.

As Figures 3 and 4 show, in 1974 capacities were fully used and output was constrained by the availability of factors (both labour and capital). The decline in capacity utilisation in 1975 reflected mainly the downturn in aggregate demand. From 1975 to 1978, capacity rose in line with the increase in output. In 1980 capacity utilisation fell sharply and in line with this, capacity ceased to grow.

From now on, it may be expected that effective demand growth would trigger investment for capacity expansion. But the situation differs widely both across sectors (with spare capacities least visible in the capital goods industries) and across countries (with spare capacities least visible in Denmark, Germany and the Netherlands).¹⁰

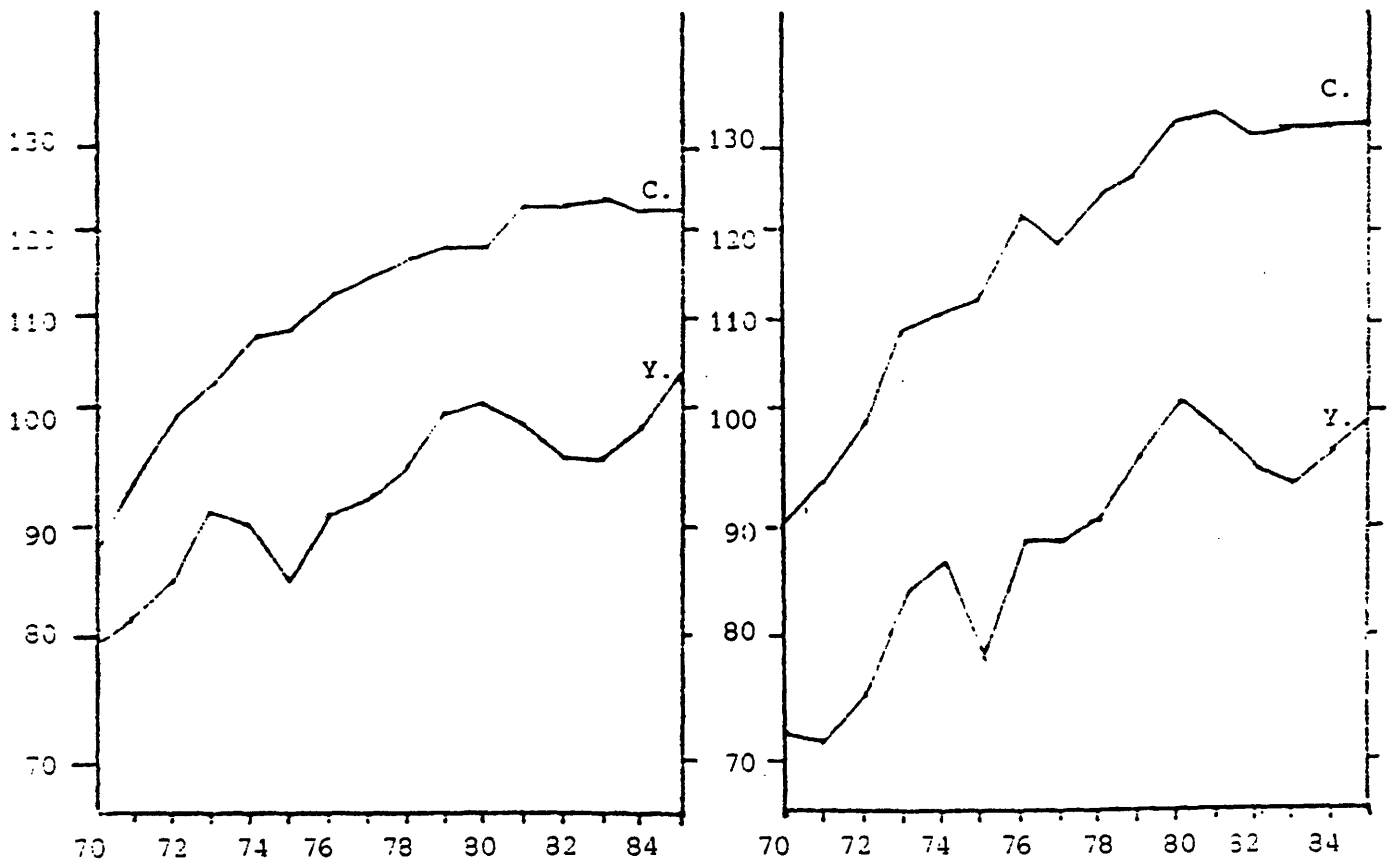
The question then arises as to how rapid an expansion could be hoped for, what policy mix would be appropriate to encourage it, and how the additional investment would be financed.

FIGURE 4

Industrial output (Y) and productive capacity (C)

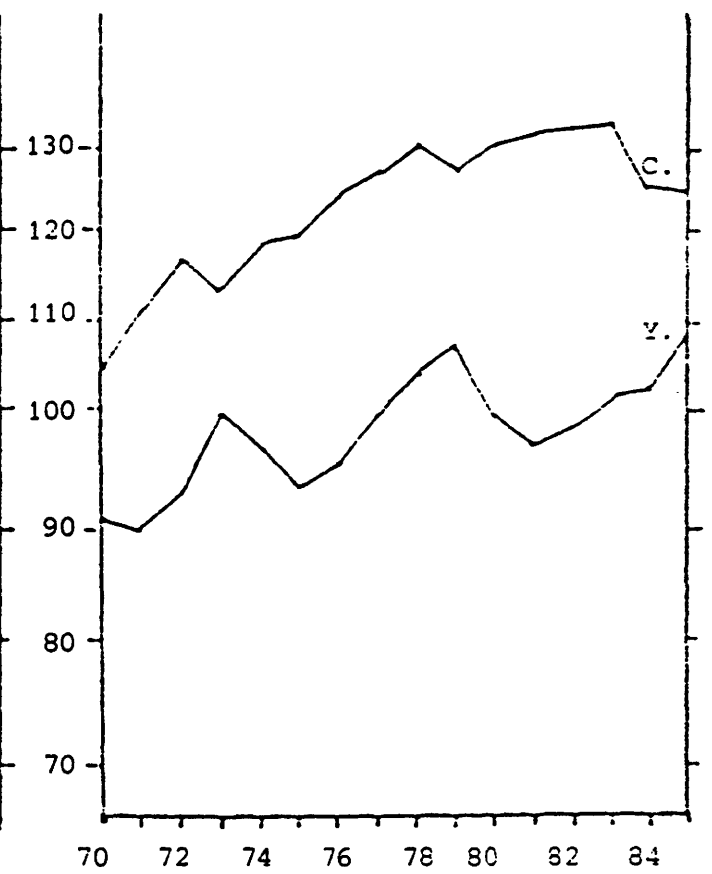
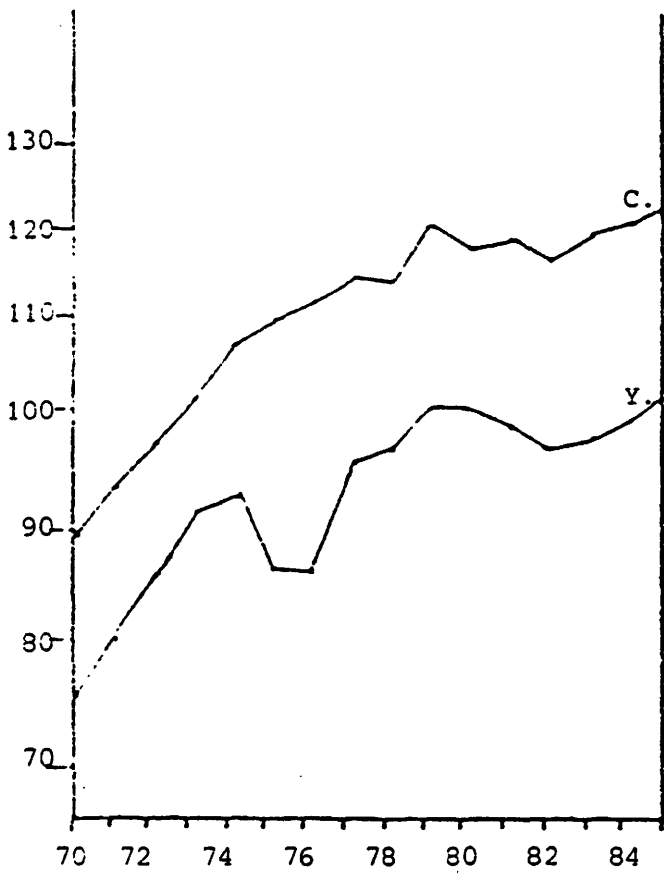
(a) FRG

(b) Italy



(c) France

(d) U.K.



Source: E.C.

III. MACROECONOMIC POLICY

III.1 The feasible scale of expansion

If European output continues to grow at say 2½ per cent a year, unemployment will not fall. Suppose that instead we aim to reduce it with reasonable speed to the level of the late 1970s. This means that unemployment will fall by 6 points (from 11 to 5 per cent). How much output would grow in order to achieve this depends on the complex issue of the relation between the growth of output and the change in unemployment. The Commission's projection of the cooperative growth scenario implies a coefficient of 1.2. A reasonable estimate is somewhere between this figure and the Figure of 2 that we used earlier. On any of these assumptions we suggest that if unemployment is reduced by 6 points with reasonable speed, conditions must be created for growth to build up to a level of 5 per cent a year for a limited period.¹¹

Such rates of growth have been by no means uncommon in the past, especially at times of high unemployment. In fact in some countries unemployment has fallen quite rapidly after reaching a high peak. For example in the five years 1932-37 unemployment in Britain fell by 8½ points (from 17 to 8½ per cent) and unemployment in the U.S. fell by 14 points (from 23 to 9 per cent). Of course both economic and institutional conditions during the 1930s were very different to those which exist today. It is also true that the 1970s were years of experience which cannot simply be rolled back in their entirety. Perceptions and reactions have changed. Nevertheless, the recovery of 1932-37 is not without interest.

III.2 Inflation and the need for wage restraint

But will not a faster rate of growth inevitably bring an increase in the inflation rate? This is, after all, probably the greatest fear at

present. There is no doubt that inflationary pressure would be higher than otherwise. Thus, as we have argued in earlier reports, wage restraint should be a crucial element in the policy, with wages rising little faster than prices.

But the exact scale and nature of the inflationary problem remains a matter of considerable debate. Unfortunately, even though the relation between wage and price inflation and aggregate activity - the so-called Phillips curve - has been a subject of intensive inquiry in the last decade, there is disagreement on many issues, and in particular on the role played by the rate of change of unemployment (or employment).

Some, like Blanchard and Summers¹² have argued that wage behaviour in fact depends mainly on the change in employment. This, if true, would mean that, in the absence of induced wage restraint, *any* permanent decrease of unemployment would lead to a prolonged period of higher inflation. The mechanism that is said to explain this is the fact that existing workers (insiders) only care about keeping their own jobs, and thus the existing level of employment is always the critical level above which inflation increases (and vice versa).

Others, such as Layard and Nickell,¹³ argue that there *is* in fact a long-run NAIRU (non-accelerating-inflation rate of unemployment). But if unemployment is driven above it, as in the last few years, there is a short-run NAIRU which is a good deal higher than the long-run NAIRU. This is because rises of unemployment lead to disproportionate increases in long-term unemployment, and the long-term unemployed are an ineffective source of labour supply. Given that unemployment is now above the long-run NAIRU, it can be reduced without increasing inflation provided it is reduced slowly. But faster reduction of unemployment can only be achieved without extra inflation if jobs are explicitly targetted at the long-term

unemployed or if there is effective wage restraint. In support of their view Layard and Nickell point to the rise of unemployment at given vacancies which has happened in many countries. This cannot be explained by the Blanchard/Summers analysis but can be partly explained by the long-term unemployment and other supply-side factors. In addition the Blanchard/Summers analysis cannot explain why in the long term the rise of the labour force affects the level of employment.

Others still, such as Sneessens and Dreze,¹⁴ argue that the inflation/unemployment relationship cannot be isolated from the degree of capacity utilisation. There are two sources of inflation - cost push and demand pull. And there are two determinants of employment - effective demand and production capacities (places of work). Rates of unemployment, and of excess capacity, compatible with given levels of inflation are determined simultaneously, against the background of income claims (wages and profits) and of classical unemployment (unemployment at full use of available capacities).

The three stories have important elements in common. In all three, there are elements of "hysteresis" - meaning that the current non-inflationary level of unemployment is affected by past history. In the Sneessens-Dreze version, the hysteresis is embodied in the capital stock. In the Blanchard/Summers version there is total hysteresis, and in the Layard/Nickell version there is partial hysteresis. Thus it seems wise to proceed on the assumption that what can be attempted in Europe is limited by our recent past.

There have of course been episodes in other times and places where this has not appeared to be the case. The U.S. reflations of 1961-64 and 1982-86 proceeded without countemporaneous increases in inflation (the second helped by a massive terms of trade gain and growing unemployment in

the rest of the world). And even the huge U.S. recovery from 1938 to 1941 saw inflation rising from - 1.4 per cent in 1938 to only 1.4 per cent in 1940, and then 7.5 per cent in 1941. But we could not safely now in Europe rely upon the same degree of luck.

We would therefore suggest that, to ward off the inflation risk, the recovery plan needs to have the approval and explicit support of all economic actors - business and labour. This should include a pledge of containing wage increases within the limits of price increases as long as unemployment remains above some stated level - which means essentially during the duration of the recovery program. This could be matched by a pledge on the part of business not to try to expand profit margins, which should not be a serious sacrifice considering that profits should be greatly swelled by the large rise in volume. Those pledges might, of course, be reinforced by a formal and binding type of incomes policy, in countries where this was feasible or appropriate. In a country like Italy which still makes wide-spread use of escalator clauses, one might suggest a set-up ensuring roughly 100 per cent inflation-coverage as the combined result of escalator clauses and new nominal contracts. In the United Kingdom a taxed-based incomes policy might be the natural route. The most obvious success of incomes policy in recent years has been in France (a policy applying strictly in the public sector and followed by agreement in the private sector). This has helped to reduce inflation from 12½ per cent in 1982 to 4 per cent today without any large increase in unemployment.

So wage restraint is necessary, and so are the other supply-side measures discussed in our last report.¹⁵ But, in terms of the inflation risk, it is hard to imagine a better moment to embark on a policy of expansion, with both oil prices and the dollar on our side.

III.3 Generating and financing the expansion of capacity

We can therefore revert to our initial focus, and ask how an adequate expansion of capacity can be achieved and how it can be financed. In the last 15 years, the largest increase in capacity for the Community has been 6 per cent per annum (about the same as for output), and the maximum for a single country has been about 10 per cent (Italy 1976). Increases of this size have not raised any problem, but significantly the expansion required now needs to be sustained over a longer period than has been the case in the examples given.

If output were to grow 2½ percentage points a year more than otherwise (at 5 per cent rather than 2½) and we assume an incremental capital/output ratio of 2, the share of investment in total output would have to rise by 5 percentage points of GDP (2 x 2½). This is probably an exaggeration, given the existing spare capacity and the role which services will play in the expansion. Even so, an expansion on the scale we envisage poses a substantial challenge. Two issues need to be confronted.

First, there is the challenge to the equipment-producing industry. The capacity utilisation in this area was high by 1985; in that year equipment investment rose some 6 per cent, substantially more than the rise in capacity of the equipment industry, whose capacity utilisation rose, therefore, 3 to 4 per cent in most subsectors, reaching rates of 82-86 per cent. Furthermore, by year end, the rates had risen to the 84 to 88 per cent level.

It is not clear how fast capacity and output can grow in these industries, though it is encouraging that they are reported to plan an increase in investment by 15 per cent in 1986 on top of a 15 per cent rise in 1985 (*European Economy*, January 1986, Supplement B). In any case, some of the equipment would be imported from outside Europe.

The second question is where the finance will come from to pay for the extra share of investments in national income. It will mainly come from two sources. First, the European current account surplus will come down as Europe expands and the effects of the lower dollar come through. This year the Community's current account surplus is forecast at roughly 1 per cent of GNP. As this turns round, the unhealthy deficits of the U.S. and the third world debtor countries will come down, and Europe will cease to be an exporter of capital. Second, the share of consumption in income will decline. This naturally tends to happen in an upturn, since a substantial fraction of any rapid rise in output does not get consumed. (In the longer term a permanently higher rate of growth would also increase the savings rate by about 2 per cent of income for every 1 per cent of growth, in a steady state).¹⁶ However to generate the higher savings, we have to ensure that our expansion package includes the right mixture of monetary and fiscal policies.

III.4 Monetary and fiscal policies

The standard view, though not universally accepted, is that the world economy has been suffering from inappropriate mixtures of monetary and fiscal policy on both sides of the Atlantic. The U.S.A. has pursued a high interest rate monetary policy, in order to restrain the possible inflationary effects of an expansionary budget. The net effect of the expansionary budget and relatively tight money has been favourable to U.S. employment and has helped unemployment to fall by about 4 percentage points over the last 4 years. But it also led to a strong appreciation of the dollar, which together with the high U.S. activity rate, generated the present huge U.S. trade deficit.

Though this deficit provided jobs in Europe, Europe was forced to accept the high world real interest rates. The alternative would have been

a further depreciation of the European currencies, sharpening the twin dangers of inflation in Europe and protectionism in the U.S. The high real interest rates were, in the absence of wage restraint, bad for European employment. On top of this the European governments also adopted much tighter fiscal policies. In the Community between 1979 and today the share of taxes (and social security contributions) in the national income rose by between 3 and 4 percentage points.¹⁷ At the same time the share of government expenditure (net of transfers) barely changed,¹⁸ and as a proportion of potential output (however measured) such government expenditure fell substantially. Thus the net impact of the budget was contractionary.¹⁹

The situation has now changed substantially. First, the oil price fall has reduced the level of world inflation, just as the earlier oil price rises lifted it. Second, the U.S. has relaxed its monetary policy enough to permit a fall in the dollar. Thus the danger of an unacceptably low value for the European currencies (with the associated inflation risk) has been removed. This makes it much easier for European countries to consider a coordinated monetary expansion.

Would this be the right thing to do? It is quite possible that in the process of increasing employment, there will be such a scarcity of capital that high real interest rates will correspond to the correct pattern of factor prices. In the light of this, long-term real rates may remain high for some time. But this does not argue against greater monetary ease in the short run. In the new context, lower short-term real interest rates and (where appropriate) less credit rationing would be important parts of a package for European recovery. Lower interest rates in turn will involve somewhat higher monetary aggregates, justified by a fall in the velocity of circulation of money.

III.5 The structure of fiscal policy

There is also a need for fiscal expansion in Europe. How should this be structured? Given our previous discussion, we must ensure that the requisite savings emerge to finance the construction of new capacity. We cannot have a consumption-led boom. In addition fiscal expansion must not lead to a permanently growing ratio of debt to income. It should therefore be focussed mainly on temporary incentives to employing more labour and creating more capital.

Labour is the surplus factor, but owing to complementarity between the factors, one *must* pursue both objectives simultaneously.²⁰ It is only when output is fixed that more capital implies less employment. But we clearly want the expansion of capital to take as labour-intensive a form as possible. In other words we want capital widening rather than capital deepening. This means that, where possible, it is the real cost of labour that we want to reduce rather than the real cost of capital.

So let us first consider steps to encourage expansion of the capital stock. This consists of the public and private capital stock, both of which may need to grow when national output rises.. In some countries the public capital stock has become quite run down, and the case for infrastructure investment is quite strong. This must be judged on normal social rate of return criteria. Where it passes this test, an expansion of the government deficit to finance such investment can involve no crowding out of investment in total, since by definition it can at worst divert a given volume of savings from financing private investment to financing equally-profitable public investment.

However the main expansion is needed in private investment. Incentives to investment in the form of tax provisions and subsidies have apparently proved to be not very effective in stimulating investment.²¹ But, in

addition, they have the serious drawback of encouraging substitution of labour with capital, at a time when labour is abundant and capital presumably scarce. So we see little use in trying more of that medicine, except for an investment tax credit of relatively short duration (cf. two handed approach). In this case the dominant effect of such a measure is the desirable one of shifting investment forward in time.

More generally - as to the existing widespread public-sector transfers to the corporate sector, we believe that a critical review should be carried out, for each member country and in a comparative way, of the complex network of grants, subsidies, tax reliefs, credits, participations, etc.

While some of these interventions may be warranted, it does seem urgent to us that the arguments for their continuation on the present scale, diffusion and lack of transparency, should be reconsidered more closely. The EC Commission has recently undertaken a systematic review of these interventions for France, Germany and the U.K., with comparisons with the U.S., and has identified a number of critical issues concerning the budgetary cost of financial supports to industry, their effects in terms of efficiency, their consequences on the EC internal market, their degree of transparency.²²

In some countries, attempts have been made to estimate the macroeconomic consequences of a massive reduction in these government interventions, including the aggregate and sectoral effects on employment that would derive from a reduction in personal taxes matching the reduction of expenditure on subsidies.²³ Simulations seem to indicate positive net effects on employment and the subject is worth pursuing.

What has to be stressed, in the context of our proposed strategy, is that financial support by governments seems to go to a large extent to the

protection of unproductive capacity at old firms in sectors facing declining demand, to the detriment of the creation of new firms and of capital formation in sectors facing high demand. This runs contrary to the requirements of a policy aimed at removing the capital constraint on employment growth.

If a factor is to be subsidised (or detaxed), it should mainly be the abundant factor, labour. Several methods have been suggested to implement this approach. The method we advocate is that of "marginal employment subsidies", preferably in the form of rebating to the employer some portion of payroll taxes on net additions to payrolls (in terms of number of workers, not in terms of hours worked or of wage bill). This scheme has a number of desirable features.

(a) Provided the rebate is guaranteed to last some time, it will encourage labour-intensive techniques.

(b) It will lower domestic costs of production relative to the rest of the world, increasing exports - and aggregate demand - and the increase in exports will be valuable to attenuate the effect on the balance of trade of a rapid expansion of demand. It is true that if this measure is adopted simultaneously - as it should be to avoid intracommunity raiding - its effect on the demand from this source would come only from that portion of trade that is directed to the rest of the world. However, it is also true that the gains obtained abroad by each country will spill over to the other member countries through intra-community trade.

(c) But one could expect some effects even in a closed economy, by lowering marginal costs, thus shifting the supply curve. In addition, of course, the newly-employed create their own demand, as long as the incremental savings are absorbed into investment, which, as we have said

repeatedly, is pretty safe to assume once output gets growing and monetary policy is accommodating.

Finally we should comment on public consumption. This again should be judged on its merits. But there does not seem to be a major role for big expansion of public employment in Europe except in the form of special programmes for the long-term unemployed, such as are advocated in the Two-Handed Approach. Many of these schemes could in any case be operated through the private sector.

A feasible policy for creating demand has to be such that at one and the same time it generates the capacity to supply the demand. Thus it must generate an increase in desired investment, as well as sufficient savings to finance this. But there is also the important question of the microeconomic efficiency of the process by which savings are allocated to investment, to which we now turn.

IV. IMPROVING THE FINANCIAL SYSTEM IN EUROPE

IV.1 Capital formation and the efficiency of the financial system

Along with the macroeconomic policies suggested above, supply-side policies should be pursued in a complementary manner in all three crucial markets: the labour market, the output market and the financial market.

Actions to achieve continued wage moderation, to contain non-wage labour costs and to substantially increase the flexibility of the labour market, should still be considered as the central piece of supply-side policies in Europe. If we do not dwell on them here, beyond what has been said in Section III.2 above, it is simply because we discussed this subject at length in our previous report²⁴ and because appropriate measures have been spelt out in detail by the EC Commission.²⁵

Policies aimed at increasing the supply response in the output market are also important and should be carried out both at the level of individual countries and at the EC level. A large set of measures contemplated by the plan for the completion of the internal market for goods and services belong precisely to this category. Their implementation will serve the purpose not only of a deeper integration among member countries, but also of increasing the supply elasticity in each country's market for goods and services. In addition, the establishment of a truly unified market will itself provide a powerful impetus for capital formation.²⁶

Structural policies to improve the financial system in Europe are not less essential. We wish to deal with them at some length for two reasons.

First, capital formation in Europe in the next few years is not likely to find a substantial and permanent stimulus in an overly expansionary demand management, for the reasons mentioned above. It will have to rely

more, therefore, on improvements in the financial system that may facilitate the allocation of financial resources to promising initiatives.

Second, the link between the employment goal and structural financial policies needs to be stressed. Measures to increase the efficiency of financial markets and intermediaries - in individual countries and in the EC - are usually perceived by public opinion as bearing little or no relationship with the employment issue. However, as one key constraint to employment growth is now the capital constraint, and since it cannot be removed through macroeconomic policies alone, it should become clear that any step towards a more efficient financial system, which will allow a larger capital formation for any given set of macroeconomic conditions, is to be viewed as a positive contribution to employment policy.

Once this link is acknowledged, a strategy to improve financial allocation in Europe is likely to benefit from a wider political support than has been the case so far. For this strategy to be effective, it has to consist of two coherent sets of policies, aiming respectively at improving domestic financial systems, and at achieving a deeper integration among them.

IV.2 Improving domestic financial systems

Through the improvement of their domestic financial systems, European countries may increase the formation of productive capital associated with any given volume of aggregate private savings and current account position.

Three main aspects of public policies come into play here, concerning respectively public sector investment, public sector financial transfers to firms, and public policies affecting the structure of the financial system. Issues related to the first two aspects have been discussed above, in the context of fiscal policy. We now consider policies affecting the structure

of the financial system, i.e. the array of monetary, financial and equity markets and the various types of institutions which operate in them.

Although measurements in this field are particularly difficult, it is commonly agreed that several European countries have financial systems which cannot be regarded as optimal from the point of view of supporting the formation of productive capital. In particular, there seems to be room for improvement in two respects: greater operational efficiency, leading to the provision of financial services to the economy at lower costs; and greater allocative efficiency, assuring that savings flow to those uses with the highest expected real rates of return - private or social - for any given risk level.

The specification of these objectives, and the measures to achieve them, will of course differ from country to country. A strong case can be made, however, that in general European financial systems can become more efficient in both respects outlined above if domestic public policies (by the regulatory bodies and the monetary authorities): (i) create more competitive conditions in and among the markets making up the financial system; and (ii) reduce the "hidden taxes" that are presently levied from the financial system.

These are essentially the two components of the process that is sometimes called "domestic liberalisation" of financial markets. It should be stressed, however, that "deregulation" as such is neither a necessary nor a sufficient condition for this two-sided policy to be implemented. In several cases, regulatory instruments will have to be oriented towards positively achieving more competition, rather than simply dismantled.

(i) Greater competition tends to increase the operational efficiency by inducing financial institutions to contain their production costs and to operate with lower profits. Both circumstances result in lower

intermediation costs for the economy (see Appendix). Furthermore, keener competition leads also to greater allocative efficiency by enabling financial resources to respond more easily to the attraction of the different rates of return obtainable from the various uses.

As to ways to increase competition, most of them should be indentified in changes in those controls by means of which the authorities themselves to a large extent determine the degree of competition (barriers to entry, specification of the types of financial operations that each category of institutions is allowed to carry out, policies towards cartels, etc.). These changes should go in the direction of a certain relaxation of the "protection" granted to existing financial institutions, while at the same time relieving them from the various "portfolio constraints" imposed upon them in several countries (see below).

(ii) Hidden taxation results from different forms of coercion exerted by the authorities on the allocation of financial resources, most typically through portfolio constraints placed upon banks and other financial institutions (compulsory investments in certain types of securities, ceilings on specified kinds of loans, high reserve requirements bearing no interest or a strongly penalising one, etc.) but frequently also upon non-financial firms (e.g. compulsory financing in foreign exchange for certain operations) and on households (e.g., restrictions on the purchase of foreign assets). "Taxation" is involved, both because coercion is applied - which is typical of fiscal instruments rather than of traditional monetary policy instruments - and because it produces effects similar to those of explicit taxation, though in a "hidden" way.

It can be shown that such systems of controls do impose hidden taxes on the economy (through lower returns to savers and higher costs for certain borrowers, usually in the private sector), the "revenue" of which accrues

mostly to the public sector (through a larger supply of funds at lower rates to that sector).²⁷

A reduction of such taxation can be achieved by means of appropriate structural changes in financial regulation and of changes in the methods of monetary control, so as to make it less dependent on portfolio constraints and more on market mechanisms. This reduction in hidden taxation has not only the advantage of bringing about a greater transparency (notably concerning the cost of the public sector), but also that of increasing both the operational efficiency of the financial system (smaller margins between lending and borrowing rates) and its allocative efficiency (especially when the effect of the portfolio constraints is to encourage the flow of financial resources to uses with low or nil productivity, e.g. financing of public sector current account deficit, or dissaving).

Along with a reduction in explicit taxes (and subsidies) on financial markets - to the extent allowed by budgetary considerations - a decrease in hidden taxation of the financial system would really amount to reducing the burden on the savings-investment process and at the same time increasing the efficiency with which financial markets perform the allocative function in that process: two results which are of crucial importance in the framework of a strategy for productive capital formation to sustain employment growth.

It will be noted that there is close complementarity between reducing hidden taxation and increasing competition in the financial system. Greater competition is necessary to ensure that the easing of inappropriate burdens on financial institutions, which would flow from a lower degree of hidden taxation, is passed on to users of financial services, i.e. is fully reflected in lower intermediation costs for the economy, rather than in higher profits for financial institutions themselves.

A revision of financial policies along the lines suggested here does aim at stimulating efficient capital formation also through a greater allocative neutrality on the part of the authorities than has been observed in the past. This does not necessarily mean that governments should refrain altogether from influencing financial allocation. Within our strategy, however, they should do so more by making use of efficient financial markets than by impeding their efficiency through direct controls. Furthermore, to the extent that allocative purposes remain in governments' objectives, they should be oriented mainly in favour of new firms, of growing small and medium-sized firms, especially those characterised by relatively low capital intensity. Much remains to be done in order for those firms to gain easier access to capital markets.²⁸

In the last few years, several European countries have started to move in the directions suggested above. Increased competition among financial institutions has been encouraged. Less use has been made of hidden taxes, especially in the form of direct controls over credit flows. The level and structure of interest rates have moved more freely. The more liberal environment has permitted the emergence of many new types of instruments and intermediaries, reflecting the needs of borrowers and lenders.

Although there are problems associated with these developments - in particular, supervisory problems in relation to financial stability - we consider it is important that this trend should be continued and should be intensified, to the advantage of capital formation in Europe. Certain countries, that in the last few months have temporarily reverted to previous practices based, in particular, on credit ceilings, should resume the new trend of domestic financial liberalisation as soon as possible.

IV.3 Government debt and capital-market liberalisation:
the role of indexed bonds

Perhaps the main reason that keeps the authorities of some countries from further pursuing financial liberalisation (both domestic and in the field of capital movements), is that in a regime without hidden taxation of the financial system the Treasury would have to pay more competitive interest rates on its issues. Besides the adverse budgetary consequences, this may contribute to keep up interest rates also for other borrowers in the bond market (although, for example, bank lending rates would be lowered by the elimination of hidden taxation, where this took the form of ceilings on bank loans).

We believe that this problem could be solved at least in part by introducing index-linked bonds among the financing instruments of the Treasury, an innovation that we would recommend also in those countries that have already proceeded to a substantial liberalisation of their financial system, if they wish to give some stimulus to the saving-investment process for any given demand policy stance.²⁹

In several financial markets, many agents still maintain fairly high expectations concerning the underlying rate of inflation, in spite of the recent remarkable declines in observed inflation rates. These expectations may take the form of a high expected rate of inflation (relative, for example, to government plans or to consensus forecasts) and/or a large variance associated with the inflationary expectation. In such conditions, a borrower issuing a long term bond with principal linked to the general price level is likely to be able to raise funds at a lower real cost than would be implied by issuing conventional bonds of the same maturity, as it does not have to compensate the lender with an inflation-risk premium. At the same time, the borrower itself acquires the certainty concerning the

real cost of financing over the whole life of the bond, rather than being exposed to unexpected changes in the real cost as is the case with conventional bonds and with floating-rate nominal bonds as well. This may be of particular importance in connection with the financing of capital-widening investment - which should be increased, under the strategy advocated in this report - because that kind of investment implies an extension of the forecasting horizon and therefore more uncertain inflationary expectations.

It is true that a company issuing bonds linked to the general price level would be exposed to a relative-price risk, as prices of its outputs may move differently from the general price level.³⁰ But it should be noted that this does not apply to the Treasury. Since its receipts - taxes - are indeed linked to the general price level (indexation of the tax system, even if applied, would simply make this relationship proportional rather than progressive), the Treasury is possibly the only agent in the economy, which, without incurring relative-price risks, can "sell" inflation coverage on financial instruments, obtaining as revenue a decrease in its own real cost of financing. It is paradoxical for a government not to exploit this sort of "natural monopoly" it potentially enjoys, and at the same time to artificially impose distorting elements of monopoly through various types of constraints in order to make Treasury financing easier.

There are possible objections to the indexation proposal, but they may be overcome. Issuing indexed bonds, it is sometimes feared, may appear a surrender to inflation; but clearly this preoccupation might have been more serious a few years ago than it is under the present conditions of low inflation. It is contradictory - states another argument - to index financial instruments while trying to reduce indexation in the labour

market; but it should be noted that wage indexation has by now been substantially reduced in several countries, and that at any rate no simple symmetry can be established between wage indexation and asset indexation, for a number of reasons made clear by the literature.³¹ Setting the "appropriate" real rate on indexed bonds is difficult and may make an issue either unattractive or else too attractive at the expense of non-indexed issues of the Treasury itself or other borrowers; but this difficulty is reduced if indexed bonds - which should be fully negotiable instruments - are issued by tender. Finally, some monetary authorities are concerned that indexed bonds, as they reduce nominal interest payments relative to conventional or floating-rate bonds and shift the servicing burden over time, may give the fiscal authorities the impression that more room is available for other expenditures; but this can be avoided by establishing that the Treasury should make annual payments into a sinking fund, possibly with the central bank, for an amount corresponding to the nominal appreciation of the principal of the outstanding stock of indexed bonds.

The policy suggested here - financial liberalisation supplemented and made easier by some indexation of government debt - would bring benefits not only to the Treasury, but probably also to other borrowers. To the extent that they issue bonds, firms would find Treasury pressures in the conventional and floating-rate bond markets somewhat eased. To the extent that they have recourse to bank loans, they would benefit from the more abundant supply and the lower rates that would be brought about by the elimination of ceilings and other constraints that now still exist to facilitate Treasury financing. Furthermore, firms as well as savers would benefit from having a more competitive financial system. This would stimulate the savings-investment process without the need for a substantially more expansionary monetary policy at the aggregate level. It

may be added that savers would benefit also because indexed instruments (savings deposits, insurance policies, etc.) would become more easily available if financial intermediaries were in a position to match them with indexed government bonds on their asset side.

Of course, indexed bonds would have to complement, certainly not to substitute for, present forms of financial instruments issued by governments. There is in the markets a considerable demand for diversification, and indexed bonds should satisfy a portion of this demand. Indeed, diversification might perhaps be considered even within indexed bonds themselves. Along with indexed bonds bearing a fixed real rate of interest - as those referred to so far - a government may find it appropriate to issue indexed bonds bearing a real rate of interest which varies (but in a predetermined way not in a way which is unspecified ex ante, as is the case for real rates implicit in conventional or floating-rate bonds). A case could be made, in particular, for indexed bonds bearing a real rate of interest linked to the real growth rate of GDP. This would have stabilising properties from a theoretical standpoint and, at a time when the principles of the "share economy" are being regarded with favour, would represent for a government a form of financing which is the closest possible to some concept of "equity capital".

In conclusion, introducing indexed bonds in the array of government debt instruments may both make capital-market liberalisation easier and reinforce its effect of stimulating the saving-investment process for any given monetary policy stance (see Appendix).

IV.4 Financial integration

While domestic financial systems are in the process of being improved, they should also be integrated more deeply. Besides supplementing from the financial side the completion of the EC internal

market, progress in integration will reinforce the trend towards more efficient financial systems in member countries, thus contributing to a more effective savings-investment process in support of growth and employment.

In fact, financial integration may be seen as the natural extrapolation of domestic financial liberalisation. In common with the latter, it is based upon the two elements of increased competition (opening up domestic financial markets to international competition) and decreased recourse to hidden taxation (in particular of the form deriving from restrictions on capital flows).

In turn, financial integration is a component of a wider strategy aiming at creating in the EC an area of effective monetary and financial union. This wider strategy consists of the process leading to greater exchange rate stability among national currencies (monetary integration) and of the process leading to the liberalisation of financial services and of capital movements (financial integration). While substantial progress has been made through the EMS on the front of monetary integration, advances have been much more limited towards financial integration, which is by no means less important in view of supporting the savings-investment process in Europe.

Yet, present circumstances seem to be rather favourable to an acceleration and deepening of financial integration, for two reasons.

First, macroeconomic conditions denote a clear convergence among member countries, as indicated in particular by the narrowing of inflation differentials. This should reduce the risks, as perceived by national authorities, associated with phasing out the restrictions on capital flows and other obstacles to financial integration. At the same time, there is an increasing concern that market rigidities bear considerable responsibility for the relatively poor performance of the EC in terms of

growth and employment. This is gradually inducing national monetary authorities to reduce on their part some of the rigidities in the financial sphere as well. They may even come to realise that financial openness would put greater pressure on the budget process and on the labour market for the achievement of the adjustments that remain to be made.

Second, those countries which have a longer way to go in the direction of financial integration have recently initiated a liberalisation process. This is the case of France and Italy, which have recently taken some measures of liberalisation in the field of foreign exchange controls, as well as more incisive measures reducing the constraints on the allocation of funds through domestic intermediaries and markets. The two sides of this dual policy tend to reinforce each other because, as less recourse is made to financial constraints domestically, the level and structure of domestic interest rates become more market-determined and more in line with those prevailing in international markets. This makes it less necessary to keep restrictions on capital flows, for any given balance of payments or exchange rate target.

In this new environment, the recently announced EC plan to achieve gradually a full liberalisation of capital movements is an important and feasible contribution not only towards financial integration, but also towards the more general strategy for growth and employment advocated in this report.

The plan³² involves two phases. In the first phase, the objective would be to achieve the unconditional and effective liberalisation throughout the Commission of the capital operations most directly necessary for the appropriate functioning of the Common Market and for the linkage of national markets in financial securities. This implies the ending of the exceptional arrangements authorised in the parts for some member countries

and an extension of Community obligations to cover unconditional liberalisation of long term common credits, the acquisition of listed and unlisted securities, and the admission of securities to the capital markets.

The second phase would aim at achieving the complete liberalisation of all monetary and financial flows including those unrelated to common transactions.

The trend towards liberalisation of capital movements by countries such as France and Italy may also make other countries, Germany in particular, more prepared to adopt a favourable stance concerning the development of the ECU and further institutional steps for the development of the EMS, thus increasing the potential for a Community-wide financial system with its own identity. On the other hand, it seems justified that there should be only limited support for these developments as long as both the ECU and the EMS are severely eroded in their scope by the high degree of financial fragmentation still existing in the EC, mainly due to restrictions on capital flows.

Further progress towards the improvement of domestic financial systems and towards their deeper integration may of course imply relevant transitional costs and problems for economic agents as well as for the national policy-makers. However, in view of the proximity of a capital constraint for the European economy, a general improvement of Europe's financial system is as important as appropriate macroeconomic policies if growth and employment are to be sustained.

V. SUMMARY

Finally it may be useful to summarise our main points, somewhat baldly.

1. The falls in the price of oil and of the dollar provide a new climate of low inflation. It is now safer than before to expand the European economy. The fall in the dollar, by destroying jobs in Europe's exports industries, also makes it more necessary than before to provide a specifically European stimulus to demand. This will be even more necessary if there is a U.S. fiscal contraction.
2. Europe's industry is now working only slightly below previous peak levels of capacity utilisation. More shiftwork might make higher utilisation possible, and employment in services is less limited by physical capacity. But major increases in employment will not be possible unless there are major expansions in capacity.
3. To reduce unemployment to its level in the late 1970s (5 per cent of the labour force) output will have to grow faster than the 2½ per cent a year growth currently projected. High growth rates have occurred in the past, especially starting from high unemployment, and they can occur again in the future. We must create the conditions for growth to build up gradually to 5 per cent a year for at least a few years.
4. But there would be a danger of inflation increasing, and, to prevent this, supply-side policies, leading to low barriers to entry and more flexibility of all markets and including appropriate policies on wage restraint, are essential.
5. The extra investment would be financed partly from a reduced trade surplus (i.e. reduced capital outflows) and partly by higher savings, as consumption lagged behind the growth of income.

6. To encourage investment, Europe should relax its tight fiscal policy and have a coordinated monetary expansion. The fiscal relaxation should be mainly temporary, in order to get the economy moving faster. There should be time-limited investment incentives, and also marginal employment subsidies. Public employment growth should be mainly limited to programmes for the long-term unemployed.

7. The success of the proposed expansion depends in large measure on its occurring more or less simultaneously in all members of the community. Any one country that tries to do it alone (except possibly Germany) would soon face a current account deficit, to be financed by capital imports. If capital cannot be attracted, this would create a serious risk of depreciation and renewed inflationary pressure. But if the expansion is simultaneous, much of the negative effect on the current balance would be avoided through additional exports generated by the expanded imports of the other countries. Whether these considerations call for some explicit form of coordination is a political issue beyond the scope of this report.

8. The allocation of savings to investment would be more efficient if there were less quantitative regulation of financial markets. Liberalisation is needed in relation to capital flows within countries and between member states. Access to the capital market should be eased for small firms.

9. Governments should be more willing to issue index-linked bonds. This would reduce the inflation risk both to governments and to savers and thus help to reduce real interest rates.

10. With the measures outlined in this and our preceding report it should be possible to make a major attack on the problem of European unemployment.

APPENDIX

Improvements in the financial system

Consider a very simple framework for the analysis of the financial market:

$$D = D(\underset{-}{i_D}, \underset{-}{\sigma_{i_D}}, \dots)$$

$$S = S(\underset{+}{i_S}, \underset{-}{\sigma_{i_S}}, \dots)$$

$$i_D = i_S + m$$

$$D = S$$

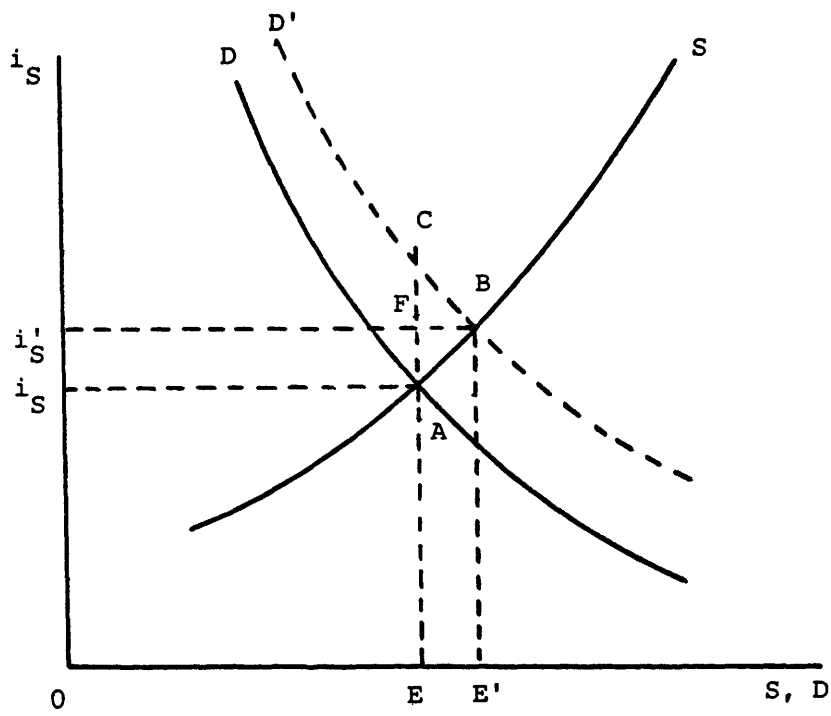
where D is the demand for funds, S is the supply of funds, i_D is the expected value of the real interest rate for borrowers, i_S is the expected value of the real interest rate for savers, σ_{i_D} and σ_{i_S} are the standard deviations of the probability distributions of those respective real interest rates, and m is the margin charged by the financial system (intermediation cost).

If both the agents who demand and those who supply funds are risk-averse (in that the former will be prepared to bear a higher expected real cost on borrowings if the cost can be anticipated with greater certainty, and savers will be content with a smaller expected real return on assets if that return is exposed to less inflation-risk), the response of the demand and supply of funds to changes in the arguments will be those indicated by the signs.

As shown by Figure 1, any policy intervention resulting in a decrease in the spread will shift the D schedule upwards by the amount of such

FIGURE 1

Policies reducing the cost of intermediation



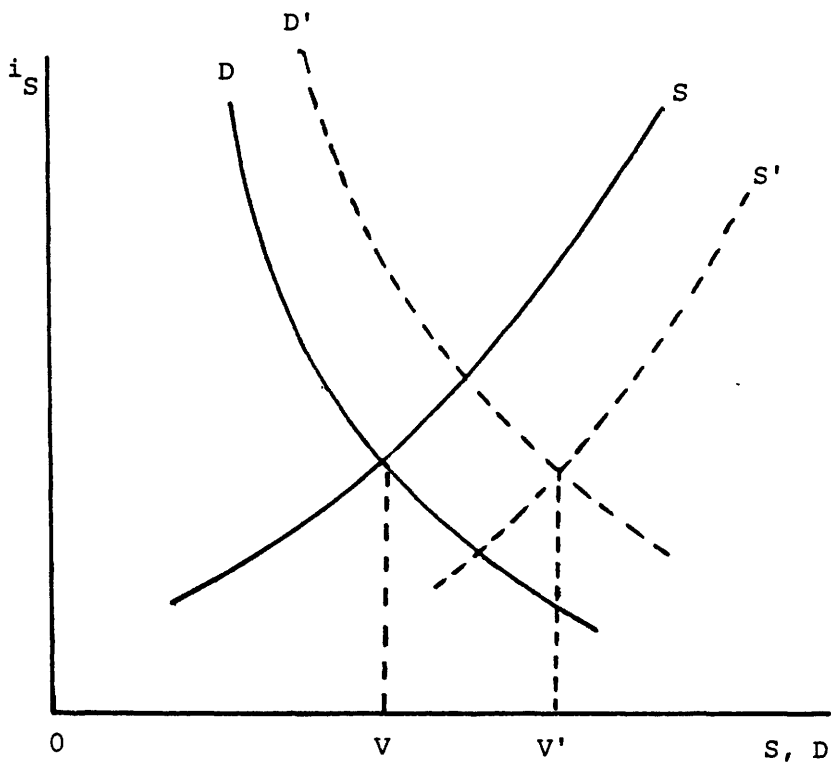
decrease, because any given borrowing rate will now be associated with a higher level of the rate of return to savers i_s , shown on the vertical axis. There will be an increase in the volume of all funds supplied and demanded (from OE to OE') (likely to be associated with greater savings and investment), an increase in the equilibrium rate of return to savers (from i_s to i_s'), and at the same time a decline in the equilibrium interest rate on borrowings (because the increase in i_s , AF, is more than offset by the decline in the spread, AC).

In terms of the policies discussed in the text, this is the case of an increase in competition, of a reduction in the (explicit or hidden) taxation of the financial system, and - at the EC level - of greater integration among domestic financial systems.

The effects of introducing indexed bonds can in turn be considered by looking at Figure 2. Indexation allows for a reduction in the inflation-risk and thus shifts both schedules to the right. The volume of funds supplied and demanded (and the scale of the savings-investment process), will increase (from OV to OV'). The changes in real interest rates cannot be determined unambiguously. However, the smaller is the elasticity of D with respect to the interest rate and to its standard deviation (as is likely to be the case for the government sector), the more likely is a decrease in the real interest rate.

FIGURE 2

Introduction of indexed bonds



NOTES AND SOURCES

- 1 "Employment and Growth in Europe: A Two-Handed Approach", Centre for European Policy Studies, Paper No.21, 1985.
- 2 See, in particular, the EC Commission's "Annual Economic Report 1985-86", in *European Economy*, No.26, Brussels, November 1985, and the OECD, *Economic Outlook*, Paris, December 1985.
- 3 EC Commission, *European Economy*, *op. cit.*, pp.140 et seq.
- 4 See also "Employment and Growth in Europe: A Two-Handed Approach", Centre for European Policy Studies, Section III.2.
- 5 EC Commission, *European Economy*, Supplement B, No.1, January 1986, p.2
- 6 This involves assumptions about how total GDP would change with unemployment and about how industrial production would change with total GDP. On the latter point, we assume a unit elasticity, assuming unit income elasticity of demand for industrial products in consumption plus a disproportionate growth in investment offset by negligible growth in Community exports and in government purchases of industrial products. On the first point, we base our Okun coefficient partly on Federal Reserve Bank of New York *Quarterly Review*, Summer 1985, 'How Fast can Europe Grow?'. This suggests that for the recent period the Okun coefficient is 1.8 for Germany and 1.6 for the U.K. One may query whether even coefficients of this order are fully relevant when one is considering a once-for-all expansion of output and employment (rather than a cyclical change). In addition the labour-intensity of marginal output will also be very important. The calculations are therefore illustrative.

- 7 This is broadly in line with the findings of the Compact model that in 1982 the excess of labour supply over the maximum labour force that the capital stock could employ was 7.4 per cent.
- 8 The EC has asked firms their reasons for not employing more people. Insufficient production capacity came tenth out of the reasons tabulated. (*European Economy*, Supplement B, April 1986, p.8.)
- 9 See below.
- 10 *European Economy*, Supplement B, February 1986, Tables 1 and 3.
- 11 If the coefficient were 2, output growth of 5 per cent a year would reduce unemployment by 1.25 points a year (the 2½ 'extra' growth, divided by 2).
- 12 Blanchard, O. and Summers, L.H., 'Hysteresis and the European Unemployment Problem', Massachusetts Institute of Technology, mimeo, 1986.
- 13 Layard, R. and Nickell, S.J., 'The Performance of the British Labour Market', London School of Economics, Centre for Labour Economics, Working Paper No.846, 1986.
- 14 Sneessens, H.R. and Dreze, J.H., 'A Discussion of Belgian Unemployment, Combining Traditional Concepts and Disequilibrium Econometrics', *Economica*, 1986 forthcoming.
- 15 At the European level general support for wage restraint has been expressed by both the official trade union and employers' organisations TUAC and BIAC. See "Full Employment and Growth as a Social and Economic Goal - A Joint Statement by BIAC and TUAC", According to the statement "The employment situation remains very unsatisfactory in most OECD countries, and recurrent unemployment are specially intolerable. Changing the present unemployment situation and achieving full

employment through more investment and higher economic growth should thus be the main objective of economic and social policy." (p.3).

16 See F. Modigliani, "Life Cycle Hypothesis of Saving and Intercountry Difference in the Saving Ratio", in *The Collected Papers of Franco Modigliani: The Life Cycle Hypothesis of Saving*, Vol.2 (ed. A. Abel), Massachusetts Institute of Technology Press: Cambridge, Massachusetts, 1980, pp.382-412. A 1 per cent increase in the trend growth of income is found to increase the saving ratio between 1½ and 2 per cent. In a later paper "Determinants of Private Saving with Special Reference to the Role of Social Security - Cross Country Tests" (with Arlie Sterling), it is found that the effect of pure productivity rise, which may be expected to be a large component of the advocated growth, is even larger, between 2 and 3 per cent.

17 *European Economy*, November 1985, pp.183 and 134.

18 *European Economy*, November 1985, pp.166 and 134.

19 The fact that the share of the budget deficit in GNP is still the same as in 1979 is irrelevant. This is due mainly to higher payments to unemployed workers (which respond passively to unemployment and do not explain its level) and to higher interest payments (whose demand impact is small, especially to the extent that they reflect nominal rather than real interest).

20 In the short-run there is no conflict between pursuing increased use of labour and of capital. This is clear even in a strictly neo-classical framework. In this case, employment is determined by capital and the real cost of labour:

$$\frac{N}{K} = f\left[\frac{W}{P}(1+t)\right] \quad (f' < 0)$$

where N is employment, K capital, W/P the real wage and t labour taxes. In addition, capital growth is determined by the rate of return on capital, $\rho(N/K)$, relative to the cost of capital (c)

$$\frac{\dot{K}}{K} = g \left[\frac{\rho(N/K)}{c} \right] \quad (g' > 0; \rho' > 0)$$

So for any given path of W/P , the path of N will be higher the lower t and the lower c .

- 21 EC Commission "Annual Economic Review, 1985/86", *European Economy* No.26, November 1985, Chapter 3.
- 22 Document EC II-107/85.
- 23 In a study based on a simulation model, Gerken *et al.* suggest that an overall reduction of subsidies by 50 per cent over a period of five years, combined with corresponding cuts, could increase the number of jobs in West Germany by 1 million. Gerken *et al.* 'Mehr Arbeitsplaetze Durch Subventionsabbau', Kiel University, Discussion Paper No. 113/114, 1985.
- 24 "Employment and Growth in Europe: A Two-Handed Approach", Centre for European Policy Studies Paper, No.21, 1985.
- 25 EC Commission, "Annual Economic Report 1985-86: A Cooperative Growth Strategy for More Employment" and "Annual Economic Review", *European Economy*, No.26, November 1985.
- 26 Weiss, F.D. and Giersch, H., "Internal and External Liberalisation and the European Economies' Structural Development", May 1985.
- 27 This analysis has been carried out in detail, for example in the case of Italy ("Report on the Italian Credit and Financial System", Banca Nazionale del Lavoro, *Quarterly Review*, Special Issue, June 1983).

- 28 Consider, for example, that since 1963 fewer than 600 companies have been listed on the second tier of exchanges in the EC, while during the ten years from 1974 to 1984 the nationwide electronic dealing network in the U.S. has created an active market of 5,000 listed equities with an annual trading volume of \$153 billion - bigger than the combined volume of business on the stock exchanges of Britain, Germany, France, Italy and the Netherlands. While the EC countries produce as many new start-ups in a year as the U.S., about 600,000, no large-scale mechanism exists for trading the equity of these companies. Partly as a consequence of this situation, European investors have provided American venture companies with a fifth of their capital in recent years. In 1985 alone, Europeans provided more than \$600 million towards the \$3.2 billion raised in venture capital in the U.S. (*Euro money*, February 1986).
- 29 A discussion of this issue, including references to the British experience, is in M. Monti "Indexation of Government Debt - and its Alternatives", forthcoming in B.P. Herber, ed., *Public Finance and Public Debt*, International Institute of Public Finance, Wayne State University Press.
- 30 It can be noted, however that a company may not avoid risks associated with relative prices even when issuing nominal debt instruments.
- 31 See, for example, N. Liviatan, "On the Interaction between Wage and Asset Indexation", in R. Dornbusch and M.H. Simonsen, eds., *Inflation, Debt and Indexation*, Cambridge, Massachusetts, Massachusetts Institute of Technology Press, 1983.
- 32 The plan, announced by President Delors on May 12, 1986, is outlined in the Communication from the Commission to the Council of May 23, 1986, "Programme for the Liberalization of Capital Movements in the Community"

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