Working Papers

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Europe:

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38

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Adalbert Knöbl[1]

I. Introduction

The paper presents an analysis of economic developments in Europe through the 1980s. In particular, it examines the reasons for the strikingly lower unemployment rates in EFTA compared with EC countries.

Starting point is the international policy consensus after the second oil price shock: following the experience with the "bridging policy" after the first oil price shock, a consensus had developed that the reduction of inflation was to be the primary aim of economic policy, to provide the basis for renewed and sustained economic growth. Except for the "rational expectationists", a temporary increase in unemployment was expected and was also accepted by the policy makers as the unavoidable cost of reducing inflation. However, the increase in unemployment was steeper, and certainly longer lasting, than had been expected. This holds true in particular for the EC. In some countries, notably in the EFTA, unemployment, while having risen, remained substantially lower than in the EC:

Table 1   Comparison EC - EFTA

	Rate of Unemployment (% of labor force)		Employment (change, in %) 1979-88		Real GDP (change, in %) 1979-88
	1979	1988	total	dependent	
EC (9)[2]	5.4	10.4	2.0	0.9	18.0
EFTA (6)[3]	2.1	2.7	5.5	6.0	23.5

Source: OECD, Economic Outlook.

There are, of course, many statistical difficulties with comparisons of unemployment rates[4]; but substantial differences remain also when efforts are made to standardize the rates[5]. That the differences remain when allowance for changes in the labor force is made can be seen by comparing employment growth or growth in real GDP: throughout the 1980s, both were significantly higher in EFTA than in the EC (Table 1).

In section II, a brief review is given of adjustment issues arising from supply shocks such as the two oil price shocks; and the different adjustment strategies that were followed in response to these shocks are briefly discussed. The reasons for the persistence of unemployment throughout the 1980s are analyzed in section III. While it is clear that the macro-economic policy response to higher oil prices contributed to the initial increase in unemployment, it does not explain its persistence. One possible explanation is the existence of hysteresis in the labor market. The reasons for hysteresis as well as its implications are then

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2) Excluding Greece, Portugal, and Spain.
3) Present six: Austria, Finland, Iceland, Norway, Sweden, and Switzerland.
4) For example, in Switzerland the rate of unemployment has been kept low trough changes in the foreign labor force (to a lesser extent this is also true for Austria); or early retirement schemes, etc. have influenced the labor force and thus the rate of unemployment.
5) See OECD, Employment Outlook, various issues.

discussed. In section IV, differences in macro-economic performance are analyzed, and a closer look is taken at a small sample of countries, Austria and Sweden from EFTA, and Denmark and the Netherlands from the EC. All four countries are small open economies, greatly dependent on foreign trade. Denmark and Sweden have, in the past, made use of the exchange rate as an instrument of external adjustment, while Austria and the Netherlands, through the link of their currencies to the DM, have used the exchange rate mainly as an anti-inflation tool. Fiscal policies have also differed, with major fiscal adjustments occurring in Denmark and Sweden. An important conclusion is that differences in macro-economic policies can explain only part of the differences in macro-economic performance; structural differences that influence flexibility in the labor markets seem to account for the bulk in the differences. Finally, a summary and conclusions are given in section V.

II. Adjustment to Supply Shocks

Since the mid-1970, economic developments in the industrial countries have been strongly influenced by supply shocks (such as the two oil-price shocks), and the adjustment to these shocks. Below, a brief analysis of the effects of supply shocks, and of the possible policy response, is given.

With the help of relative simple production functions, but with explicit introduction of raw-material inputs (such as oil), it can be shown that material input prices affect the supply as well as the demand side of industrial economies[6]. Higher oil

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6) See Appendix I; for details see also Bruno and Sachs (1985). It should be noted that the effects discussed here refer only to short- and medium term effects. The long run effects, which would

prices imply a shift of the supply curve. Rising input costs reduce profits and output, even if the demand curve remains fixed. Output and employment fall, while prices rise. A stagflationary impact effect occurs. Thus, the effects of a supply shock are in marked contrast to shifts in demand, where output and prices tend to move together. The supply effects of rising material input prices are similar to those of an autonomous wage push[7], or a drop in the capital stock or in productivity.

The size of the effect of the supply shock will depend on the wage response to the shock. If real wages are downward flexible, the squeeze on profits would be mitigated, and the fall in output and employment dampened. If real wages are rigid, nominal wages would rise with higher prices, and the associated profit squeeze would further hamper investment and reduce the growth in the capital stock. This would strengthen the effect of the supply shock on output and employment. The upward push on wages will not only depend on the degree of real wage rigidity, but also on the state of the labor market, i.e. on the level of unemployment.

Rising oil prices affect also the demand side. The real income of net oil importers is reduced, and the lower demand is exerting further downward pressure on output and employment. In case of contractionary demand management (e.g. to limit the inflationary consequences of higher input prices), and/or of lower foreign demand[8], aggregate demand would contract further, while the effects of higher oil prices on prices of final goods would be dampened.

include also the adjustment of the capital stock to higher oil prices (leading e.g. to a more efficient use of energy, with positive effects also on the environment) are not discussed here.
7) However, the demand effects of a wage push would be the opposite of those of rising input prices.
8) Foreign demand would tend to be lower, if the saving rate of net oil exporters exceeds that of the importers.

The macro-economic effects of higher oil prices thus depend on the wage as well as policy response. The output and employment reducing effect of higher oil prices will be the greater the more rigid real wages are. Expansionary demand management could dampen the employment reducing effect, though at the cost of higher prices; contractionary demand management could dampen the price effects, but at the cost of still lower output and employment.

Indeed, the adjustment strategies that industrial countries pursued after the two oil price shocks differed. Following the first oil price shock, the immediate policy reaction was to dampen the deflationary demand effect of higher oil prices[9] through an expansionary fiscal policy[10]. The impact effect was to be limited to the shift in the supply curve. The result was stagflation: a rise in the rate of inflation as well as a (though limited) rise in unemployment (Table 2). This strategy was later abandoned and the focus was shifted towards reducing inflation. Countries that pursued the so called "bridging policy" longer, such as Norway, Sweden, and Austria, eventually ran into balance of payments difficulties as their external current account moved into significant deficit, which then forced them to give up the strategy.

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9) This was also the function of the oil facility of the IMF that was established at the time.
10) The general government financial balance of the OECD countries moved from rough balance in 1973 into a deficit of 4% of GDP in 1975.

Table 2   OECD - Selected Economic Data

	First Oil Price Shock		Second Oil Price Shock	
	1973	1977	1978	1983
General Government Financial Balance (% of GDP)	0.1	-4.0(1975)	-2.7	-2.8(1980)
Rate of Inflation (CPI) (%p.a.)	7.7	8.9	7.8	4.5
Rate of Unemployment (% of labor force)	3.3	5.3	5.2	8.7
(OECD Europe)	(3.0)	(5.2)	(5.4)	(10.1)

Source: OECD, Economic Outlook (1989).

Following the second oil price shock, from the beginning the adjustment strategy was aimed at reducing inflation as the precondition for renewed and sustained growth. The labor markets were to produce the required adjustment of real wages and inflationary expectations. The result of this strategy was lower inflation, but at the cost of a steep rise in unemployment. By the mid-1980s, inflation had been reduced to a level well below that before the second oil price shock, but unemployment had risen much more steeply than after the first oil price shock (Table 2), especially so in Europe where unemployment started to decline only recently.

III. Persistence of Unemployment

As noted, a temporary increase in unemployment had been expected as the unavoidable cost of reducing inflation. However, the high level of unemployment has persisted much longer than had been anticipated. Clearly, the question why unemployment has

persisted for so long, even after the reduction in inflation and the positive supply shock of lower oil prices, begs for an answer.

Was demand management too restrictive, as is sometimes alleged? An answer is, of course, not easy, but an attempt is nevertheless made to analyse the issue for the Federal Republic of Germany. Germany is chosen because reducing inflation is clearly a prime objective of economic policy; Germany also holds a dominant position for some of the smaller open economies in Europe.

Some selected economic data for Germany is given in Table 3 . As is well known, Germany has been particularly successful in reducing inflation. On the other hand, unemployment has risen sharply in the 1980s and has remained on a high level.

Table 3	Germany - Selected Economic Data		
	1980	1984	1988
Rate of Inflation (CPI) (%p.a.)	5.5	2.4	1.2
Rate of Unemployment (% of labor force)	3.3	8.2	7.9
General Government Financial Balance (% of GDP)	-2.9	-1.9	-2.1
	1980-84	1984-88	1980-88
Growth in Real Money (M1) (%p.a.)	- -	7.0	3.6

Sources: OECD, Economic Outlook (1989) and IMF, International Financial Statistics.

Following the second oil price shock, the budget deficit was initially allowed to rise a little, with the general government financial deficit widening from 3% of GDP in 1980 to 3 3/4% in 1981. This was, however, in sharp contrast to the expansionary

shift equivalent to 6% of GDP from 1973-75. After 1981, a policy of gradual consolidation was pursued, with the deficit being reduced to around 1-2% of GDP. Thus, fiscal policy, while on balance being mildly restrictive through the 1980s, could hardly be held responsible for the persistently high level of unemployment.

Monetary policy, on the other hand, was clearly very restrictive until the mid-1980s, with the real money stock (M1) showing no growth from 1980-84[11]. The restrictive stance of monetary policy reflected the overriding concern with reducing inflationary pressures, based on the conviction that sustained economic growth could not be achieved in an inflationary environment. Indeed, helped also by the fall in oil prices, inflation was reduced to zero in 1986-87. Monetary policy has been eased since the mid-1980s, and the real money stock has been rising rapidly. Economic growth has picked up since 1987, though recently inflation has also risen slightly. Thus, monetary policy has gone through two distinct phases from 1980 to 1988: First a very restrictive phase to sqeeze out inflation, followed by an easier policy as inflation had been reduced. Over the period as a whole, real money (M1) rose at an annual rate of about 3 1/2%, hardly a rate that could be said to have hindered economic growth. Perhaps greater steadiness would have been helpful, though, at least initially, a significant tightening was necessary to bring inflation under control. Moreover, monetary policy had also been influenced by external considerations. Thus, during the period of dollar strength in the early 1980s monetary policy was tightened further to prevent a greater weakening of the DM, while

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11) The very restrictive stance of monetary policy in the beginning of the 1980s can be seen from practically all monetary aggregates.

the monetary target was allowed to be exceeded 1986-88, reflecting the desire to moderate upward pressure on the DM.

All in all, it seems that demand management (fiscal and monetary policies) cannot explain why unemployment has remained at such a high level throughout the 1980s. While the initial rise in unemployment was caused by a supply shock (oil price increase) and was strengthened by a demand shock (policy response to the supply shock), demand management cannot explain the persistence of unemployment. The question why was flexibility in the labor market so low, therefore, remains to be answered.

A possible explanation is the existence of hysteresis or persistence in the labor market: i.e. unemployment is strongly dependent on its own history[12]. Within the framework of the Non-Accelerating-Inflation-Rate of Unemployment (NAIRU), hysteresis or persistence exists if NAIRU is also a function of past unemployment:

$$U^* = sum \ a_i U_{t-i} + bZ_t$$

where: U^*.....NAIRU
$\quad\quad$ U......actual rate of unemployment
$\quad\quad$ Z......vector of explanatory variables.

It is said that hysteresis occurs when the a_i's sum to unity; then no stable long run NAIRU exists. There is persistence in unemployment, if $0 <$ sum of the a_i's < 1; then the short run NAIRU evolves (slowly) towards its long run level (when $U_t = U_{t-1} = U_{t-i}$). In case of persistence, the effects of a supply and/or demand shock on unemployment would persist for some time as the short run NAIRU is raised with the increase in unemployment. Eventually the NAIRU would approach its long run level, with the speed depending

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12) See e.g. Blanchard and Summers (1987), Layard and Bean (1989), and Pissarides (1989).

on the degree of persistence (the faster, the lower the sum of a_i's).

Several explanations for hysteresis or persistence phenomena have been put forward in the literature, stressing the role of wage bargaining, and human and physical capital.

One mechanism that could generate hysteresis or persistence stems from the role of the unemployed in the wage bargaining process. In the insider-outsider hypothesis of wage setting[13], employed workers (insiders) carry more weight in the wage setting than the unemployed (outsiders). If the interests of the employed dominate in wage negotiations, the level of unemployment would not be crucial for the negotiating climate. An adverse employment shock will then tend to perpetuate itself, because wage demands are adopted to the (reduced) number of employed insiders. The degree of persistence will depend on the attitudes of employers and unions towards the unemployed.

Another explanation focuses on the effect of prolonged unemployment on the depreciation of human capital of the unemployed[14]. Prolonged unemployment may lead to a deterioration of skills, the work ethic, self confidence, and the motivation of the unemployed. Long term unemployment may reduce the search efforts of the unemployed due to discouragement. Employers may also use unemployment as a screening device when judging future productivity of job applicants. Applicants with long duration of unemployment may be viewed as less promising. This effect does not depend on whether human capital of the unemployed has in fact depreciated; the firms need only believe that this is the case. Effectively, the long term unemployed cease to be part of the

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13) See e.g. Blanchard and Summers (1987), Gregory (1986), and Lindbeck and Snower (1986).
14) See e.g. Franz (1987), and Layard and Bean (1989).

active unemployment stock, exerting little or no downward pressure on wage increases. In many countries there is evidence that the rate at which the unemployed find work is much lower for the long term than for the short term unemployed[15].

The phenomena of persistence can be seen as an outward shift of the Beveridge curve (i.e. the relation between the vacancy and unemployment rates): despite the high level of unemployment, vacancies cannot be filled at the same ease as before. Similarly, shortages of skilled labor may occur, despite the high overall level of unemployment. Such shifts in the Beveridge curve have been observed in a number of countries; it is illustrated for Germany in Chart 1.

A third mechanism that could explain hysteresis or persistence stresses the role of the capital stock[16]. If substitutability between capital and labor is low, the NAIRU may also depend on the capital stock. In a period of low growth and high unemployment, investment and growth in the capital stock would be retarded. This, in turn, would raise NAIRU. This phenomena can be seen as a shift in the Okun curve (i.e. the relation between unemployment and capacity utilisation): capacity constraints may already occur at a fairly high level of unemployment. Such shifts in the Okun curve have also been observed in a number of countries; it is illustrated for Germany in Chart 2.

As noted, the existence of hysteresis or persistence implies that the short term NAIRU moves with actual unemployment[17].

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15) See Layard and Bean (1989).
16) See e.g. Modigliano, Monti, Drèze, Giersch, and Layard (1987).
17) The response of the NAIRU to movements in actual unemployment may not be symmetric, if e.g. the skills of the long term unemployed suffer permanently (or long lastingly). Then, after having risen in a recession, the NAIRU may not decline (or only very sowly) in the recovery.
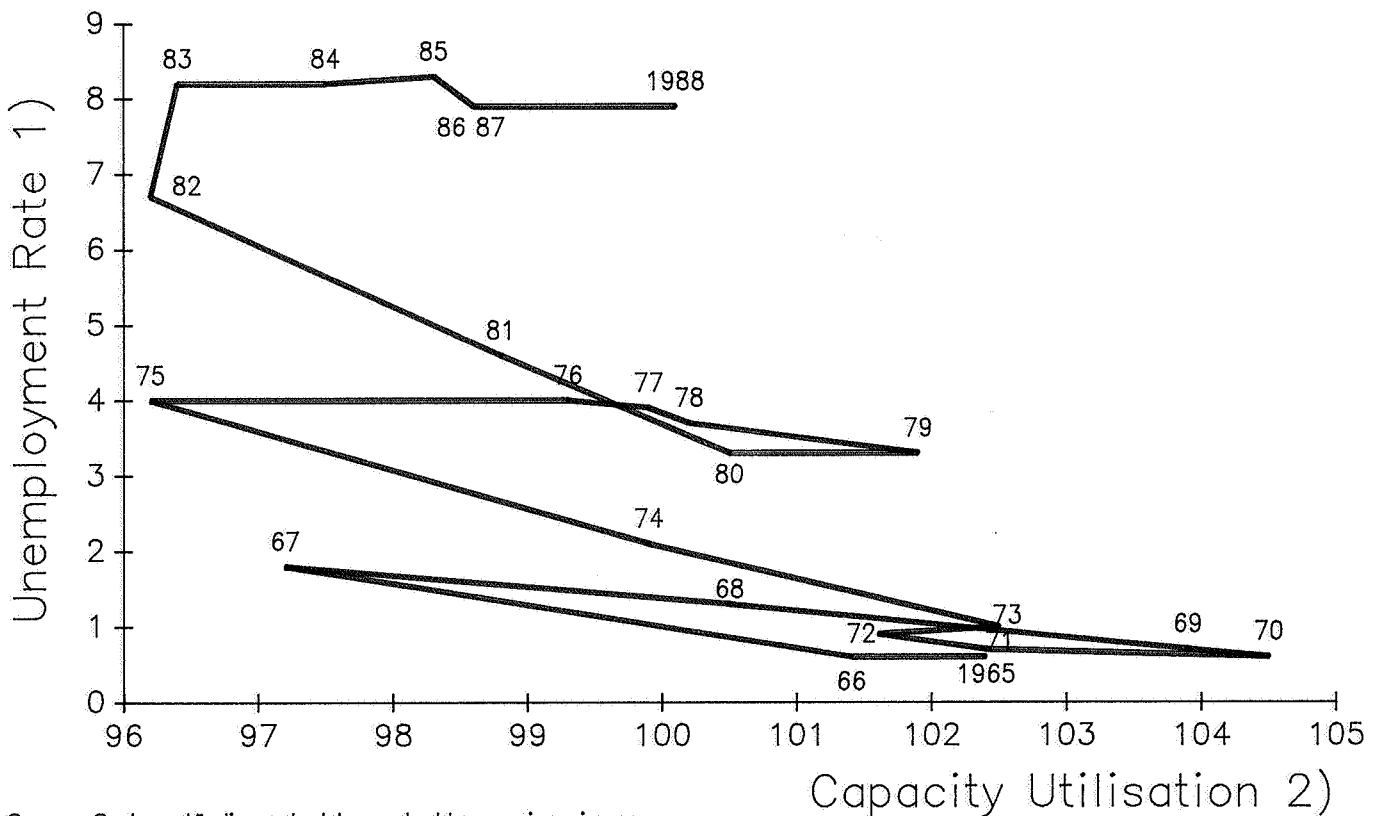
Chart 1

Germany — Beveridge Curve
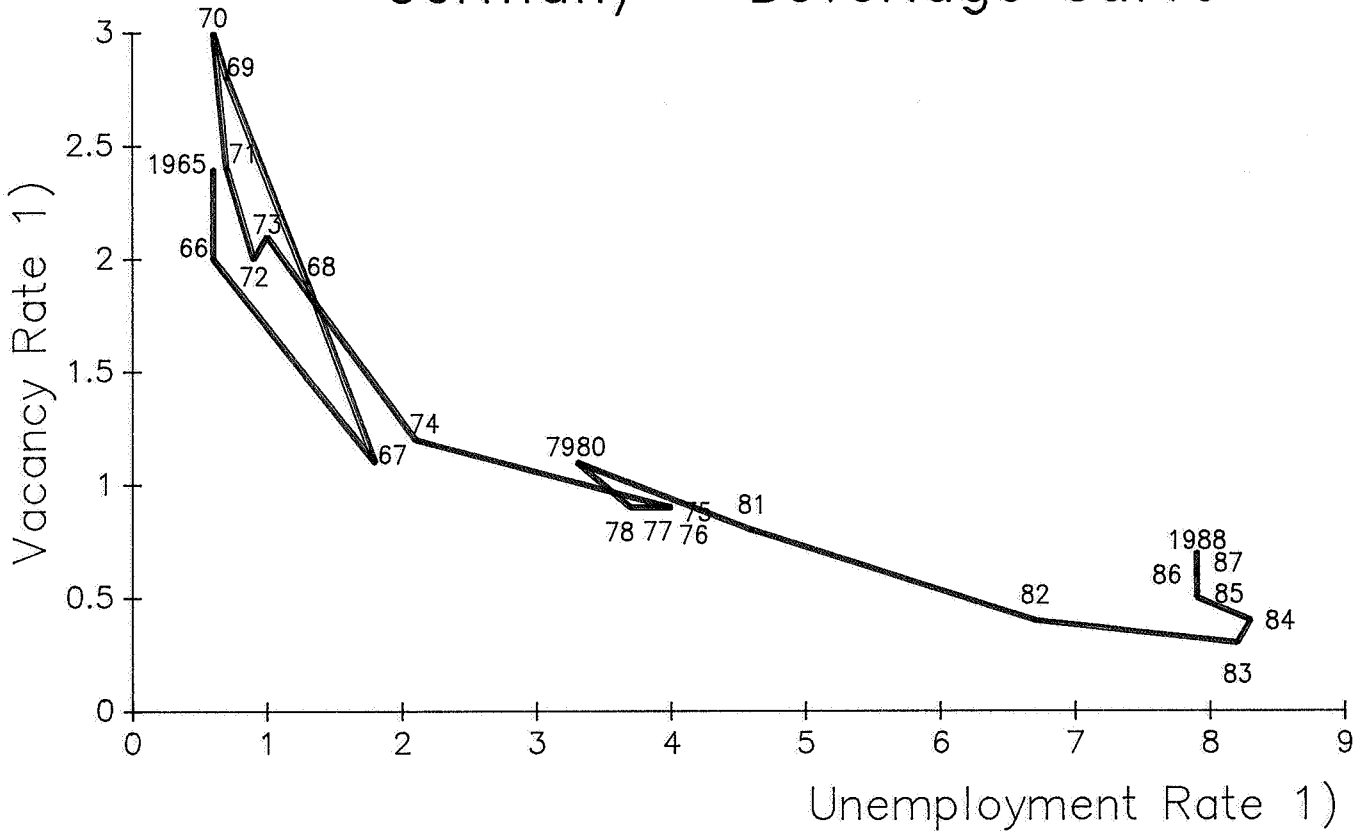
Source: Sachverständigenrat, Jahresgutachten, various issues.
1) In % of labor force.

Chart 2

Germany — Okun Curve

Source: Sachverständigenrat, Jahresgutachten, various issues.
1) In % of labor force. — 2) In % of average utilisation.

Empirical estimates of the NAIRUs suggest that they have in fact increased in Europe in the 1980s as actual unemployment rose[18]. What are now the policy implications of the existence of hysteresis or persistence? The first important implication seems to be that the concept of the NAIRU is not a straight forward guide for economic policy: the NAIRU moves in the short term with actual unemployment, although its long run level may have remained fixed. Second, in case of hysteresis or persistence gradualism in policy is likely to be less costly in terms of unemployment than short shocks[19]. Third, increasing the influence of the outsiders on wage setting would be important, as would be attempts to avoid a deterioration of the skills of the unemployed. . For this, an active labor market policy, targeted at the long term unemployed, could pay off well. Fourth, we need not be stuck at the present high level of unemployment. Once unemployment starts falling, the NAIRU would also fall, moving again closer to its long run level. A further fall in unemployment would then not have to be accompanied by rising inflation. Currently we may well be in such a phase, but gradualism seems to be important for it to be sustained.

IV. Differences in Macro-Economic Performance

While unemployment has risen in practically all industrial countries, in some countries it has remained substantially lower than in others. Often the differences between Europe and the US are stressed: in contrast to Europe, where unemployment had hardly declined by 1988 from the high level reached in the early 1980s,

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18) See e.g. Coe (1985), Franz (1987), and Pichelmann (1989).
19) The more so, if the response of the NAIRU to actual unemployment is asymmetric.

in the US unemployment had declined by 1988 to about the level of the early 1970s. But the differences are at least as striking within Europe, and they are particularly striking between EFTA and EC countries (Table 1).

In the following, a closer look is taken at a small but representative sample of countries: Austria and Sweden from EFTA, and Denmark and the Netherlands from the EC. All four countries are small open economies, greatly dependent on foreign trade, and with close economic ties to Germany. Denmark and Sweden have, in the past, made use of the exchange rate as an instrument of external adjustment; while Austria and the Netherlands, through the close link of their currencies to the DM, have used the exchange rate mainly as an instrument to reduce inflation.

1. Macro Economic Policies

The most important macro-economic indicators of the four countries are shown in Table 4.

In <u>Austria</u>, the Schilling has been closely linked to the DM to hold down inflation. Monetary policy has thus been given, and interest rates followed closely movements in German rates. Immediately following the second oil price increase, fiscal policy was tightened to protect the external current account; fiscal policy was eased after 1981 to counteract recessionary tendencies. In recent years, however, a policy of fiscal consolidation has been pursued, with medium-term targets for reducing the budget deficit[20].

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20) The Austrian policy approach has often been labelled as "Austro-Keynesianism" (Seidel (1982) or Guger (1990). However, if a label is to be attached to the policy approach, "Austro-Monetarism" would seem to be more appropriate: Austria's monetary policy is predetermined through the link of the Schilling to the DM. To the extent that the Bundesbank pursued a monetaristic policy, Austria's monetary policy would also be monetaristic.

At the beginning of the 1980s, <u>Sweden</u> was faced with large and growing external and internal imbalances. The external imbalance was characterized by large current account deficits and a rapidly rising foreign debt; the internal imbalance by a huge budget deficit and, nevertheless, rising unemployment. To counteract these tendencies, the Krona was devalued in two steps (by a total of about 26%) in 1981 and 1982. Thereafter, the exchange rate was fixed within narrow margins against a basket of currencies of the most important trading partners. The devaluations were followed by a policy of fiscal restraint: the general government financial balance was shifted from a deficit of 7% of GDP in 1982 into a surplus of 3% in 1988; about two-thirds of this shift reflected restraint on public spending. Domestic financial markets were deregulated between 1982-85.

Like Sweden, <u>Denmark</u> was faced with large and growing external and internal imbalances in the late 1970s, with a large and rapidly rising foreign debt, and high inflation and unemployment. To deal with the situation, the Krone was devalued within the European Monetary System (EMS) on several occasions between 1979-82, with the effective exchange rate declining by over 20%. However, at the same time, an expansionary fiscal policy led to a huge increase in the budget deficit and real interest rates in excess of 10%. The situation was clearly unsustainable, and economic policy was shifted in the fall of 1982: policy was moved to a hard currency policy within the EMS, and a policy of fiscal consolidation. The general government financial balance was shifted from a deficit of 9% of GDP in 1982 into a surplus of 3 1/2% in 1986, through both expenditure restraint and higher

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Finally, at least through the 1980s, Austria's fiscal policy can hardly be called Keynesian.

revenue. The strong competitive position established through the devaluations 1979-82 was to be defended through a restrictive incomes policy, first with an official guide-line (1983-85), followed by a statutory policy (1985-87); under pressure incomes policy had to be given up in 1987. As in Sweden, the financial markets were deregulated, with the stepwise removal of exchange control perhaps the most important institutional change.

The Netherlands, like Austria, has its currency closely linked to the DM within the EMS, in order to keep inflationary pressures in check. Monetary policy is thus also given. Following the second oil price shock, the budget deficit was initially allowed to rise, but since 1982 a policy of fiscal consolidation has been pursued. The outturn has, however, been less impressive than in Sweden and Denmark: the general government financial deficit was reduced from 7% of GDP in 1982 to 5% in 1988.

To summarize briefly: following the second oil price shock, policy in all four countries has aimed at reducing inflation, though initially the exchange rate was used as an instrument of external adjustment in Denmark and Sweden; since late-1982 the exchange rate in all four countries has remained more or less fixed, either against a basket or the DM. Also, after an initially expansionary phase, all four countries have aimed at fiscal consolidation, though at varying degrees.

Inflation did in fact come down significantly in all four countries, though in the Netherlands and Austria more than in Denmark and Sweden (Table 4). The strict anti-inflation policy of the Bundesbank was more closely followed by the Netherlands and Austria through the link of the Guilder and Schilling to the DM.

Unemployment rose in all four countries; relatively more strongly in the countries that followed a hard currency policy

throughout (Table 4). This was apparently the price for their greater success in reducing inflation. However, the level of unemployment is much lower in Sweden and Austria than in Denmark and the Netherlands[21]. At present, the rate of unemployment in Sweden at 1-1 1/2% is even lower than in the early 1970s. The Swedish economy is now clearly overheated, with shortages of skilled labor and again rising inflation: actual unemployment is below NAIRU.

Table 4   International Comparison

	Inflation (CPI) (%p.a.)			Rate of Unemployment (% of labor force)[22]		
	1980	1985	1988	1980	1985	1988
Austria	6.4	3.2	2.0	1.5	3.6	3.6
Sweden	13.7	7.4	5.8	2.0	2.8	1.6
Denmark	12.3	4.7	4.6	7.0	9.0	8.6
Netherlands	6.5	2.2	0.7	6.0	10.6	9.5

	General Government Financial Balance (% of GDP)			Long-term Interest Rate, real[23] (%p.a.)		
Austria	-1.7	-2.5	-3.1	2.5	4.7	4.4
Sweden	-3.7	-3.8	+3.0	-1.7	3.6	5.1
Denmark	-3.3	-2.0	+0.2	6.2	6.6	5.7
Netherlands	-4.0	-4.8	-5.0	3.5	5.0	5.6

21) The labor force has been growing at quite divergent rates in the four countries over the past twenty-five years, as well as the 1980s. Over the period 1964-87, the fastest growth of the labor force occurred in the Netherlands (1.2% p.a.), followed by Denmark (1%), Sweden (0.8%), and Austria (0.3%). The different growth in the labor force can, however, not account for the different development in unemployment in the 1980s. As noted, the different growth rates of the labor force are structural features of the respective economies, and existed well before the 1980s: faster growth of the labor force implies faster potential economic growth.
22) OECD data; where possible standardized unemployment rates are used.
23) Bond yields, deflated by consumer prices.

Effective Exchange Rate
(1980 = 100)

| | nominal | | | real[24] | |
	1985	1988		1985	1988
Austria	103.7	111.5		95.2	96.9
Sweden	78.7	74.8		86.5	92.9
Denmark (1979 = 100)	81.5	86.8		96.5	116.2
Netherlands	100.2	112.0		83.3	94.5

| | Expenditure on Labor Market Programs (1988, % of GDP) | | | Growth of Real GDP (1980-88, %p.a.) |
	active	passive	total	
Austria	0.3	1.0	1.3	1.9
Sweden	1.8	0.8	2.6	2.0
Denmark	1.2	4.3	5.5	1.6
Netherlands	1.1	2.7	3.8	1.3

Sources: IMF, <u>International Financial Statistics</u>, OECD, <u>Economic Outlook</u>, and OECD, <u>Employment Outlook</u>.

Can differences in macro-economic policies be the reasons for the differences in economic performance? <u>Fiscal policy</u> does not appear to be the reason for the different performance: the strongest fiscal adjustment occurred in Sweden and Denmark, relatively little adjustment in the Netherlands and Austria, countries with quite divergent unemployment performances (Table 4). As to <u>monetary policy</u>, real interest rates have tended to converge through the 1980s, reflecting the tendencies toward greater internationalisation of financial markets. In fact, by 1988 real interest rates were of similar magnitude in all four countries (Table 4). The increase since 1980 was the strongest in

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24) Relative unit labor costs.

Sweden, partly reflecting the effects of financial
deregulation[25].

Financial deregulation, on the other hand, appears to have
had a major impact on the economies of Denmark and Sweden.
Although financial deregulation increased the efficiency of the
financial markets, difficulties emerged as a result of a surge in
the growth of money and credit[26]. In the previous system
household borrowing had been rationed, but borrowing surged as the
pent-up demands were freed. The surge in household borrowing was
facilitated by the tax deductibility of interest payments coupled
with high marginal tax rates, which led to low post-tax real
interest rates. Thus, in the absence of a simultaneous tax reform,
financial deregulation led to a sharp fall of private savings that
was only partly counteracted by higher public savings, putting
pressure on domestic resources[27]. However, there was an important
difference: in Denmark pressures on resources showed up through a
sharp widening of the external current deficit and increased wage
pressures in 1986-87 already at a level of unemployment that was
still fairly high (around 8%); while in Sweden the pressures
showed up at a level of unemployment (1-1 1/2%) that by all
standards must be considered as very low.

As noted, differences in exchange rate policy seem to account
for the differences in inflation performance. In fact, the hard
currency countries (the Netherlands and Austria) were even able to
depreciate their real exchange rates (relative unit labor costs)

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25) However, before deregulation the measured interest rates may
not have been representative for the marginal borrower: to the
extent that credit rationing was effective, the marginal rates
faced by the sqeezed out borrowers was infinity.
26) Lehmussaari (1990).
27) Meanwhile attempts at tax reform have been made in both
countries.

slightly between 1980-88, despite a nominal appreciation of about 12% (Table 5). Over the same period, Sweden was able to protect at least some part of the competitive gain flowing from the devaluations in 1981-82; while Denmark suffered a significant loss in cost competitiveness, despite the initial devaluations[28]. The conclusion from this seems to be clear: the better inflation performance of the Netherlands and Austria seems to be related to exchange rate policy; as seems to be the better employment performance of Sweden. Even so, exchange rate policy can at best explain only part of the differences in economic performance. Indeed, the differences in the development of unemployment in countries with similar exchange rate policies (Austria and the Netherlands on the one hand, and Denmark and Sweden on the other) are remarkable.

2. Labor Markets

The conclusion that macro-economic policies can explain only part of the differences in economic performance suggests that structural differences in the labor markets may have been of crucial importance. For this, the hypothesis that the labor markets in Austria and Sweden are more flexible than those in Denmark and the Netherlands needs to be tested.

An important measure of labor market flexibility is the degree of real wage flexibility. As had been noted above, the higher real wage flexibility, the more stable employment would be in response to supply or demand shocks. In order to allow comparison of labor market flexibility, augmented Phillips curve

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28) A large part of the loss in competitiveness reflects a poor productivity performance.

relationships have been estimated for the four countries, with the basic equation:

$$w_t = a_o + a_1 p^e_t + a_2 u_t$$

where: w.....rate of wage increase

p^e....inflationary expectations

u.....rate of unemployment

t.....time subscript

a_o....constant

$0 < a1 < 1$

$a_2 < 0$

Estimates of the augmented Phillips curve for the four countries are given in Table 5. The equations perform well in all four countries, i.e. the coefficient estimates are well determined, correctly signed, and explain a large part in the variance of wage inflation. The estimates are based on annual data from 1967 to 1988; since annual data are used, no lagged response is specified; the coefficients refer, therefore, to long run elasticities or semi-elasticities. Given the simultaneous determination of wages and prices, all equations are estimated by two-stage least squares, with the current and lagged growth in the money stock and import prices, and all other independent variables used as instruments.

Table 5   Augmented Phillips curve[29]

	Austria	Denmark	Netherlands	Sweden
Constant	6.90 (2.7)	7.92 (4.3)	5.60 (2.8)	9.50 (2.3)
Inflation	0.93 (2.7)	0.81 (4.2)	0.93 (4.1)	0.95 (3.0)
Rate of unemployment	-1.56 (2.5)	-0.67 (4.4)	-0.53 (3.1)	-2.85 (1.9)
adj. R^2	0.86	0.92	0.81	0.68
dw	2.24	2.05	1.48	1.74

Memorandum item:

Real wage rigidity[30]	0.60	1.21	1.75	0.33

It is interesting to note that none of the estimated inflation elasticities is significantly different from unity, implying that the long run Phillips curve is close to vertical: in the long run higher inflation cannot buy lower unemployment, except at the cost of ever accelerating inflation. A measure of the degree of real wage rigidity is the ratio of the elasticity of nominal wages to inflation and the semi-elasticity of nominal wages to the rate of unemployment[31]. As the inflation elasticities are all around unity, the (long run) measures of wage

29) The dependent variable is growth in hourly earnings in industry (manufacturing). The inflation rate is the growth in the CPI. All equations are estimated by two-stage least squares. Annual data are used, with the estimation period 1967 -1988. The adjusted R^2, and the Durbin-Watson statistic (dw) are calculated using the actual values of the independent variables. The T-values are given in parenthesis below the coefficient estimates.
30) Defined as the elasticity of nominal wages with respect to inflation over the semi-elasticity of nominal wages with respect to the rate of unemployment.
31) See e.g. Coe (1985).

rigidity differ essentially because of differences in the estimated unemployment semi-elasticities.

As expected, real wage rigidity is estimated to be significantly higher in Denmark and the Netherlands than in Sweden and Austria[32]. In other words, a relatively small increase in unemployment produces wage restraint in Sweden and Austria; to achieve the same degree of wage restraint in Denmark and the Netherlands, unemployment would have to rise by substantially more. This relative flexibility of real wages[33] in Sweden and Austria has facilitated the economic adjustment to the terms of trade losses in the mid- and late-1970s.

Why is the labor market relatively flexible in Austria and Sweden? The economic policy consensus that exists in Austria and in Sweden seems to be an important factor behind this. In Austria, this is embodied in the so called "social partnership", between the employers associations on the one hand and a strong, centralized union movement on the other[34]. In Sweden, the central union has also been strong in the past, though recently, and under the influence of an overheated economy, there has been a tendency to move from centralized wage bargaining toward decentralization,

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32) These findings are consistent e.g. with those of Bruno and Sachs (1985), Coe (1985), Bean, Layard, and Nickel (1986), etc.
33) What is crucial here is not flexibility in the level of real wages, but rather flexibility of the growth of real wages relative to the growth of productivity. This point has been particularly important in Austria in recent years, where an important contribution to the adjustment of the economy has been made through a restructuring of the nationalized industries, i.e. partly through an increase in productivity.
34) It should be noted, however, that social partnership goes well beyond wage bargaining. It represents voluntary cooperation between labor, capital, and government in virtually all aspects of economic and social policy. While the benefits of social partnership are quite evident in terms of macro-economic performance, there have also been costs in terms of allocative efficiency, e.g. as a result of numerous regulations in the interest of specific sectors and groups, extensive subsidies, etc.. See, e.g. Guger (1990). These costs are now being increasingly recognized.

with the result of increased wage pressures. It seems that in a centralized bargaining system the voices of the unemployed outsiders carry a greater weight than in a decentralized system. Indeed, analysis suggests that corporate economies characterized by centralized wage bargaining with strong unions (such as Austria)[35], and economies with highly decentralized labor markets (such as the US), have shown greater flexibility in the response to shocks than economies with intermediately centralized labor markets, with weak central but strong individual unions (such as the UK)[36].

It is perhaps also interesting that macro-economic wage flexibility seems to be more important for employment than micro-economic flexibility[37]. For example, in Sweden macro-economic wage flexibility is fairly high, while micro-economic flexibility is very low; relative wages are fairly rigid and wage differentials low. In Austria on the other hand, both the macro-economic as well as the micro-economic wage flexibility is high; wage differentials are high and flexible[38]. The employment performance has been strong in both countries, facilitated by the high macro-economic wage flexibility. Micro-economic wage flexibility, on the other hand, is important for the structure of industry and the economy[39].

An additional and important factor that may help explain the greater flexibility of the Swedish labor market is the extensive use of an active labor market policy. The Swedish system

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35) Bruno and Sachs (1985), Metcalf (1987), and Guger (1990).
36) Calmfors and Driffill (1988), and Freeman (1988).
37) Metcalf (1987).
38) Guger (1990).
39) Indeed, in Sweden it is argued that rigidity in the wage structure is fostering an efficient industrial structure, as less productive industry is forced out of business.

emphasizes the "work approach" over the "benefits approach"[40],
with unemployment benefits being considered the last line of
defense against unemployment. The benefits are generous by
international standards, but the standards by which entitlements
are determined are also exacting. The first line of defense
against unemployment are efforts to match job seekers with
available vacancies, and when this fails, channelling job seekers
on to training programs, relief work, etc.. About one percent of
the labor force goes through training programs at any point in
time. Spending on active labor market policy usually well exceeds
spending on passive measures such as unemployment benefits (Table
4). The policy operates by offering the unemployed strong
incentives to keep up active job search and to remain competitive,
or regain competitiveness, in the job market, thus reducing the
danger of hysteresis in the labor market. Indeed, not only the
number of long-term unemployed but also its share in total
unemployment is very low in Sweden.

What could be the reasons for the relative inflexibility of
the labor markets in Denmark and the Netherlands? Surely the
reasons are very complex, but active labor market policies play a
relatively small role compared with passive labor market programs
(Table 4). Indeed, the passive labor market programs are
relatively generous by international standards, not only with
respect to the level of benefits, but, and perhaps more
importantly, also with respect to the ease of access and the
duration of unemployment benefits[41]. This may have increased the
reservation wage of the unemployed, impeding greater adjustment in
real wages.

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40) See Appendix II.
41) OECD, Employment Outlook, various issues.

V. Summary and Conclusions

The paper examines the reasons for the strikingly different levels of unemployment within Europe. Following the two oil price shocks, unemployment has risen throughout Europe, but steeper, and certainly for much longer, than had been expected. This is particularly true for the EC.In some countries, notably in EFTA, unemployment has remained substantially lower than in the EC.

First some economic background to the adjustment issues arising from supply shocks is given, pointing out that an increase in unemployment was to be expected after the oil price shocks, but that real wage flexibility could have counteracted such a tendency. Then the persistence of the high level of unemployment is analyzed, indicating that macro-economic policy is unlikely to be the reason for it. An important factor in European labor markets could be the existence of hysteresis, perhaps as a result of insider-outsider problems in the wage bargaining system, or of depreciation of human capital of the long term unemployed. Hysteresis implies that the short-run NAIRU follows the path of actual unemployment, although the long-run NAIRU may remain unchanged. An important implication of hysteresis is that gradualism in policy would be less costly in terms of unemployment than short shocks. Moreover, Europe need not be stuck at the present high level of unemployment: once unemployment starts falling, as is presently the case, the short-run NAIRU would also fall, and a prolonged period of economic growth could be achieved without being accompanied by rising inflation. In addition, an active labor market policy, targeted at the long-term unemployed, could reduce hysteresis and thus pay off well.

Finally, the reasons for the differences in economic performance in a small sample of countries, Austria and Sweden from EFTA, and Denmark and the Netherlands from the EC, are examined. The analysis indicates that differences in macro-economic policies (including exchange rate policies) can explain only part of the differences in economic performance. Differences in structural characteristics, relating to flexibility in the labor market, seem to be responsible for the bulk of the differences in performance. Labor market flexibility, measured as real wage flexibility, is estimated to be substantially higher in Austria and Sweden, where unemployment is much lower than in Denmark and the Netherlands. The social consensus in the "corporate states" of Austria and Sweden appears to be an important factor behind this flexibility, though the consensus is presently under pressure in the overheated Swedish economy. The Swedish emphasis put on an active labor market policy also seems to have contributed to minimizing hysteresis, and could serve as guide for labor market policy in other countries.

Effects of Supply Shocks[42]

In order to analyse the effects of input price shocks, raw-materials (N) are explicitly introduced as a separate factor of production along with labor (L) and capital (K) in the production of final goods (Q). For simplicity, it is assumed that the production function is separable, i.e. gross output can be written as a function of raw-materials and value added (V), which itself is a function of L and K:

$$Q = Q(V(L,K,), N)$$

With standard properties of the production function, and combining it with a conventional aggregate demand framework, the determination of output and prices can be described in terms of aggregate supply (S) and aggregate demand (D), as in Fig. 1.
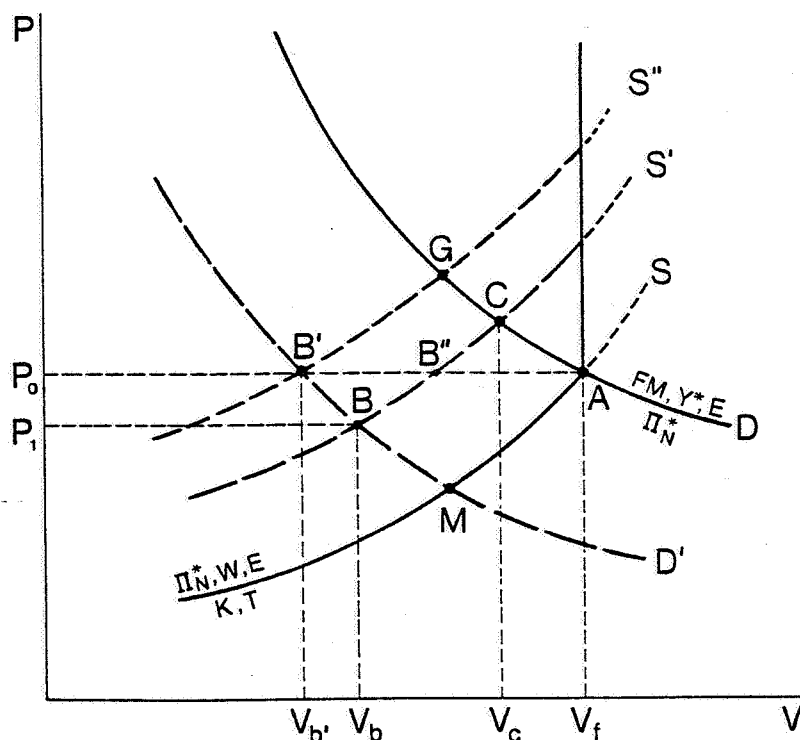

Figure 1.3. Supply and demand determination of output and prices

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42) For details see Bruno and Sachs (1985).

On the horizontal axis, the value added in the production of final goods, real GDP $V = V(L,K)$, is measured. Since in the short run K is fixed, V is also a measure of employment. V_f is the GDP level at full employment; any output below V_f signals unemployment. On the vertical axis, the unit price of final goods (P) is measured.

On the basis of a standard production function, the aggregate supply of goods can be described as an upward sloping schedule S[43], where capital (K), technology (T), the international real cost of raw materials $(RP_N^* = P_N/P)$, the nominal exchange rate (E), and the nominal wage (W) are constant. An increase in RP_N^*, W, or E will shift the supply curve (S) to the left; while an increase in K or T will shift S to the right[44].

The demand schedule (D) rises with a fall in P, with RP_N^*, demand management (fiscal and monetary policies, FM), foreign income (Y^*), and E constant. Rising foreign income (Y^*), a rising E, or an expansionary demand management (FM) will shift D to the right. Rising relative prices of raw-materials (RP_N^*), on the other hand, reduce real income and wealth for net importers of such materials and, for the typical industrial country, will therefore shift the aggregate demand schedule (D) to the left.

Within this framework the output (employment) and price effects of rising raw-material (oil) prices, as well as the effects of the policy response to such input price shocks can be analyzed. The first effect of rising input prices is a leftward shift of the aggregate supply curve (S to S'): Rising costs of material inputs reduce profits and output at each given price level. If the demand curve D remains put, rising raw-material

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43) Above V_f, S becomes vertical.
44) For a (nested) CES function details are derived in Chapter 5 of Bruno and Sachs (1985).

prices (or rising real wages, or a fall of K or T) cause a move of the economy from the initial full employment equilibrium point A to the new equilibrium point C. Output and employment fall, while prices rise, i.e. a stagflationary impact effect occurs. The effects of a supply shock are therefore in marked contrast to those of a shift in aggregate demand, where output and prices tend to move together. The supply shock effect of rising raw-material prices is similar to that of an autonomous wage push, or a drop in the capital stock and productivity.

The size of the supply shock effect depends, inter alia, on the wage response to the shock. If real wages were downward flexible (thus mitigating the sqeeze on profits), this would limit the shift in the S curve. If real wages were fairly rigid, and nominal wages rose with higher prices, the leftward shift of S would be more pronounced (e.g. S to S''). The associated profit sqeeze would hamper investment and reduce the growth of the capital stock, which would further strengthen the supply shock in the medium- to long-term. (The upward push on wages would not only depend on the degree of wage indexation, but also on the state of the labor market, i.e. on the level of unemployment).

On the demand side, a rise in RP_N^* reduces real income and demand of net importers of raw-materials, shifting the demand schedule D leftward, thus exerting further downward pressure on output and employment. Contractionary demand management and lower foreign income would, in addition, contract aggregate demand. With D shifting to D', the new equilibrium would be at point B, with output having fallen further to V_b, and final goods prices at P_1. P_1 may be greater or lower than P_o, depending on wether the shift in S or D dominates.

Labor Market Policy in Sweden

A fundamental objective of Swedish economic and social policies is to provide jobs for all who want to work. Unemployment is viewed as giving rise to social inequity as well as unnecessary loss of output. Traditionally, these considerations have been combined with considerable scepticism about the functioning of the labor market and its ability to match demand and supply in an efficient manner. Accordingly, it has been considered necessary to supplement market forces by discretionary action.

The most prominent feature of the Swedish labor market is the consistently low rate of unemployment. In a purely statistical sense, labor market policy has, of course, contributed to this, because those who are engaged in training programs, relief work, etc., are not registered as unemployed. Thus, in 1988, while the open unemployment rate amounted to only 1.6 percent of the labor force, an additional 3.5 percent were engaged in labor market programs. But, even the sum of the two, 5.1 percent, is low by international standards[45]. Moreover, many labor market policy measures serve to increase the number of job-seekers, rather than the number of employment opportunities. This is the case, for example, with efforts aimed at the disabled, many of whom would not be in the labor force at all, if it were not for these efforts[46]. In fact, aside from the low unemployment rate, a

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45) This is true in particular if allowance is also made for labor market programs in other countries.
46) Excluding the measures for the disabled, 1.6 % of the labor forces participated in labor market programs in 1988. Together with open unemployment, the sum amounts to 3.2 % of the labor force, very low by international standards.

further prominent feature of the Swedish labor market is that participation rates are high by international standards; this is true in particular of the female participation rate. The following describes the main features of labor market policy in Sweden[47].

The central administrative agency for labor market policy is the National Labor Market Board (AMS). Under the AMS, there are county labor boards, which, in turn, run local employment offices. The local employment offices are responsible for matching job-seekers with the available vacancies and, when this fails, channelling the job-seekers on to training programs, relief work, etc.. As a last resort they offer unemployment benefits. The available instruments can be grouped in four different categories:

Matching measures. The matching of demand and supply of labor is considered the most basic and typical function of Swedish labor market policy. To this end, the public employment service is backed by a law that prohibits private employment agencies operating for profit. In addition, employers are required to report most vacancies to the employment service, although they are not obliged to employ the applicants referred to them. The aim of this legislation is to make job-matching more effective through large-scale collection and dissemination of information. Apart from job placement and distribution of information, matching activities also include vocational counselling, aptitude testing, etc..

Mobility-promoting measures. Together with the matching activities, measures promoting occupational and geographic mobility are considered to be the most important instruments of labor market policy. Occupational mobility is promoted mainly through training programs. Training programs generally fall into

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47) For details, see Swedish Ministry of Labour (1988).

two categories: courses designed for the unemployed, and on-the-job training for those that are at risk of being laid off. The former are mainly vocationally oriented and are offered by a separate government agency (AMU). The average duration of the courses is 20 weeks; courses are free of charge and participants receive per diems. The second type of measure is less common and involves financial support to companies that agree to organize in-plant training as a means of preventing redundancies or eliminating bottle-necks. Geographic mobility is encouraged in various ways, the most important being relocation grants, which can be paid to employees agreeing to fill a vacancy in a different region.

Job creation. While job creation is considered a second line of defense, it has had a tendency to grow rapidly in times of rising unemployment, since it is administratively simple to use. Apart from relief work--normally arranged in the public sector--job creation includes so-called recruitment support, involving temporary wage subsidies when an employer takes on job-seekers who otherwise would be difficult to place. Reflecting the social ambitions of labor market policy, a large part of the job-creation initiatives are directed toward handicapped job-seekers.

Unemployment benefits. The Swedish system emphasizes the "work approach" over the "benefits approach", with unemployment benefits being considered the last line of defense against unemployment. For historical reasons, unemployment benefits are administered by insurance funds, associated with the trade unions. However, the state covers 95 percent of the costs, and the employment service has an important monitoring function in ascertaining that the beneficiaries are active job-seekers, etc.. The benefits are generous by international standards, involving

replacement ratios that can be as high as 90 percent. However, the standards by which entitlements are determined are also exacting. They include controls that the unemployed maintains his search efforts, limitations on the possibility of turning down job-offers, etc.. When the entitlement runs out (normally after 300 days), the unemployed has to turn to the social service, which offers a much lower level of support.

All in all, Swedish labor market policy seems to have helped create a flexible labor market. The policy operates by offering the unemployed strong incentives to keep up an active job search and to remain competitive in the job market. The instruments used to this end are not unique to Sweden. What may be characteristic of the Swedish approach is the way these instruments are used: the intensive matching and placement efforts, the conditional nature of the unemployment benefits, the selective use of training and relief work to preserve attachment to the labor market, etc.. This has helped avoiding hysteresis type of unemployment problems.

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