

International Finance Discussion Papers

Number 205

April 1982

THE SWEDISH ECONOMY IN THE 1970's:
THE LESSONS OF ACCOMMODATIVE POLICIES

by

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I. Introduction

It is agreed among economists that, in the absence of any policy response, an oil price shock in an oil-importing country will produce a (presumably) temporary increase in both inflation and unemployment. Freeman (1981), Johnson (1981), Blinder (1981), Bruno-Sachs (1979), Buiters (1978), Gordon (1975), Phelps (1978), and others have put forth models in which such a stagflationary response results from higher oil prices. Rather than a mere happenstance, the promulgation of these models was attributable to the macroeconomic events which took place in most oil-importing countries following the large oil price hikes of the 1970s. Economists were quick to point out that an oil price shock presents policy makers with a choice, to wit, whether to accommodate the shocks or to keep policy constant in the face of the stagflationary response.^{1/} Those who endorsed the existence of a short-run trade-off between inflation and unemployment typically favored some type of accommodation, while those who denied the existence of a stable, short-run trade-off argued against accommodation.

Economic developments in Sweden during the 1970's are interesting in the present context because the Swedish authorities clearly chose the option of fully accommodating the oil price shock of 1973-74. Opponents of accommodative policies -- either in general or in response to the oil shock in particular -- are quick to allude to Sweden's subsequent economic difficulties as evidence against accommodation. One purpose of this paper is to argue that accommodation per se was not necessarily the main source of later difficulties.

Instead, it is argued that these difficulties resulted from the interaction of accommodative policies with exchange-rate and wage policies, as well as from a misperception of the size and duration of the shock.

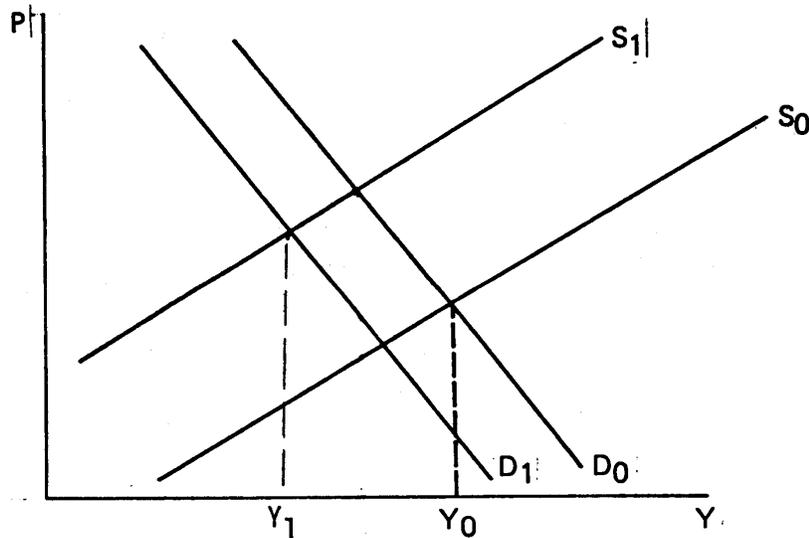
A second and perhaps more interesting point of this paper is to use the Swedish experience to suggest that the approach in the literature to the question of whether or not a government should accommodate a supply shock is too simple. According to this approach, which is nicely set out by Blinder (1981) and Gramlich (1979), accommodation is called for if there is a trade-off between inflation and unemployment and if, given the terms of this trade-off, society is thought to value a reduction in unemployment more highly than the consequent increase in inflation. The Swedish case demonstrates that there are a number of additional considerations which are neglected by this approach.

In the next section I shall briefly summarize the trade-off approach to the accommodation issue, withholding an evaluation of it until later. Section III contains a description of the Swedish economy prior to the shock, while section IV deals with the policies adopted in response to the first oil price shock and their effects during the 1974-76 period. In section V I shall discuss the corrective measures of 1977 and the explosion of public spending over the 1978-80 period. Finally, section VI is devoted to a criticism of the trade-off approach based on the Swedish experience.

II. The Accommodation of Supply Shocks: Theoretical Issues

Although the issue of whether or not a government should accommodate a supply shock is a normative question, an evaluation of the costs and benefits of accommodation is a topic for positive economics and has been the subject of much research. Blinder (1980), Gramlich (1979), Gordon (1975), and Phelps (1978), are some of the better known studies on this subject. As shown in Figure 1, an increase in the price of an imported input, such as oil, will shift the aggregate supply curve upwards, from S_0 to S_1 . Moreover, it is likely that the demand curve will also shift. As Freeman (1981)

FIGURE 1



demonstrates, an increase in the price of an imported input will lead to a reduction in real domestic disposable income and therefore produce a decline in aggregate demand.^{2/} As drawn in Figure 1, the supply shift outweighs the demand shift, so that the price level is higher at the new and lower level of output (Y_1).

In this simple framework, the accommodation issue is whether the government should take policies which will increase

aggregate demand so as to restore output to its initial level (Y_0). If the supply curve has some positive slope, as in Figure 1, then the resolution of this question depends on the society's preferences. On the other hand, if the supply curve is vertical, accommodative policies will only result in higher prices, with no change in output or employment. Consequently, most of the debate in the literature has concentrated on the slope of the aggregate supply curve or, equivalently, on the existence of a trade-off between inflation and unemployment. The literature in this area is extensive and well known. It is conceded by most economists that there is some short-run trade-off -- even in a rational expectations model -- if any price or wage is sticky or fixed. As Blinder (1981) demonstrated, the setting of the dollar price of oil by OPEC is sufficient to yield an upward sloping supply curve.

However, even if we assume that the supply curve is upward sloping, Figure 1 cannot be applied to the Swedish case without make two amendments. First, the demand curve for Swedish output shifted downward by more than the conventional theory admits because of the induced recession in Sweden's major trading partners. Since the vast majority of these countries suffered a severe recession in 1974-75, aggregate demand for Swedish output declined not only as a result of the terms-of-trade effect alluded to above, but also because of this foreign income effect. Most models that are used to analyze oil shocks ignore the induced changes in income in other oil importing countries. Schmid (1980) is an exception to this statement, as he employs a 3-country model which includes trade between oil importing countries.

Second, as will be emphasized below, the Swedish government did not accurately estimate the size of the shifts of both supply and demand. Although it might be relatively easy to calculate the impact of oil prices unit costs, the combination of macroeconomic policies and wage policy led to a jump in wages and prices, of which, had the authorities been cognizant, might have persuaded them to change their mix of macro policies. Moreover, the Swedish authorities, the OECD, and most reputable forecasters significantly underestimated the recessionary impact of the shock. Hence, the Swedes were accommodating an uncertain shock, in contrast to the precisely known shock in Figure 1.

In any event, the Swedes did accommodate the oil price shock of 1973-74 and the next three sections describe Swedish macroeconomic developments and policies during the 1970s insofar as they related to the oil price shock and the accommodation issue. Then, in the final section, the Swedish experience will be used to evaluate critically the simple approach to accommodation which was presented in this section.

III. The Swedish Economy Prior to the Oil Price Shock

Until the mid-1970s, the Swedish economic system was often depicted as a model for other countries to emulate. During the 1950's and 1960's, real GDP per capita advanced on average at an annual rate of 4 percent, while unemployment and inflation remained low. These developments occurred in the context of a socialist system peculiar to Sweden. Although the government's share of GDP expanded rapidly, most of this growth was associated with the expansion of Sweden's social welfare system, while the state enterprise system remained

small.^{3/} The growth of the tax and transfer system coupled with Sweden's wage policy (described below), led to a progressive narrowing of the distribution of income.

At the time of the first oil price shock, Sweden was just recovering from the 1971 slowdown of economic activity. Following the boom of 1967-70, fiscal policy had been tightened to reduce the inflation rate and the current-account deficit, both of which were much greater than the levels experienced during the 1960s. As shown in Table 1, the rate of growth of real GDP declined sharply in 1971, while unemployment, although low in comparison with other countries, rose to the highest level in the post-war period.^{4/} Much of the decline in the rate of growth was attributable to an 0.2 percent fall in consumption, as disposable income declined as a result of increases in value-added and municipal taxes. Investment expenditure also was weak despite some favorable changes in taxes and various subsidies for fixed and inventory investment.

On the other hand, exports held up well -- rising by 4.2 percent in 1971 -- despite a decline foreign growth from a very high rate in 1970 (see Chart 1). Since imports fell with the decline in disposable income, the trade and current accounts improved significantly. When the inflation rate began to moderate in 1972, fiscal policy became more stimulative in 1972 and 1973 in order to lower the unemployment rate. Selective labor market measures -- incentives to improve labor mobility, re-training programs, and relief works -- were important in this effort.

By 1973 the expansionary policies and rapid export growth (14.1 percent) had produced a recovery of real GDP growth and a slight

Table 1

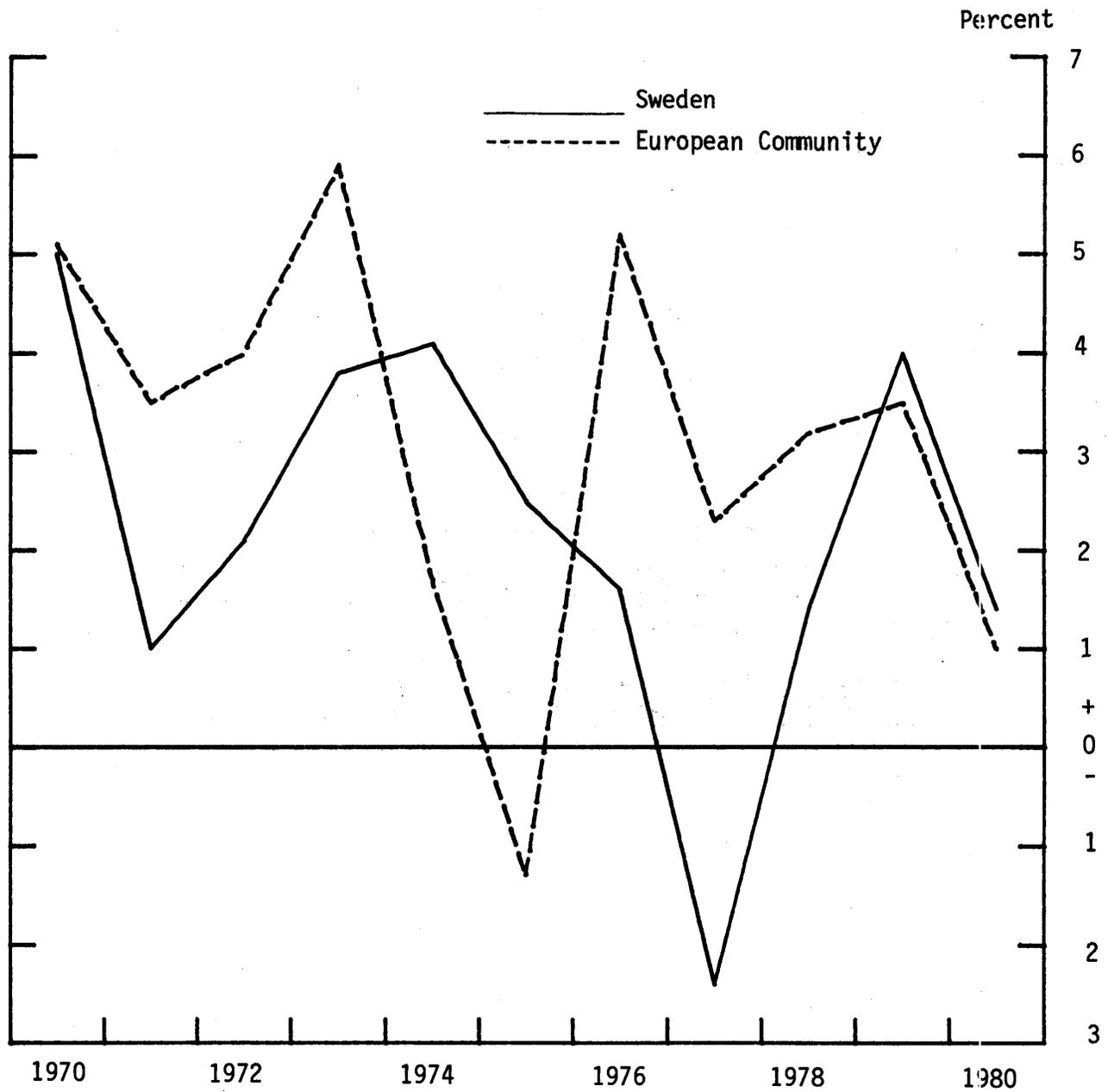
Selected Economic Indicators ^{1/}

	<u>1963-69</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
Real GDP	4.4	5.0	1.0	2.1	3.8
Unemployment Rate	1.8	1.5	2.5	2.7	2.5
Consumer Prices	3.8	7.0	7.4	6.0	6.7
Hourly Compensation	9.6	13.0	12.3	14.8	9.4
Money Stock					
M1	5.5	12.2	6.2	10.2	13.5
M3	n.a.	3.7	8.7	11.8	12.5
Current Account (U.S. \$ billions)	-0.08	-0.3	0.2	0.2	1.2

^{1/} Data are expressed as a percentage change over the previous year, except for the unemployment rate (which is expressed as a percent of the labor force) and unless otherwise noted.

Source: IMF International Financial Statistics, OECD Economic Outlook, Main Economic Indicators, and various national sources.

GROWTH IN SWEDEN AND THE EUROPEAN COMMUNITY
(PERCENTAGE CHANGE IN REAL GDP, YEAR OVER YEAR)



Source: OECD Economic Outlook December 1980 and EEC Annual Report 1980.

decline in unemployment. The growth of exports also helped to bring about a large current-account surplus in 1973, which was equal to about 2-1/2 percent of GDP.

Thus at the time of the oil price shock, Sweden appeared to be in a good position to take accommodative policies in response to the expected decline in OECD growth in 1974-75. Although the unemployment rate was declining in 1973, it was still high by historical standards and full employment was the most important objective of macroeconomic policy.^{5/} Price stability, also mentioned by the government as a policy objective, seems to have been given less emphasis. The inflation rate in 1973 of 6.7 percent, though high in comparison with Swedish experience in the 1960s, was about 1 percent below the average rate of inflation in the OECD. Finally, the record current-account surplus of 1973 placed Sweden in a strong external position.

In the debate that rose among OECD governments shortly after the oil price shock, it was agreed that the OECD countries as a group would have to run a current-account deficit and that expansionary policies were needed to offset the recessionary impact of the transfer to OPEC.^{6/} Sweden seemed to be in an excellent position to take such expansionary policy measures. Given that this course of action coincided with the desires of Swedish policy makers to lower the unemployment rate, accommodative policies were adopted in 1974.

An additional and very important element in the Swedish decision to accommodate the 1974-75 oil price shock was the expectation that the recessionary impact of the shock would be brief. This expectation was not unique to Swedish policy makers. The OECD also

predicted a short-lived recession: in the Economic Outlook of July 1974, the OECD forecast that, after falling by 1-1/2 percent (s.a.a.r.) in the first half of 1974, real GNP/GDP in the major seven industrial economies would grow by 2-3/4 percent in the second half of 1974 and by 3-3/4 percent in the first half of 1975. As is well known, the recession was both steeper and longer than predicted, as GNP in these countries instead fell by 1.2 percent in the second half of 1974 and by another 3-1/2 percent in the first half of 1975. As we shall see below, the unanticipated length and severity of the recession increased the costs to Sweden of its accommodative policies.

Before proceeding with a description of the Swedish policy response, it is necessary to comment on Sweden's solidaric wage policy, since this policy pre-dates the shock and plays an important role in subsequent developments. This policy, which is fully espoused by the labor unions,^{7/} has its origin in the early postwar writing of Gosta Rehn and Rudolf Meidner. According to Lindbeck (1974), Rehn argued that full employment should be achieved with a generally restrictive macro policy coupled with selective job-creating measures, rather than with a high level of aggregate demand.^{8/} He also argued that profits should be squeezed between rising wages and weak output demand so as to force productivity improvements. Thus Rehn proposed that unions try to set wages for comparable work to achieve equality across industries regardless of firm or industry profitability. He realized that such a policy would lead weak firms and industries to contract or shut down, and

argued that when coupled with a labor mobility policy -- e.g. retraining, payments for moving, etc. -- this would result in a favorable allocation of resources.^{9/}

Given that the unions did adopt this policy and that the degree of unionization in Sweden is the highest in the OECD area, it is not surprising that some compression of wage differentials has occurred.^{10/} Also, if solidaric wage policy has had any effect on the dispersion of Swedish wages among industries, one would expect that this phenomenon would show up in cross-country comparisons. Table 2 presents data on labor compensation in about 30 industries in the G-10 countries. Sweden ranks third among these countries in the level of average wages but, along with Italy and the United Kingdom, has a relatively small standard deviation. The low degree of wage dispersion in both of the latter two countries is a result in part of incomes policies. Although it is possible to use the standard deviation as a measure of dispersion when the means differ by little, it is more appropriate to look at Kendall's coefficient of variation (the standard deviation divided by the mean) shown in column 3, when the means differ substantially.^{11/} According to this measure wages in Sweden are less variable than in other G-10 countries and, given the absence of any formal incomes policy, it is plausible that the solidaric wage policy accounts for at least part of the lower dispersion of Swedish wages. Also, as I shall argue below and as Rehn and Meidner accurately had foreseen, the interaction of this wage policy with stimulative aggregate demand policies led to an explosion of wages.

Table 2

Wage Dispersion in 1979 in G-10 Countries^{1/}

<u>Country</u>	<u>Mean Wage Rate</u> (in dollars)	<u>Standard</u> <u>Deviation</u>	<u>Coefficient of</u> <u>Variation</u> (in percent)
Belgium	12.06	2.2508	18.7
Netherlands	11.27	1.5550	13.8
Sweden	11.22	0.9824	8.7
Germany	10.90	1.7214	15.2
United States	9.32	2.4986	26.8
France	8.20	1.2847	15.7
Canada	8.11	1.8136	22.4
Italy	7.67	0.9453	12.3
Japan	6.09	1.6643	27.3
United Kingdom	5.63	0.9023	16.0

^{1/} "Wages" are actually total compensation by industry for 30 industries in each country. The data were converted into dollars using average exchange rates for 1979.

Source: Bureau of Labor Statistics, unpublished data.

IV. The Swedish Policy Response: 1974-77

Once an accommodative policy was decided upon, the Swedish government acted quickly to maintain aggregate demand and, in accordance with Mundell's assignment rule, used fiscal policy to maintain internal balance while monetary policy was employed to maintain the value of the krona within the snake. As can be seen in Table 3, in 1974 fiscal stimulus increased dramatically, as the combined impact of the public sector rose to just over 3 percent of GDP from an approximately neutral position in the previous year. Most of this expansionary impetus came from a temporary (6-month) decrease in the value-added tax of 3 percentage points, as well as from increased transfer payments. Real disposable income rose by about 6 percent, leading to a 4.1 percent rise in real private consumption expenditures. Fixed investment was weak as a result of the government-ordered freeze of part of companies' profits in special investment funds.^{12/} However, because of government subsidies for the accumulation of stocks of final goods, inventory investment rose sharply from the reduced levels in the two previous years. Also, despite a large decline in the rate of growth of economic activity in Sweden's major trading partners (see Chart 1), export growth held up fairly well in 1974.

Consequently, real GDP grew by over 4 percent in 1974 at a time when the growth rate in the EC fell from about 6 percent to less than 2 percent. The success of Swedish policies was most evident in the unemployment rate, which dropped markedly over the 1973-75 period (see Table 4) while unemployment was rising significantly in other countries. However, the effects of this accommodation can also

Table 3
Effects of Fiscal Policy^{1/}
 (percentage of GDP)

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Central Government	<u>0.2</u>	<u>1.5</u>	<u>0.4</u>	<u>1.1</u>	<u>2.2</u>	<u>3.4</u>	<u>2.5</u>	<u>-0.5</u>
Direct ^{2/}	(0.2)	(0.0)	(0.1)	(0.2)	(-0.2)	(0.3)	(0.3)	(0.2)
Indirect ^{3/}	(0.0)	(1.5)	(0.4)	(0.9)	(2.2)	(3.1)	(2.2)	(-0.7)
Local Government	<u>0.3</u>	<u>1.0</u>	<u>1.1</u>	<u>0.4</u>	<u>0.2</u>	<u>-1.0</u>	<u>1.0</u>	<u>1.1</u>
Direct	(0.3)	(0.4)	(0.5)	(0.5)	(0.9)	(0.8)	(0.8)	(0.8)
Indirect	(0.0)	(0.6)	(0.6)	(-1.0)	(-0.7)	(-1.8)	(0.2)	(0.3)
Social Security	<u>-0.2</u>	<u>0.7</u>	<u>0.4</u>	<u>-0.2</u>	<u>0.4</u>	<u>0.5</u>	<u>0.3</u>	<u>-0.2</u>
Total	<u>0.3</u>	<u>3.2</u>	<u>1.9</u>	<u>1.3</u>	<u>2.8</u>	<u>2.9</u>	<u>3.3</u>	<u>0.4</u>

1/ The data, which are estimates by the Swedish government, refer to the contribution of the government to GNP growth. Although induced effects of fiscal policy on income are included, only impact effects are considered -- the lagged effects are ignored.

2/ Refers to the impact of government expenditure.

3/ Refers to the impact of tax and transfers on private demand.

Source: Revised National Budget, 1980.

Table 4
Selected Economic Indicators, 1973-80 ^{1/}

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Real GDP	3.8	4.1	2.5	1.6	-2.4	1.4	4.0	1.4
Unemployment Rate	2.5	2.0	1.6	1.6	1.8	2.2	2.1	1.9
Consumer Prices	6.7	9.9	9.8	10.3	11.4	10.1	7.2	13.7
Hourly Compensation	9.4	16.6	21.2	19.9	12.2	12.5	7.9	
Money Stock (M3)	12.5	12.3	9.9	9.9	5.8	14.2	14.3	12.3
Trade Account (\$ billions)	1.5	-0.5	-0.4	-0.8	-0.9	1.2	-0.9	-0.8
Current Account (\$ billions)	1.2	-0.8	-0.4	-1.6	-2.1	-0.2	-2.6	-5.2

^{1/} Data are expressed as a percentage change over the previous year unless expressed otherwise.

be seen (in Table 4) in the rise of wage and price inflation and the deterioration of the current account.

If foreign economic activity had recovered as quickly as had been forecast in early 1974, Swedish economic policy would have been judged successful according to most social welfare functions. Instead, real GNP in the OECD area again declined in 1975, leading to a real decrease in Swedish exports of 11 percent. An additional element behind the steep fall in exports was the stock subsidy scheme, which provided an incentive to withhold goods from foreign (and domestic) markets. Moreover, Sweden's exports were relatively concentrated in investment goods, which lagged the recovery, and in certain problem industries, such as steel, textiles, and shipbuilding, which lost their comparative advantage primarily to newly emerging industrial countries. Finally, unit labor costs rose sharply in Sweden in comparison with other industrial countries (see Table 5). This performance was exacerbated by the effective appreciation of the krona as a result of its membership in the snake. Consequently, unit labor costs in Sweden relative to those of its main trading partners deteriorated even more sharply after allowing for exchange rate changes.

The loss of competitiveness in the 1974-76 period was crucial to Sweden's subsequent economic performance since the resultant decline in market shares was not recaptured. Some observers, notably Martin (1981), have suggested that this deterioration was mainly a result of the jump in profits associated with the 1972-73 commodity price explosion. Although I agree that the commodity price boom was an important factor in the rise in Swedish wages, it is a

Table 5.

Unit Labor Costs in Sweden and its Competitors^{1/}
(percentage change, in domestic currency (in dollars))

	<u>Sweden</u>	<u>Eight European Countries</u>	<u>Ten OECD Countries</u>
1960-73	3.4 (4.8)	4.3 (6.4)	3.8 (5.8)
1974	12.8 (10.8)	13.7 (11.1)	16.6 (12.8)
1975	22.9 (31.5)	17.1 (20.7)	15.9 (17.8)
1976	19.1 (13.3)	5.7 (-3.5)	3.7 (-2.7)
1976/1974	65.0 (65.0)	40.7 (29.3)	40.2 (29.3)

^{1/} The eight European countries are: France, Germany, Italy, the United Kingdom, Belgium, Denmark, Netherlands and Sweden. This group of countries plus Canada and Japan comprise the 10 OECD countries. Figures in parenthesis represent the percentage change in relative unit labor cost in dollars.

Source: Arthur Neef and Patricia Capdevielle, "International Comparisons of Productivity and Labor Costs", Monthly Labor Review, December 1980.

weak basis to explain relative unit labor cost differentials since commodity prices rose for all countries, not just for Sweden. Moreover, since many commodities are priced in dollars, and since the dollar appreciated relative to most OECD currencies during the 1974-76 period but remained essentially unchanged vis-a-vis the krona, it follows that most of Sweden's competitors experienced a greater increase in commodity prices measured in national currency than did Sweden. Thus, in order to argue that the commodity price boom was the principal factor behind the deterioration of relative unit labor costs, one would have to show that production of the affected commodities occupies a greater fraction of the labor force -- or accounts for a greater portion of GDP -- in Sweden than in other OECD countries.

Instead, these differentials are more likely a result of the difference in aggregate demand policies, which led to differences in the degree of labor market slack in Sweden and in other OECD countries, and especially the solidaric wage policy in Sweden. As was noted above, wages in Sweden vary less among industries than in other major OECD countries. Thus it is likely that the boost in commodity prices coupled with tight labor markets led to sizable wage increases in export industries. Then, owing to the unions pursuit of (and the government's acquiescence to) wage solidarity, large wage increases were rapidly transmitted to the rest of the economy. Sizable wage increases, coupled with large boosts in payroll taxes, led to high unit labor cost increases relative to those in other OECD economies.

Fiscal policy remained expansionary in 1975, with public final consumption rising by 5 percent in real terms. The central government's deficit remained at about the same fraction (4 percent) of GDP as in 1974 primarily because of automatic increases in tax revenues associated with the 17-1/2 percent rise in nominal GDP. In contrast to the fall in the previous year, fixed investment rose by over 3 percent in 1975, in part as a result of the release of funds from the investment fund accounts previously mentioned. Therefore, despite the weak performance of exports, real GDP still grew at a moderate pace and unemployment continued to shrink (Table 5).

In 1976, fiscal policy became less expansionary owing to automatic increases in tax revenues.^{13/} Real GNP growth began to slow, with the second quarter being the only quarter of 1976 that showed positive growth. The foreign sector accounted for much of this slowdown. Real exports rose slowly (4-1/2 percent) despite a rapid rate of economic growth (5.3 percent) in the OECD area, while imports jumped by 10 percent. Much of this poor performance is attributable to the decline in Swedish competitiveness which was alluded to above and which continued in 1976.

By mid-1977 many observers -- both within and outside Sweden -- were referring to the economic situation as a crisis: foreign debt was rising, real GDP was declining, and the profits of companies listed on the Stockholm stock exchange fell by 90 percent. The problem industries, to which reference was made previously, were showing extensive losses and were in danger of bankruptcy. The aforementioned deterioration in Sweden's international competitiveness helped to produce a 20 percent

decline in Sweden's share of OECD markets between 1975 and 1977. Consequently, the current-account deficit widened, reaching 2 percent of GDP in 1976 and was still larger in the first half of 1977.^{14/} Despite two small devaluations within the snake in October 1976 and April 1977, the downward pressure on the krona remained intense through the summer of 1977 and ultimately led to the policy measures of August 1977, to which we not turn our attention.

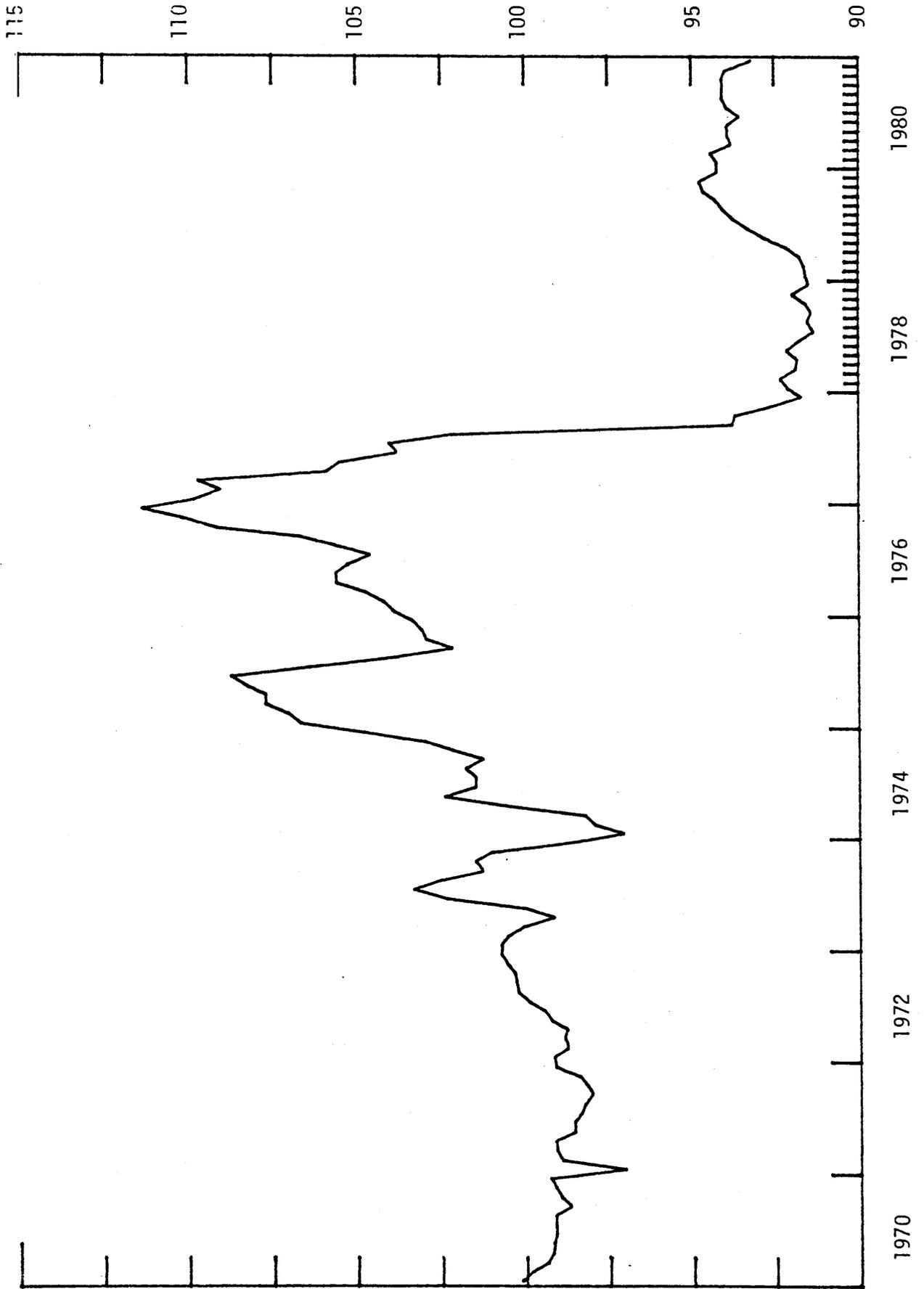
V. Corrective Measures and Backward Steps: 1977-79

Although much of the loss of international competitiveness was due to domestic factors, Sweden's membership in the snake exacerbated this trend. As shown in Chart 2, the weighted-average krona appreciated by about 14 percent from early 1974 to late 1976, leading to reduced price competitiveness vis-a-vis many of its competitors.^{15/} Furthermore, the actual and expected inflation differentials in mid-1977 between Sweden and several of the snake members, notably Germany, implied the need for periodic exchange-rate realignments.^{16/} Consequently, as a first step in restoring international price competitiveness, in August 1977 the Swedish government decided upon a withdrawal from the snake and a 10 percent depreciation of the krona against a basket of currencies representing Sweden's major trading partners.

Additional measures in the August package included a reduction in a special payroll tax on employers from 4 to 2 percent -- and to zero in 1978 -- and a general price freeze until October 1977 followed by intense price surveillance. In fact, this price surveillance program involved temporary price freezes on selected commodities through

Chart 2

Exchange Rate of the Swedish Krona
(weighted average, March 1973=100)



1980. The government also stated its intention in August 1977 to index taxes for inflation and to reduce the budget deficit. A final part of this austerity package was the increase in the value-added tax (VAT) in June 1977 from 17 to 21 percent.

Monetary policy measures were not part of the August package since monetary policy was at that time perceived to be sufficiently restrictive. As a result of exchange market pressures associated with Swedish participation in the snake, restrictive monetary policy was followed during the latter part of 1976 and most of 1977.^{17/} The August devaluation relieved exchange-market pressures and led to improvements in the external balance. Consequently, it was possible for monetary policy to become expansionary late in 1977 and in 1978 to accommodate the growing government budget deficit.

The trade account responded quickly to devaluation and the VAT increase, with a surplus in the fourth quarter of 1977 and in each successive quarter through the middle of 1979.^{18/} In addition to the devaluation, the turnaround in the trade account was fostered by the weak condition of domestic demand, the end of the stock subsidy scheme, and a low wage settlement in early 1978. Private consumption declined in real terms by about 1 percent in 1977 and 1978, while gross fixed capital formation fell in these years by 4 and 8-1/2 percent, respectively. Thus resources were freed for the foreign sector, while firms were encouraged by the weak domestic economy to look to foreign markets. The existence of large stocks of goods also figured in the rapidity of the turnaround, as sizable discounts are reported to have been offered to reduce these stocks when the subsidy scheme ended in 1977.

The importance of the 1978 wage settlement in the brief Swedish turnaround cannot be overemphasized. Sweden's three major unions agreed to a 3 percent wage increase over the March-December 1978 period and a 2 percent rise during the next 10 months ending on October 31, 1979. This settlement followed contractual increases which had averaged about 7-1/2 percent per year during the previous 3 years and was particularly surprising since, at the time of its announcement, the inflation rate was about 10-11 percent. An important pre-condition, which was necessary to win union approval, was the incorporation of a price trigger clause, according to which negotiations could be reopened if the consumer price index rose by more than 7.25 percent during the March-December 1978 period or by more than 5 percent in the first 10 months of 1979.^{19/} Additionally, personal income tax rates were reduced somewhat and, as an added incentive to secure labor's agreement to such a moderate package, direct taxes were indexed for inflation.

Several factors facilitated the Swedish government's attempt to achieve a fall in the real wage. First, the labor market is highly centralized: there is one large employer's group (the SAF) which is composed of 27,000 member firms employing about 1-1/2 million people (one third of the labor force), one large union (the LO) which covers over 90 percent of blue collar workers, two moderate-size unions controlling about 80 percent of salaried workers, and a handful of small private and public employer groups. The collective wage agreement is the most important. Indeed, it is rare for the smaller employer and labor groups to deviate significantly from the LO-SAF

settlement. The absence of staggered contracts presumably facilitates the similarity between the wage settlements of different unions.

Second, Swedish workers in 1978 seemed to have realized that they had priced themselves out of too many markets. This realization probably was strengthened by the extent of the decline in the traditional export industries during the mid-1970s. Third, Swedish income is distributed more evenly than in most countries and this distribution narrowed in part as a result of the solidaric wage policy. It is plausible that real wage decreases are easier to impose the more equal the income distribution since income equality would imply that everyone was bearing his or her share of the reduced standard of living. Finally, at least until 1980, Swedish labor relations were excellent, with the number of days lost to strikes per thousand employed only 15 percent of the U.S. figure during the 1966-75 period.

As a result of the low wage settlement and the slack labor market (which limited wage drift), labor costs per man hour decelerated during 1978, attaining an annual rate of 8-1/2 percent in the fourth quarter, one half of the rate during 1976. As 1978 proceeded, the effect of the devaluation and wage settlement began to show up in activity and prices. Led by foreign demand and government spending, real GDP advanced by 1-1/2 percent in 1978 (and by almost 4 percent on a Q4/Q4 basis), while inflation was preceeding at a rate of less than 6 percent by the end of the year. However, the labor market remained slack: officially, the unemployment rate rose to 2.2 percent, while another 4 percent of the labor force was engaged in labor support schemes

and early retirement rose quickly. Moreover, as noted previously, real private consumption had declined slightly in 1977 and 1978.

Thus, the Swedish government decided in 1978 to adopt a more expansionary stance. Net transfers increased sharply in the second half of 1978 and in 1979, leading to an increase in the net borrowing requirement of the central government from 5.2 percent of GDP in 1977 to 8.3 and 10.2 percent in 1978 and 1979, respectively.^{20/} Much of the increase was due to the increased cost of industrial policy and labor market measures. Subsidies and other transfers to troubled industries rose from about 2-1/2 billion krona in 1976 and 1977 to 10-1/2 billion in 1979, while the cost of various labor market programs almost doubled to about 12 billion krona over the same time period.^{21/}

The effects of this expansion quickly evinced itself in activity and price data. Real GNP jumped by 4 percent in 1979, while by the end of that year consumer prices were rising at a 12-13 percent rate and the trade account had reverted to a deficit. The expansion of aggregate demand by fiscal policy during 1978-79 was especially poorly timed, in that it increased inflationary pressure in Sweden at the time of the oil price hikes of 1979-80. Moreover, this was the second instance during the 1970s of a very expansionary fiscal policy, despite the inconsistency of such a policy with solidaric wages. The Swedes also demonstrated their unwillingness to permit the contraction of uncompetitive firms and industries. However, as Rehn might have argued, tight macro policy and a willingness to permit the contraction of inefficient firms are prerequisites for a solidaric wage policy. Without these prerequisites, either wages will rise together by more

than is consistent with external and internal balance or progress towards wage solidarity will be halted as firms bid against each other for labor. Sweden has suffered somewhat more from the former problem than from the latter.

The final bit of evidence of the seriousness of Sweden's economic position at the end of the 1970's was the combination of strikes and lockouts in the spring of 1980, which involved one quarter of the labor force. The result of this dispute was wage settlements which led to unit labor cost increases approximately in line with other OECD countries. However, in 1980 Sweden needed a better than average cost performance in order to encourage export growth. Government spending was 64 percent of GDP, the net borrowing requirement of the central government was about 10-1/2 percent, and the current-account deficit was over 4 percent of GDP. Thus, export growth was desired so that the government sector (and the deficit) could be reduced without incurring a rise in unemployment. The failure to secure lower relative wage growth underlined the seriousness of Sweden's economic predicament at the end of the 1970s.

VI. Lessons for the Accommodation Debate

During the 1970s Sweden's economic performance did not compare favorably with that of other major industrial countries. Real GDP rose by only 19-1/2 percent from 1970 to 1979, compared with gains during the same period of 22 percent in the United Kingdom, 29 percent in Denmark, 34 percent in Finland, and 30 percent in Germany.^{22/} Consumer prices rose more rapidly in Sweden than in the OECD countries on average in 7 of the 10 years of the 1970s. The government sector mushroomed,

as public sector employment rose from 20 to 30 percent of the labor force, while the share of government spending in total GDP soared as noted previously. At the end of the decade, Swedes were burdened by the highest income and consumption taxes in the OECD region. The low wage differentials -- both before and after taxes -- had produced a low degree of labor mobility. Sweden's unemployment rate was far below that of most OECD countries. However, much of this difference disappears if the Swedish unemployment rate is adjusted for that part of the labor force participating in the various labor market programs mentioned previously.

It is understandable, in view of the unexpected size and duration of the oil price shock, that these results were not predicted. However, it is troublesome that the possibility of such results and, especially, the inconsistency of accommodation with both wage and exchange-rate policies do not seem to have received any attention. In fact, there does not seem to have been much of a debate about Sweden's adoption of accommodation policies. Instead, it appears to have been taken for granted by both the Swedish government and the OECD Secretariat that, given the slack in the Swedish economy on the eve of the oil price shock and a relatively favorable balance of payments position, Sweden was well-suited for accommodative policies. In other words, in conformance with the simple approach to accommodation, which was summarized in section II, policymakers seem to have proceeded from the existence of economic slack to the decision to accommodate.^{23/}

The Swedish experience emphasizes that the simple approach to the accommodation issue can only be a first step. That is, in

considering the question of whether or not to accommodate a supply shock it certainly is sensible to ascertain whether or not the aggregate supply curve is vertical. However, the knowledge that there is some elasticity of supply is not sufficient for accommodation to be the optimal choice. One drawback of relying solely on the simple approach to the accommodation issue is that it is at best a partial equilibrium approach to the accommodation issue. The simple approach ignores the interaction of the chosen accommodative policies with other existing macroeconomic policies. However, in the Swedish case, both exchange-rate and wage policies required tight demand management policies; this interaction seems to have been ignored, at great expense to the Swedish economy.

The omission of this interaction highlights the limited -- and theoretically ambiguous -- nature of a social welfare function defined over inflation and unemployment. Instead, one can conceive of a social welfare function which includes the present value of future consumption and an income distribution parameter and which the authorities are charged with maximizing subject to the production and trading possibilities of the society. Besides being preferable from a welfare point of view, such a formulation underlines the trade-off between growth and distribution which often lies behind the accommodation decision. In the Swedish case, this formulation might have focussed attention on the inconsistency of the chosen policy mix.

The inclusion of the present value of future consumption as an argument in the social welfare function introduces potential timing questions. Even if it is granted that, in a given situation, accommodative policies will raise present consumption, this formulation makes it

hard to ignore the possible consequences of accommodation for future consumption. In the Swedish case, these costs were unexpectedly large as a result of the underestimate of the magnitude and duration of the recession in the OECD area and the apparent unrecognition of the consequences of accommodation for relative unit labor costs given solidaric wages and Swedish participation in the snake.

In addition to the foregone consumption of the 1977 recession, Sweden paid (and is still paying) for the policy mix which was adopted after the oil price shock with a mis-allocation of resources. As argued previously, one consequence of the policy mix was the hastening of the loss of comparative advantage on the part of several key industries. Although it is unclear at what rate Sweden should have been reallocating its resources away from its traditional industries, most observers agree that the long-term trends favored such a switch. By concentrating the loss of competitiveness in a short period of time, the government was compelled to bail-out their troubled industries. Once begun, it is often difficult to end such support measures, and Sweden has not been an exception to this rule.^{24/} The costs to the Swedish taxpayer might well have been lower if at least one of the elements of the policy mix (wage, exchange-rate, demand-management, and industrial policies) had been altered.

This example brings out other aspects of the accommodation decision. The simple approach to this issues seems to assume that once an accommodative policy is decided on, politicians will opt for the most efficient way to attain the desired goal. Although understandable from the viewpoint of a macro modelbuilder, such an assumption is not supported by historical experience. Moreover, it

is also assumed that policies can be reversed at any time -- e.g., if inflation becomes more costly than unemployment, a government can switch policies at that point. Yet in the Swedish case, the inability of the Swedes to reverse or halt existing programs account for part of the automatic rise in the government deficit in the late 1970s. Programs like the labor market and industrial policy measures build constituencies and thus are hard to stop. Of course, these programs would have been more easily halted if the OECD countries had recovered on schedule. Both of these additional aspects of the accommodation issue -- the efficiency and the reversibility of policies -- are easily omitted from consideration in the simple approach, which only looks at the slope of the aggregate supply curve today. If future consumption has some weight in the social welfare function, it is at least possible that these additional aspects will be considered.

Perhaps the most important lesson of the Swedish experience is that the optimal policy response is contingent upon the exact nature of the shock. In the Swedish case, such information was not available. The vast majority of experts in early 1974 had little idea of the magnitude and duration of the shock. Moreover, it was unclear at the time -- especially in the problem industries -- how much of the loss of markets was due to relative cost changes and how much was due to cyclical factors abroad. The lack of such knowledge weakens the case for accommodation by a small, open economy unless it is accompanied by a similar policy response abroad.^{25/}

The main lesson of the Swedish experience during the 1970s, then, is that accommodative policy can be costlier than anticipated and that the deleterious effects of such policies can persist for a long time. Thus, any approach to the accommodation decision which ignores future effects is necessarily limited and potentially misleading. Unfortunately, this lesson is unlikely to be accepted by politicians, who are often rewarded for having brief time horizons. Although the Swedish experience does not argue against ever accommodating a supply shock, it does suggest other alterations in existing policies should be considered along with any decision to take accommodative measures.

Footnotes

- * International Finance Division, Federal Reserve Board. I have benefited substantially from conversations with and comments from Richard Freeman. I am also indebted to Peter Clark, David Howard, and Karen Johnson and Raymond Lubitz for comments on an earlier draft of this paper. This paper represents the views of the author and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or other members of its staff.
- 1/ A shock is said to be fully accommodated when macro policies are altered so as to maintain the unemployment rate. Invariant policy in the face of a shock is described as zero accommodation, while partial accommodation refers to intermediate cases.
- 2/ Bruno-Sachs (1979) argue, that for a net importer of intermediate goods, the demand curve is likely to shift to the left. However, for a net exporter of these goods, the demand curve may shift to the right.
- 3/ By 1980, total public sector expenditures were 64 percent of GDP; however, about one-half of this total represents transfer payments.
- 4/ Until recent revisions of the national income accounts, the growth rate of GDP in 1971 was recorded as -0.2 percent. Thus 1971 was officially described as a recession until the revisions were made.
- 5/ Calmfors (1977a) cites budget statements that emphasize the primary importance of the full employment objective to Swedish policy makers.
- 6/ OECD Economic Outlook, July 1974, p. 7.
- 7/ See Economic Expansion and Structural Change: A Trade Union Manifesto, pp. 119-36.
- 8/ Some selective job measures, such as labor retraining and subsidization, were adopted by the government.
- 9/ Both he and Meidner asserted that a more rapid reallocation of labor would be achieved by, as Lindbeck puts it, pushing and pulling labor (via contracting output in inefficient sectors and retraining and subsidizing labor to shift to expanding sectors), rather than by economic incentives operating through wage differentials.
- 10/ See the OECD Economic Survey of Sweden (1981) pp. 41-44. Wage dispersion was measured by the coefficient of variation.

- 11/ See Chow (1969) pp. 106-8 and Croxton et al. (1967) pp. 198-201 on appropriate measures of dispersion. In the above case there is little doubt. Imagine 2 countries identical in every respect except that, owing to inflation, wages in country A are twice as large in country B. In this case, the standard deviation of wages in A would be twice that of country B, while the coefficients of variation would be identical. Thus the latter measure conveys the information that in terms of relative dispersion (i.e., relative to each country's mean), A and B are identical.
- 12/ This policy was adopted to moderate demands for large wage increases -- in other words, since businesses did not have large profits, laborers should settle for moderate wage increases. Thus the government was trying to repeal one of the assumptions of the EFO model, that labor's share in the export sector is constant. Unfortunately, this strategy was not successful.
- 13/ The net borrowing requirement of the central government fell from 4 percent of GDP in 1974 to just over 2 percent in 1976.
- 14/ Until corrected in 1979, there was a substantial underreporting of Sweden's service exports. The original balance of payments statistics for 1975, 1976, and the first half of 1977 showed deficits of 6.7, 10.5, and 7.7 billion kroner, respectively; the corrected figures are 1.5, 7.1 and 5.3 billion. Although the exaggerated current-account deficit may have contributed somewhat to the downward pressure on the krona in foreign exchange markets, it is clear that the krona was substantially overvalued in 1977 and that a sizeable depreciation was warranted.
- 15/ The exchange rate referred to in the text is the multilateral trade-weighted average on a monthly basis.
- 16/ In the first half of 1977, Sweden's inflation rate was 7 percent (a.r.) higher than Germany's, and the difference in policy stances between the two countries indicated that this differential would widen. In the second half of 1977, this differential did widen substantially -- to 11 percent -- mainly because of the drop in German inflation. Throughout the remainder of the decade, this differential remained in excess of the 2-1/2 percent band of exchange rate fluctuation permitted in the European Monetary System.
- 17/ As shown in Table 5, the rate of growth of the broad money supply dropped from about 10 percent in 1976 to about 6 percent in 1977.
- 18/ The surplus of \$218 million in the fourth quarter of 1977 compared with a cumulative deficit of \$1 billion in the three preceding quarters.

- 19/ The price standard was not breached until October 1979. Instead of renegotiating wages for 1979, the breaching of the price standard was used as another argument for higher wages in 1980.
- 20/ As shown in Table 4, part of the increase in central government net spending was offset by an increase in local government saving.
- 21/ See the Economic Outlook, O.E.C.D. pp. 35-37, April 1980.
- 22/ Draft Economic Survey, OECD Table 7, May 1981. High tax rates contributed to the growth of the underground economy, whose size in relation to GNP may be among the largest in the OECD, according to anecdotal and casual econometric evidence. Thus the slower growth of real GDP in Sweden in the 1970s may have been due to the faster than average growth of its underground economy.
- 23/ In addition to the evidence presented in section III concerning the existence of economic shock prior to the oil shock, it should be mentioned that Branson and Myhrman (1976) did evidence of a significant Phillips curve trade-off based on 1954-70 data.
- 24/ The OECD Economic Survey (1981) notes that industrial policy measures, much of which went to shipbuilding, steel, and other troubled industries, rose from 2-1/2 billion krona in 1975 to kr. 10-1/2 billion in 1979. In 1981 these expenditures were estimated to about kr. 6 billion.
- 25/ Moreover, the impact of the shock on potential output was unknown at the time of the shock and, in fact, is still being debated today. Consequently, it is difficult to judge whether the Swedish authorities accommodated or over-accommodated the oil shock. Swedish unemployment fell to 1.6 percent by 1975-76, slightly above the 1963-69 average. However, the oil shock clearly raised the "non-accelerating inflation rate of unemployment," so the Swedish authorities may have over-accommodated.

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