CHAPTER VI

Sweden: Is Something Wrong with the Growth Engine?

Contents

1. Introduction

The previous Nordic analysis predicted a considerable growth potential in the Swedish economy following the devaluation of the Swedish krona in 1982 (Economic Growth in a Nordic Perspective, 1984, pp. 153–179). This development was conditioned by the assumptions of the world economic environment made common to the four Nordic forecasts and by certain domestic policies from 1984. Two policy scenarios were presented – one "successful" in the long term, and one "inflationary" scenario, appearing to be successful in the short term, but not so in the long term. The major differences between the two scenarios were expected to appear from 1985 and onwards. Recent reorientations of Swedish policy and the unexpected drop in oil prices make significant revisions in our forecasts necessary and form the basis for the new assessment for 1985–90, to be presented in this chapter. However, if the effects of unexpected world economic changes are removed from our earlier forecast, actual domestic development appears to have been following the inflationary scenario more closely than the successful one, in short, world economic development has been "kind to" the Swedish economy.

The devaluation of 1982 generated a short period of recovery with a substantial increase in industrial production and in exports. After a long period of deficits, the current account showed a small surplus in 1984. However, recent developments in the Swedish economy show many of the trendbreaks to have been only temporary (see Section 2). Thus, it is still relevant to ask to what extent and in what sense Swedish industry has lost its *basic competitive edge*. Has the Swedish supply structure not adopted to changing world market conditions, and to what extent is Swedish industry suffering from cost-inefficiencies? Many argue that both, or at least one of these deficiencies continues to prevail. The arguments for Sweden often stress the importance of developments in relative unit labor costs as an indicator of changing competitiveness, and refer to a favorable unit labor cost development after a considerable decline in the 1980s. In sharp contrast to these arguments empirical evidence shows that Sweden, after a short period of resumed growth, still continues to lose market shares in world trade. Thus, the assessment of the competitive position of Swedish industry is still somewhat confused. An attempt to shed light on the situation is made in Section 3.

Since the Swedish economy is in a phase of restructuring, the allocation of key resources, in particular capital and labor, is of significant importance. An inefficient *capital allocation* process might explain why industrial production is levelling out while Swedish industry nevertheless appears to be highly competitive (see Special Study 2). Regulations and administrative pricing mechanisms have been frequently used and they have created distortions and unfavorable allocation effects. The development during the 1980s is calling for new kinds of risk capital and the creation and development of a well functioning capital market is critical for this supply (Eliasson et al., 1985). The tax system distorts capital allocation and the distribution of corporate profits, while fiscal deficits and public foreign debt adversely affect interest rates and investment. In Section 4 we discuss capital market issues, relevant to growth in Swedish industry.

The *allocation of human resources* is also constrained by bottlenecks in the supply of certain categories of skilled manpower, low mobility, etc. An inadequate incentive structure appears to be the main explanation. The tax system and a too narrow wage dispersion are two factors behind rigidities in the labor market (see Special Study 3). Section 5 is devoted to a discussion of these issues.

Taken together institutional phenomena contribute to the slow growth in manufacturing production experienced since the mid 1970s. In Section 6 we discuss some further threat to the growth prospects such as the classical wealth effect.

The projections follow in Section 7. As the Swedish economy is highly energy intensive and exposed to fluctuations in oil prices, the recent fall in oil prices raises several important policy issues. The structural response to the price fall — being initially favorable to the economy — will critically affect long-term economic prospects of the Swedish economy.

Before the analysis a brief description of the current state of the Swedish economy will be presented together with a comparison of the 1984 forecasts[1] and the outcome up to 1985. This introductory section will highlight the importance of changing environmental conditions.

2. Current State of the Swedish Economy

The 1984 analysis identified five critical long-term characteristics of Swedish economic development up to the devaluations of the early 1980s.

First, the real growth trend had tilted downwards. Up to the middle of the 1970s the Swedish economy was able to stay on a fairly stable growth path. The annual increase in manufacturing production — seen over a century — was about 5 per cent. An expansionary policy during the first oil crisis years temporarily bridged the recession, but after the peak in 1974 and up to 1982 the trend was reversed in a downward direction. The annual increase in labor productivity had fallen to less than half the rate of the previous decade.

Full employment has been the prime objective of Swedish economic policy in the postwar period, and in this respect the policy has been successful. In an international comparison, rates of unemployment were lower, even when people participating in labor market programs are included. In the early 1980s, however, the rates of unemployment increased from the level of 2 per cent maintained during the 1970s, to the current rate of 3.0—3.5 per cent. Despite the increase the social costs of maintaining these low unemployment figures continued to be reflected in the rapid accumulation of public and foreign debt, eroding the capacity of continuing the same policies. The irony of the situation is that, because of these dynamic imbalances, the "artificial" short-term success on the employment side may create *more* unemployment during the next decade (Eliasson et al., 1985).

Second, persistent *current account deficits* and the consequent accumulation of foreign debt and debt service presented the Swedish economy with a major problem. The devaluations of the Swedish krona in 1981 and 1982 instantaneously and dramatically increased the value in SEK of the foreign debt. On the other hand, the devaluations stimulated Swedish exports and helped to achieve a positive trade balance 1983—85, in contrast to the period 1974—82. The critical policy issue, to be discussed below, is whether this respite has been used to pave the way for future balanced economic growth, or as an excuse to do nothing.

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[1] In *Economic Growth in a Nordic Perspective* (1984).

Third, the *consolidated public budget* had been showing deficits since 1978 even after having taken cyclical variations into account. As a share of GDP the tax seems to have peaked that year while the expenditure share continued to increase.

Fourth, a marked reduction in *national savings* as a share of national income had been observed since the mid 1970s – a decline accompanied by an almost equal decline in the share of investment in value added.

Fifth, Swedish *inflation* had been running slightly higher than in major competitor nations for many years, suggesting a need for future corrective devaluations, or more fiscal and monetary restraint.

What happened after the devaluations of the early 1980s?

The devaluations to promote export growth created a recovery which was different from the recovery of 1978–80. At that time the major contribution to growth in real GDP was public sector demand growth. Today, export industries generate the growth in output, but no consequent increase in employment is expected. In the ongoing recovery, growth of final domestic demand is currently at a significantly lower rate than GDP growth; private investment being its major component. Exports are contributing 3–4 times as much to growth as in the recovery of 1978–80.

The 1982 devaluation started an upswing in manufacturing production which in 1984, for the first time, brought it back to, or slightly above the 1974 level (see Figure VI:1). However the *rate of real growth* in manufacturing output seems to

Figure VI:1 Manufacturing production in OECD-Europe, USA, Japan and Sweden, 1972–85

Index 1972=100

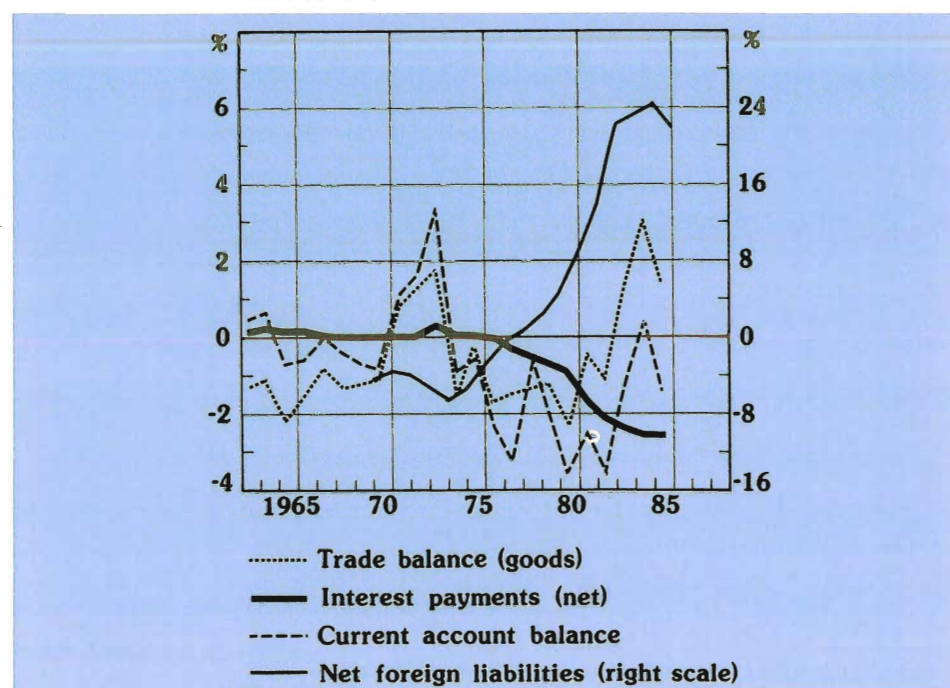Source: Eliasson et al. (1985), p. 90
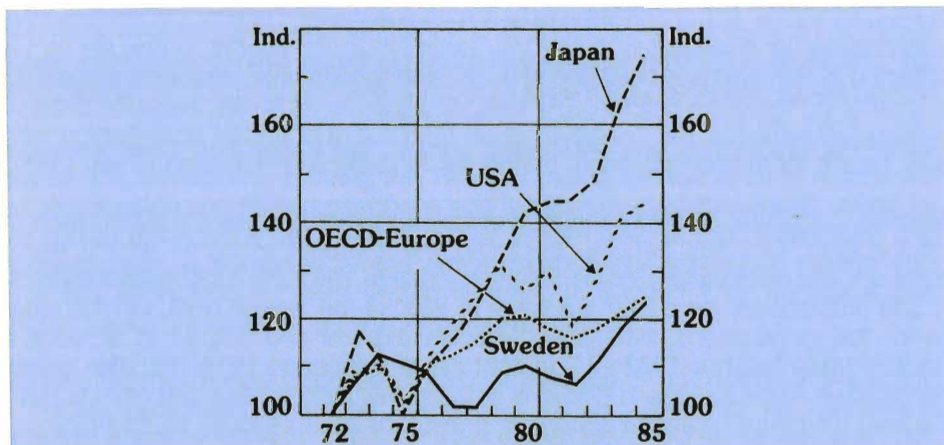
have peaked in 1985. Since we are continuing towards a "software", service oriented economy, manufacturing production should not be analyzed separated from private services; in 1985 the share of private services in GDP was about 50 per cent higher than the share of manufacturing and mining industries. Looking at the total private sector, output has stagnated since no compensating growth in private services has occurred.

Despite the recovery, average rates of unemployment have been higher in 1982–85 than during the period 1974–82. Yet, during the recent period, shortages of skilled technical workers etc. have been experienced, indicating a structural problem in the labor market, partly caused by rigid wage and salary setting practices (Deiaco, 1986).

What happened to the *external balance*? Defending an inadequate parity rate in a fixed or semi-fixed exchange rate regime like the Swedish one will produce external imbalances like those shown in Figure VI:2. Due to an overvalued krona in the beginning of the 1970s Swedish industry has to generate a net trade inflow in excess of what a krona in parity would generate to be able to handle the debt service of the Swedish economy. The devaluations in 1981 and 1982 generated rapidly increasing trade surpluses and even a substantially improved *current account*. However, figures for 1985 exhibited a substantially reduced trade surplus

Figure VI:2 Swedish economy – external balances, 1963–85
Per cent of GDP

.... Trade balance (goods)
——— Interest payments (net)
----· Current account balance
——— Net foreign liabilities (right scale)

Source: Eliasson et al. (1985), p. 67

and a current account deficit amounting to 9 billion SEK.[1] Figures for 1986 indicate a moderate current account surplus, to a large extent[2] explained by a decrease in the value of imports due to lower oil prices. A "structural" current account deficit still appears to remain in the sense that the account will be negative under "normal" business cycle conditions.

The importance of interest rate payments as a part of the current account deficit is also illustrated in Figure VI:2. Transfers exhibit a strong increasing tendency.

Furthermore, Swedish indebtedness has increased rather than decreased. At the end of 1985 total public debt represented 65.1 per cent of GDP. Foreign public net debt was equal to 16.2 per cent of GDP. Indebtedness has developed very fast. Up to 1977 the Government/Central Bank recorded positive net foreign positions. Sweden still has the best rating – an AAA-rating – as international borrower, but the debt service will soon become a heavy burden and may change this assessment. Since the amounts originally borrowed have been used for consumption rather than investment in growth capacity, no future export effects to help amortize the debt should be expected.

Figure VI:3 Consolidated public sector spending, income and debt, 1950–85
Per cent of GDP

———— Public sector spending (total)

·········· Transfers from public to private sector

– – – – Public sector income (total)
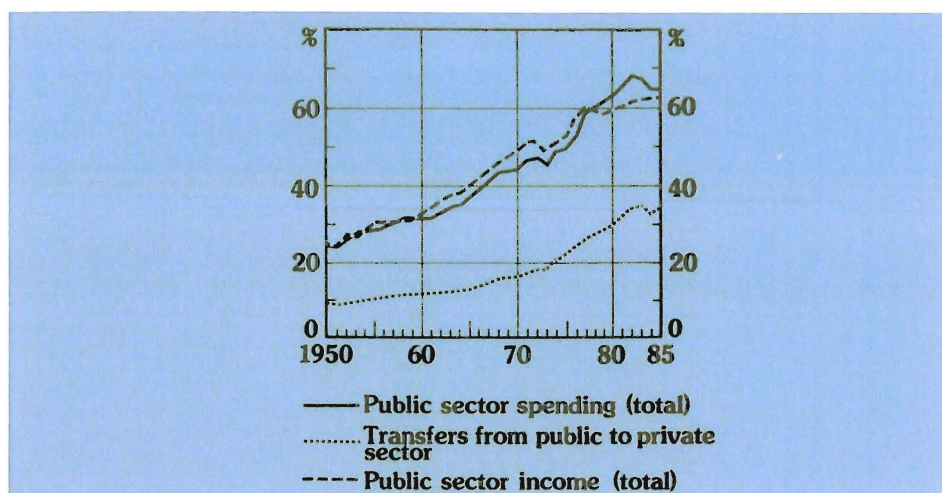
Source: National Account Statistics and IUI estimates

[1] According to figures, reported by the Central Bank of Sweden.
[2] For the first 10 months of 1986 the trade balance improved by 19.6 billion SEK compared to the same period the year before. 15–16 billions of this amount can be ascribed to the fall in oil prices according to the Swedish Statistical Bureau.

Public sector expansion since the mid 1970s – in order to create new jobs – led to large deficits in the *consolidated public budget*. However, the trend towards a growing deficit was reversed in 1982 (see Figure VI:3). The budget for the fiscal year 1986/87 announces a smaller deficit as a percentage of GDP. Lower oil prices, favorable exchange rates and lower interest rates might make the deficit even smaller than calculated. Still, there is a long way to go to get the public budget balanced. The level of public spending and the deficit are often claimed to be sources of both price distortions and inflation – blown up still further by the tax system (Södersten and Lindberg, 1983; Axell, 1985). The financial impact of public sector expansion on taxation is illustrated in Figure VI:4.

Combined with labor market rigidity the full employment ambitions have contributed to a considerably higher *inflation* in Sweden. Table VI:1 shows that Sweden has recorded a relatively higher inflation rate for the last few years than in major competitor economies. An effort to reduce inflation by influencing expectations was made during 1983–85. In 1985 the target rate of inflation was set to 3 per cent by the government. The actual outcome was 7.4, as compared with an OECD-average rate of 4.6. In its calculations for 1986, the government predicts the inflation rate to fall to 3.5 per cent, a forecast still above the OECD average. Referring to falling oil prices and lower interest rates, the price increases in official estimates are expected to come down further, to an annual rate of 2 per cent during 1986.[1]

Figure VII:4 The public sector – tax revenues and financial savings, 1950–85
Per cent of GDP
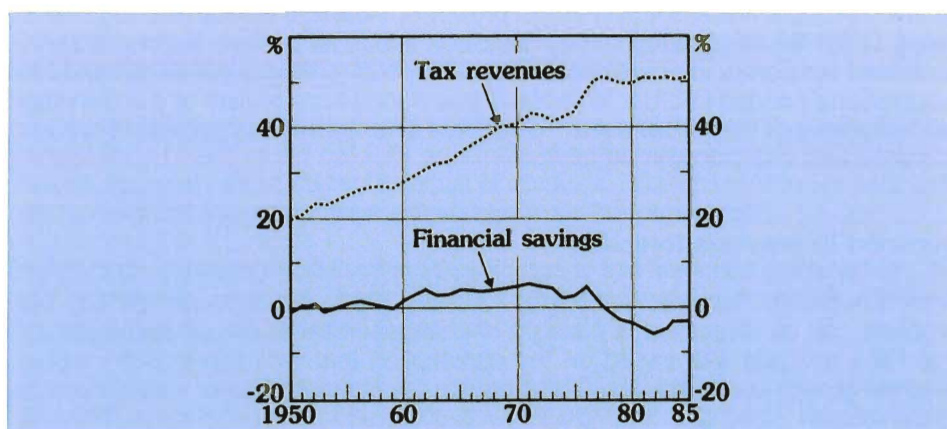
Source: Eliasson et al. (1985)

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[1] According to Swedish National Institute of Economic Research.

Table VI:1 Inflation in Sweden as compared to major OECD-countries, 1961–85

Percentage change between annual averages

	At annual average change					
	1961→70	1971→81	1982	1983	1984	1985
Sweden	4.0	9.5	8.6	8.9	8.0	7.4
United States	2.8	8.1	6.1	3.2	4.3	3.5
Japan	5.8	8.6	2.7	1.9	2.2	2.1
Germany	2.7	5.2	5.3	3.3	2.4	2.2
Austria	3.6	6.3	5.4	3.3	5.6	3.2
Denmark	5.9	10.0	10.1	6.9	6.3	4.7
Finland	5.0	11.3	9.6	8.3	7.0	5.9
Netherlands	4.0	7.3	6.0	2.8	3.3	2.3
Norway	4.5	8.9	11.3	8.9	6.2	5.7
Switzerland	3.3	5.1	5.6	3.0	3.0	3.4
Major Seven	3.2	8.7	7.0	4.5	4.5	3.8
OECD Europe	3.8	10.6	10.5	8.3	7.4	6.6
OECD Total	3.3	9.2	7.8	5.3	5.3	4.6

Sources: OECD and Swedish National Institute of Economic Research

In conclusion, turbulence in financial markets and the dramatic drop in oil prices make it hard to compare economic development during 1982–85 with the 1984 Nordic projection. The devaluations of the Swedish krona in 1981 and 1982 meant a strong demand stimulus to the Swedish economy. However, inflation is still above the international average and will for 1986 be well above the official estimate of 2 per cent mentioned in the previous section. The public deficit – the cause of the inflation – is diminishing but is still huge. Private savings continue to be low. A substantial slowdown in the growth of industrial output was registered during 1985–86, suggesting that devaluations and other positive factors had only generated temporary improvements. Thus, the policy changes called for, and the assumptions needed in order to achieve stable long-term growth of the Swedish economy are still the critical issue. To address it, let us first compare our previous forecasts with the outcome so far.

Precision in previous forecasts

Even though the forecast period for "Nordic 1984" has not yet ended, the forecasts can be discussed in the light of changes in some critical assumptions. The 1984 analysis was based on the assumption that Swedish industry would generate growth above the OECD-average on the profit stimulus of a considerably "undervalued" Swedish krona. We presented two alternative scenarios. The first was based on the assumption of an economic policy aimed at preserving the competitive edge created by the devaluations of the Swedish krona in 1981 and 1982. This scenario assumed a tight demand policy. Initially, such a policy was assumed to result in a growing open unemployment. In a long-term perspective, however, favorable circumstances for growth were expected for the second half of

the 1980s. GDP was estimated to increase by 2 per cent per year, which represented a more modest growth perspective than earlier IUI forecasts had provided. The reason was an unfavorable starting point for recovery. This alternative was seen − given external world assumption − as the only way of return to a stable long-run growth path before the end of the 1980s.

Our inflationary scenario, on the other hand, was expected to improve the employment record initially. A slightly higher level of total consumption was assumed for 1984. As a consequence, inflation was expected to accelerate during 1985, economic growth to slow down and both the external and internal balance to gradually deteriorate. The increase in unemployment from 1985 and onwards was estimated to be considerable. The two scenarios are put together in Table VI:2 as a base for an outcome analysis.

The actual outcome as presented in the beginning of section 2 gives no definite answer to which scenario has come true. The calculated difference between the two scenarios depended on the duration of the improvement following the devaluation. The most recent development indicates that the likely outcome still will have something in common with both scenarios. In general, however, the figures will not be as bad as in the inflationary scenario since world economic development has been better than expected. But, as in the inflationary scenario, a higher *inflation rate* than that of competitor nations has nearly "consumed" the (price) competitive advantage provided by the devaluations.

On the whole, after corrections for the influence of mistaken world assumptions, actual development so far seems mostly in line with the inflationary scenario. Actual GDP growth, however, runs ahead of both forecasts due to improvved growth in world demand. Hence, the employment forecast also underestimated actual development in a way consistent with our underestimation of the growth of industrial production. The average annual change in investments has also been higher than projected. The downward tendency in public investments continued 1982−85, while residential investment rose primarily due to restoration work. However, the most important component in the considerable growth in total investments is the growth in private investments, which we clearly underesti- mated. The largest increase is noted for investments in machinery and in the business area. 1984−85 investment activities even meant growth in net investments in both basic and machinery industries.

Our consumption as well as price projections have, so far, been accurate. But our calculations of prices did not fully anticipate the decrease in world inflation. This means that even with a correct forecast of domestic inflation we failed to anticipate the duration of the competitive advantage from the devaluation.

Net-foreign liabilities decreased in 1984/85 due to this favorable development, but still considerably exceed our estimates in the successful scenario. In 1985 net foreign liabilities still exceed 20 per cent of GDP.

The favorable development of the world financial scenario − from a Swedish viewpoint − has influenced the size of the budget deficits which has decreased from 13 per cent of GDP in 1982/83 to slightly over 5 per cent for the fiscal year 1986/87. We are here well below our forecasts from the "inflationary" scenario. Public debt is consistently deviating from the forecast of 120 % of GDP. Net public debt in 1985/86 represented some 40 per cent of GDP, while gross public debt

Table VI:2 The Swedish economy, 1982-87
Forecast and outcome

A. Balance of resources

	1982 Mill SEK	Average annual change in volume, %			
		Forecasted development, 1982→87			Forecast residual Scenario I 1986-87
		I The successful policy scenario	II The inflationary policy scenario	Outcome 1982→85	
GDP	627 678	2.0	1.5	2.7	0.9
Imports	205 157	3.6	3.0	4.1	2.8
Total resources	832 835	2.4	1.8	3.1	1.4
Exports	201 331	5.6	4.0	6.6	4.1
Investments	118 236	0.9	1.0	4.0	-3.6
private	43 210	3.4	1.0	9.1	-4.6
public	42 280	0.3	2.0	-0.7	1.8
residential	32 746	-2.8	-0.5	2.7	-10.5
Consumption	519 361	0.8	0.7	1.0	0.5
private	336 650	0.7	0.1	0.4	1.1
public	182 711	0.9	1.9	2.0	-0.7
Inventory changes*	-6 093	..	..	..	..
Total demand	832 835	2.4	1.8	3.1	1.4

* Incl. statistical discrepancy

B. Manpower (1 000 persons 1982 and changes to 1987)					
Labor force	4 357	58		67	-9
Employment	4 219	-24		80	-56
Unemployment (% of labor force end year)	137	83	163	-12	95
	3.2	5.0 (1987)	6.8 (1987)	2.8 (1985)	
C. Households					
Disposable income	335 610	0.9		0.5	1.5
Savings ratio	0.5	2.5		0.6	5.4
D. Manufacturing and mining					
Production		2.1		4.7	-1.7
Productivity		3.5		5.2	0.9
Investment		3.7		11.2	-6.6
Investment/Value added, %		13.3			
E. Prices, etc.					
Producer prices		8.5		8.4	8.7
Export prices		8.0		7.9	8.1
Import prices		7.6		7.0	8.5
Consumer prices		8.2		8.1	8.4
F. External balance (% of GDP)					
Trade balance		2.5 (1987)	2.1 (1987)	1.9 (1985)	
Current account (excl. interest payments)		2.5 (1987)		1.6 (1985)	
Interest payments, net		-1.9 (1987)	-3.9 (1987)	-2.7 (1985)	
Net foreign debt		-15.0 (1987)	-30.0 (1987)	-22.0 (1985)	

Table VI:2 (continues...)

G. Public sector 1987 (forecast)

	Bill SEK	% of GDP	% of GDP
Budget deficit	−150	−14	−7.1 (1985/86)
Deficit in consolidated public sector	−160	−15	−2.2 (1985/86)
Public debt	−1 300	−120	−70.5 (1985/86)
Interest on public debt	−155	−15	−7.7 (1985/86)

Sources: IUI and Ministry of Finance

was about 25 percentage points higher. However, the rates have been steadily increasing since 1975/76.

As a relatively small economy — with about 35 per cent of total output exported — Sweden is highly sensitive to fluctuations in the world markets for goods. In our global scenario for "Nordic 1984" we anticipated a decline in the real effective US dollar exchange rate, a fall in oil prices and a drop in the general inflation and in interest levels. All these assumptions came true, but in a stronger sense than expected.

New macroeconomic assumptions

Our experiences from the "Nordic 1984" forecasts provide a new point of departure relative to Swedish competitor economies making the following policy issues crucial for our projections for the Swedish economy 1985–90;

- Open unemployment will be steadily rising, partly because of the gradual curtailment of labor market programs that have so far concealed the extent of the unemployment situation. Figures will, however, not reach OECD European levels, in effect placing Sweden at the lower end of a European Phillips curve.

- Swedish inflation will be above the OECD average which, however, will be quite low by the standards of the 1970s. Thus, the price competitive advantage is continually being eroded. We see no political possibility to significantly change the parity of the Swedish krona again.

- The favorable relative unit labor cost situation in Sweden provides additional degrees of freedom for industrial expansion in a broader sense. This advantage will diminish but probably persist for the whole forecasting period. We will return to this issue in Section 3.

- A sustained improvement of the current external balance must be based on a continued reduction of the public sector deficit, primarily — we believe — through expenditure restraint.

- Frequent policy interventions — changing the rules of the game — have distorted the information content of market prices. Even if the cost of each single intervention might appear relatively low in comparison with short-run welfare

gains, these interventions taken together represent a major distortion of the market signalling system. During 1985–90 stable rules and careful interventions are required since they both heavily influence the allocation of resources in a way which might seriously affect long-term economic growth.

The prospects for solving remaining structural deficits seem good, since recent policy making in Sweden indicates that politicians are *aware* of the importance of keeping increases in hourly earnings low relative to major competitive economies and of reducing public sector expenditures. But the ability of the government to make the rules of the game explicit and stable in order to *convince* industrial decision-makers to invest in capacity for export-oriented production is still debated. And the outcome on this end evades prediction since it will necessarily involve a break with past Swedish policy traditions. Thus the way back to external as well as internal balance without generating new imbalances requires a policy that supports expansion of the private sector from the supply side and an increase in exports. In the following three sections we will discuss key elements of the industrial growth engine and its capacity to return the economy in the period 1985–90 to the old growth trends.

3. Is the Loss of World Market Shares a Matter of Corporate Disillusions?

What should we mean by competitiveness?

There is an economic debate about what is meant by and how to measure the competitive edge of firms and industries. At a comprehensive level the assessment of *the international competitiveness* of an industry or a nation, must be carried out by studying *the ability to sustain, over the longer term, a relatively higher growth rate in output than competing industries or nations* (Eliasson, 1972). The analysis of a deteriorating or improving competitive position hence, boils down to studying the factors behind differing growth rates. This approach also places relative rates of return in manufacturing and export industries in focus. Balance of payments and other imbalances are to be seen as *only* intermediate, short-term reflections of problems associated with internal domestic imbalances between supply and total demand.

Hence, the analysis of this section will be organized as follows. We start with the notion of competitiveness as the ability to sustain a rate of return that makes it possible for a firm or an industry to grow faster than competing firms or industries. We then study the development of various components of the rates of return to understand why Swedish market shares in world trade have not developed favorably despite a favorable unit labor cost development in international currency. This analysis takes us back to the rate of return outlook as the prime reason for the reluctance of firms to engage in volume expansion through investing in factory processing equipment.

Competition can be divided into two categories – price competition and competition using other variables associated with the quality of the products. The first kind of competition involves taking advantage of favorable exchange rates

and interest rates in the pricing policy of the firm. The pricing decision is based on the trade-off between gross margins and market shares, taking price elasticity into account. Price competition has a short-term character as opposed to competition based on other characteristics, notably related to R&D spending for product development and marketing efforts, mostly through foreign subsidiaries.[1]

Market shares decline

Before measuring the overall competitiveness of Swedish exports we are taking a look at Swedish market shares in the world trade since the beginning of the 1970s. The product mix and the mix of markets are two explanatory factors behind this development.[2]

Horwitz (1986) reports a systematic tendency to market share losses caused by these factors. Losses due to the market mix are most important. The choice of products heavily influences the result of calculations of a measure of competitiveness. For Swedish export only a small number of products (transport equipment, medical products and oil products) have increased their market shares in expanding markets.[3] A considerable part of machinery exports falls within the 20 per cent of the products in Swedish exports which have realized market share losses in markets with very weak expansion. Losses of market shares are primarily concentrated to important markets in other Nordic countries and in Great Britain.

From 1979 to 1984 Swedish exports suffered a 15.6 per cent loss of market shares in manufactured goods (excl. ships and aircrafts). Horwitz finds that the loss of "competitiveness" is only 5 per cent, while the product mix accounts for a loss of 3.4 per cent and the market mix for a loss of 7.2 per cent. The loss of market shares due to the loss of competitive edge according to Horwitz' constant-market-share analysis is worth noting since it has come true despite the fact that price increases in international currency have been lower in Sweden than in competitor economies. However, the negative trend might to a large extent be explained by supply restrictions and/or insufficient flexibility in chanelling resources to more expansive industrial areas.

A continuing decrease in relative prices of Swedish goods has been observed. Its magnitude, however, varies between statistical sources. A comparison of relative prices and the cost situation is needed to understand price competition.

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[1] See Eliasson (1986).

[2] These factors can be separated from the overall competitiveness by a constant-market-share technique. The result from an application of that technique is reported in Horwitz (1984). See also later updatings of the results in Horwitz (1986). Other factors to take into account are the impact from public sector expansion in crowding out industrial capacity and the profit squeeze in Swedish industry.

[3] These products together with paper exports contributed to about one third of total Swedish export value.

In doing so we distinguish between price-takers and price-setters. The price-takers are only concerned about the relationship between the world market price and domestic costs. A favorable change of the exchange rate will increase the gross margin in Swedish kronor. A decrease in market shares for a true price-taker will signal a decrease in competition – as in Horwitz' analysis – when effects of the product mix and the market mix have been taken into account. About half of Swedish export firms can be roughly classified as price-takers. The other half of Swedish export firms can be characterized as price-setters, which enjoy a monopoly position in their markets. For these firms we have to estimate the leeway for autonomous price setting and quantity adjustment. This essentially means estimating their export price elasticities. Price competition is not interesting if the elasticity is smaller than minus one. A study of price development in international currency in the form of a purchasing parity study will provide information about gross margin improvements for the price-setter and its price setting autonomy. The purchasing power parity study has to be carried out from the market side (product prices) as well as from the factor side (labor costs).

Purchasing power parity may help analyzing short-term competitiveness

Evaluating the short-term competitive position of a country can be done by the help of an index of purchasing power parity (PPP). The choice of price index is critical.[1] Relative unit labor cost indices are often used in studies comparing cost competitiveness. However, here differences among countries concerning pay-roll taxes etc. cause problems of comparison. The producer price index or the

Figure VI:5 Relative unit labor costs in Swedish manufacturing industry as compared to the OECD-countries, 1970–86

Index 1974=100

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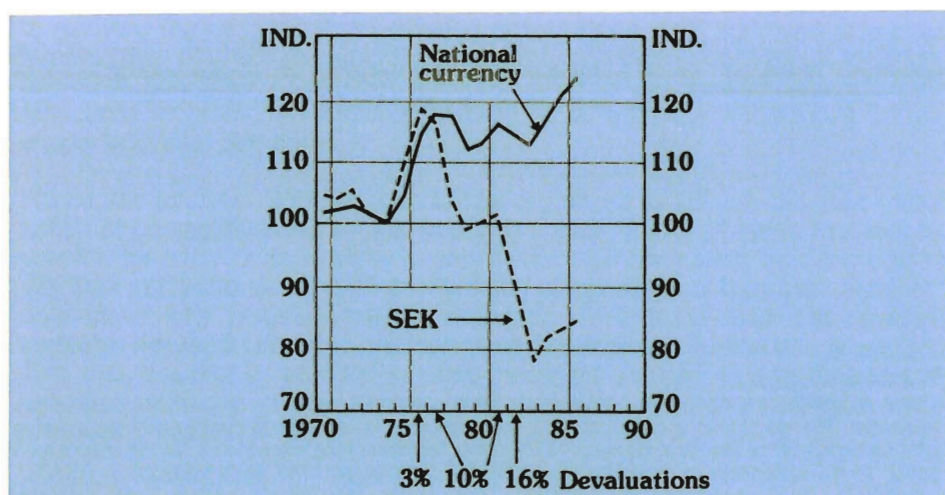
[1] See Oxelheim (1985), pp. 110–118, for a further discussion.

wholesale price index are other indices used in the PPP calculations for comparison of product market prices. To the extent that these PPP indices deviate from their long-term equilibrium we have a competitive advantage or disadvantage. However, as was previously stressed, the deviations alone carry no information about the basic competitive advantage based on the characteristics of the product.

The devaluations in 1981 and 1982 brought Swedish unit labor costs down to the extraordinary favorable level shown in Figure VI:5. This gave Swedish industry a significant advantage on the cost side. In 1984, unit labor costs increased again. However, at the end of 1986 there was still about 20 per cent left of the cost advantages created by the two devaluations in the early 1980s, before Sweden is back to the relative wage cost situation at the beginning of the 1970s.

Swedish hourly earnings and hourly labor costs − measured in a common currency − are currently in the middle of the OECD-range. Exchange rate adjustments account for most of our relative cost advantage. With the exception of a couple of years in the beginning of the 1980s, the annual percentage change in hourly earnings for Swedish industrial workers has been higher than the average for 14 major industrial nations. This pattern is reinforced by a new pattern in Swedish wage negotiations. Previously, the Employers' Confederation negotiated with one dominant labor organization. Today, at least three strong labor organizations watch each other and compete with one another for the "best" contract.

No market share increases from devaluation

The 1982 devaluation appears to have worked differently from the other Swedish devaluations after 1974. The last devaluation was intended to stimulate Swedish export industries to regain market shares through price competition, not primarily to improve corporate gross margins. However, the actual and temporary recovery of market shares in 1983/84 was not only an effect of the devaluations but can to a large extent be explained by reference to extraordinary factors − like for instance the strike in the Canadian paper and pulp industry.
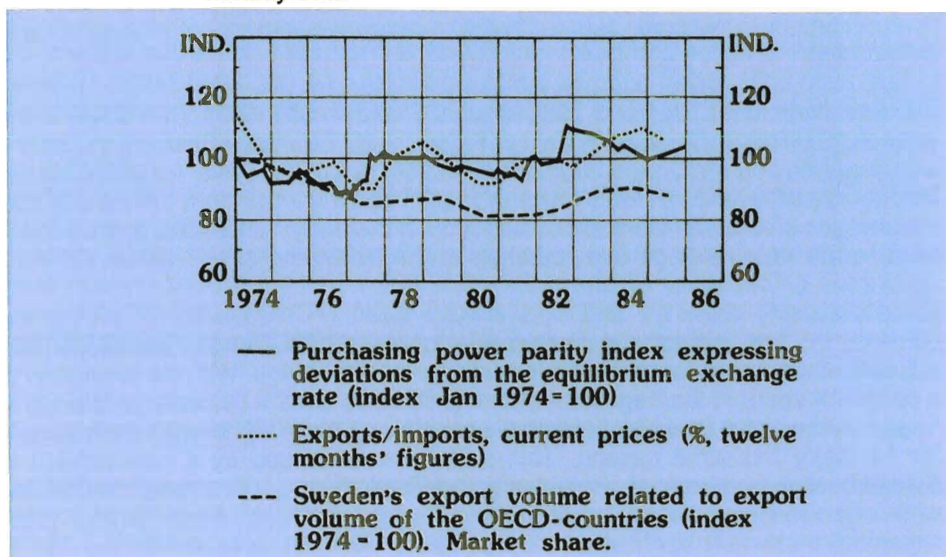
Despite the favorable unit labor cost situation Sweden lost world market shares in 1985. A great deal of the explanation is to be found in firm pricing policies. Companies that compete with prices were more concerned with consolidating their balance sheets and to raise their short-term profit margins than with lowering prices to increase volumes. The experience of the 1970s made them unwilling to take on more risk through expansion. As we will argue below, this was sound policy for producers in the price taking category.

The development of world market shares of Swedish producers and deviations from purchasing power parity measured by producer prices are shown in Figure VI:6. The figure suggests that the competitive advantage in pricing created by the devaluation has almost disappeared.[1] Despite an undervaluated Swedish krona Swedish manufacturing industry did not manage to regain market shares during 1984−85.

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[1] Another way of interpreting the figure is that the Swedish krona was still undervalued − with a few per cent − at the end of 1985.

Figure VI:6 Purchasing power parity index SEK/basket currencies, 1974–85

Monthly data

— Purchasing power parity index expressing deviations from the equilibrium exchange rate (index Jan 1974 = 100)

······ Exports/imports, current prices (%, twelve months' figures)

--- Sweden's export volume related to export volume of the OECD-countries (index 1974 - 100). Market share.

Source: Oxelheim (1985), pp. 123

Estimates of the Swedish National Institute of Economic Research suggest that 90 per cent of market shares gains should materialize within two years of a devaluation. This time the gains in market shares seem small as compared to the size of the devaluation. Correcting for increases in the price of imported goods a potential decrease in the relative export price of Swedish manufacturing of 18 per cent is obtained. The actual decrease in relative price was only 9 per cent from the second part of 1981 to 1984. The difference is to a large extent explained by increased costs of investment goods — in excess of what is caused by the devaluations and/or increased corporate profits. Thus, from a theoretical point of view the outcome in terms of market shares is almost equal to the estimates based on the actual decrease in relative prices.

No more investments from higher profits?

Supply restrictions like limited capacity and bottlenecks may have prevented a rapid expansion of shipments in response to improved profit margins. If firms realistically regarded the potential profit gains from the devaluations as temporary, they should *not* expand production and/or divert supplies from domestic to foreign markets.

For the same reason long-term realistic expectations about developments of demand, costs and prices do not suggest that firms should engage in significant increases in investment. This conclusion is reinforced by the relation between

expected rates of return and interest rates shown in Figure VI:8. The bulk of Swedish industry is not profitable enough to go for long-term capacity expansion. Hence, even though manufacturing firms currently are financially prepared to invest and expand capacity, the profitability outlook and uncertainties associated with future costs and prices make suggest that they wait and see.

New forms of capital

The analysis so far may give an exaggerated negative impression of the difficulties of Swedish manufacturing industries. As we observed in a recent IUI study (Eliasson et al., 1985), commercial and technological know-how in major Swedish export firms is clearly ahead of or equal to that of world competitors. Another recent IUI study (Pousette and Lindberg, 1986) shows that the large export firms have reoriented their capacity expansion toward product quality improvement rather than volume expansion. Most of this "expansion" has taken place through large investments in R&D and in global market and distribution networks. Marketing investments explain the bulk of Swedish foreign investments. The output effects of such "soft" investments tend to be underestimated in statistics, or are not picked up at all.

4. The Imbalances and their Influence on Asset Market Prices and Investments

Swedish economic growth for the next five years must be based on rapid private sector growth, notably in manufacturing. In addition this expansion is needed to restore macroeconomic balances. However, growth in output requires an improved *allocation of capital*. In the previous section we observed that firms had been reluctant to invest for volume expansion. The question of this section is whether volume expansion will eventually get started, after a period of consolidation, or take on different forms not easily measured by traditional statistics. We begin by analyzing imperfections in the capital market pricing mechanisms, that may hold back expansion through traditional investments. We then take a broader view of "capital", including also human resources which will be dealt with in the next section.

Private sector growth involves a multitude of investment decisions. Regardless of whether it is a replacement or a new project, hard or soft investment, the decision is based on an assessment of net present value, with a discount rate adjusted for risk. In this context unexpected increases in hourly earnings for industrial workers can be seen as one important kind of risk (business risk). Another kind of risk to consider is associated with economic-political interventions – like risk for increased payroll taxes on the labor market side and changes of parity of the krona on the financial market side. These are political risk components.

Capital market imperfections caused by policy

Another question concerns the information value of market prices and how market imperfections, created by the government, influence the investment decision. Uncertainty about the rules of the game makes it harder to evaluate price signals, thereby increasing the required risk premium on investments. Furthermore, market regulations distort the information content of price signals. If the Riksbank defends the "wrong" parity level of the Swedish krona it will contribute to structural changes in the wrong directions through production and investment decisions in firms, similar to the effects of subsidies.

The size of the persistent fiscal deficit and the corresponding increase in foreign public as well as total debt have pushed the Swedish nominal interest level significantly above the average level in OECD-countries as shown in Figure VI:7. Market interventions and a propensity to change the rules of the game seem to have created political risks priced at a high premium (Oxelheim, 1986).

Returns to risks may be too small

Even real interest rates have been pushed up to extraordinarily high levels above OECD-rates. Figure VI:8 shows the gap between real rates of return in industry and the real interest rate. A new pattern emerged from the mid 1970s. The real rate of returns is approaching the average level for 1950—70. Thus, the consolidation following the devaluations has improved the position of the industry for a new investment boom. But, on the other hand, the real rate of interest is still higher, making industrial investments less attractive.

Figure VI:7 Nominal return on industrial bonds in OECD and in Sweden, 1974—85

Per cent per annum, end of month observations
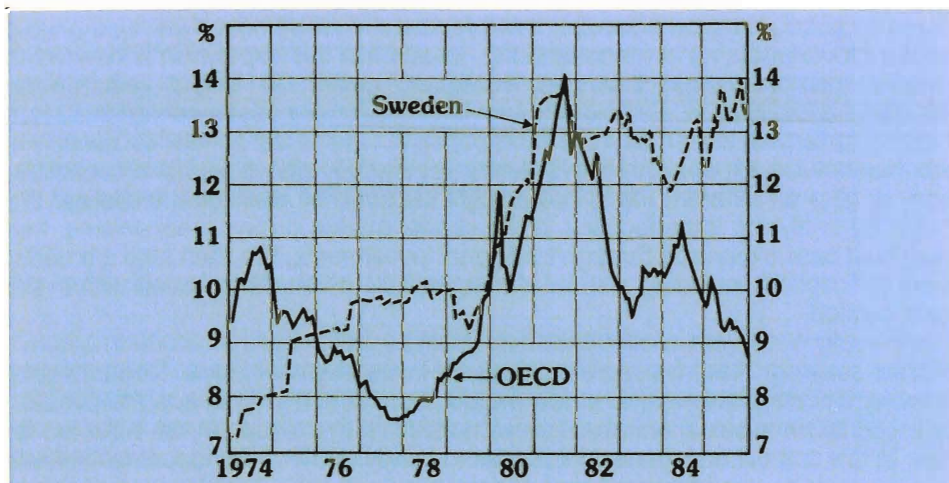
Note: The average return is based on returns in the US, the United Kingdom, Germany, Switzerland, Netherlands and Japan. OECD capital market weights have been used.
Source: Oxelheim (1986)

Figure VI:8 Real rate of return in Swedish manufacturing (RMT) and the Swedish real interest rate (IYR), 1951−85
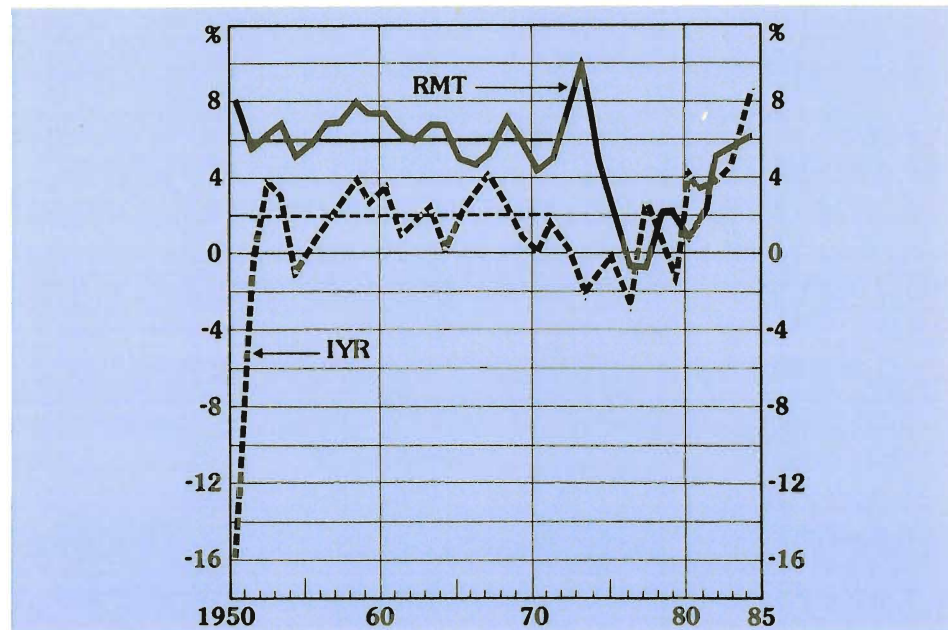

Note: Real rate of return (RMT) on real assets (machinery, buildings and inventories) in the manufacturing industry 1951−85 and real rate of interest (IYR) on long term industrial bonds.
Source: Södersten (1986)

The historically high real interest rates shown in Figure VI:8 indicate a long-term problem. The high real interest rate is partly a global phenomenon (see Chapter II) and partly associated with the large Swedish foreign and public debt, which forces the Central Bank − in the absence of sufficient fiscal restraint − to keep the real interest rate above that in world financial markets. As previously mentioned, the earlier explosive increase in public debt might now be broken, making it possible, eventually, to lower the real interest rate.

The yield, i.e. the gap between the anticipated rate of return and the interest level, must cover the risk premium for real investments. As is shown in Figure VI:8 there has been a secular decline in the relative attractiveness of real versus financial investments in Sweden. Since the mid 1970s the gap between the actual rate of return and the interest level has been very small and irregular. The disorderly situation in many markets generated by macro imbalances rather suggests that an even greater premium is needed. The lack of such a premium covering uncertainty about wage trends and the future course of economic policy, particularly taxation of capital gains, contributes to the cautious attitude towards real investments among firms.

Figure VI:9 Industrial investments, capital stock and production, 1963–86
Million SEK, 1980 prices
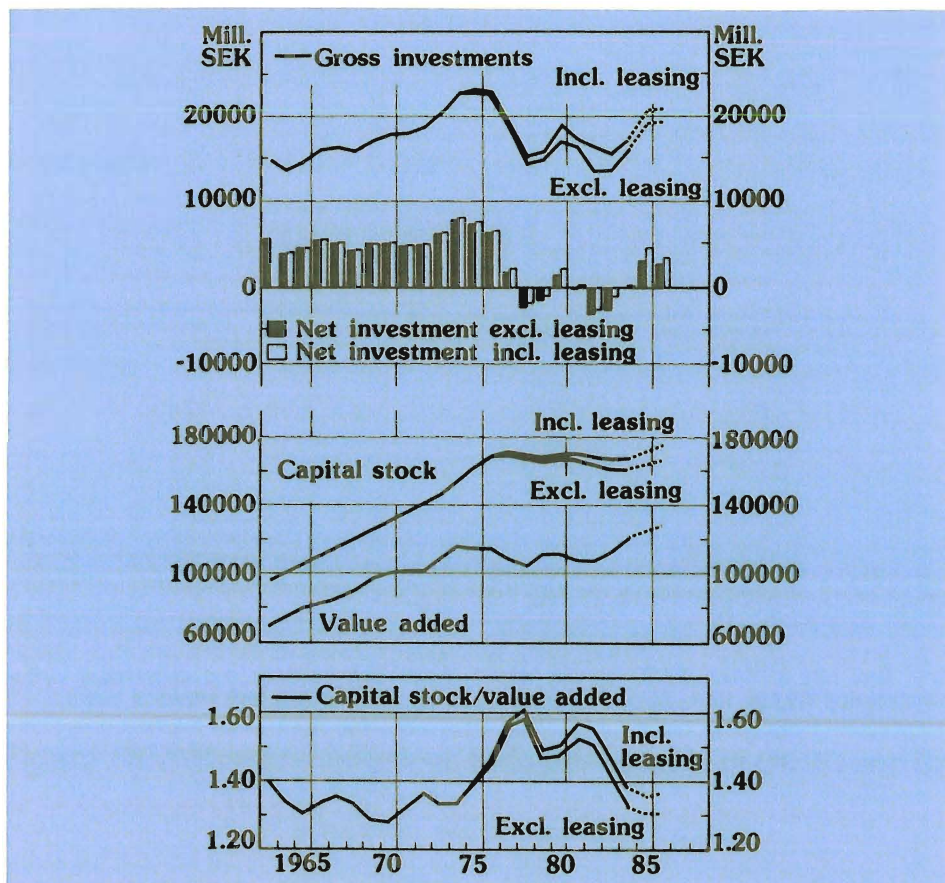
Note: Real capital stock is calculated under the assumption of 20 years of linear depreciation.
Source: Swedish National Institute of Economic Research (1985)

After all, an increase in investments

Despite the extremely high real rate of interest and the small gap between real rates of return and real interest rates the period 1983–85 shows (see Figure VI:9) an increase in net industrial investments. The figure also highlights the growing importance of leasing as an alternative to conventional investments.

In 1984–85 net investments including leasing within basic industries became positive for the first time during the 1980s. From a restructuring point of view the large increase in investment in basic industries is rather a source of worry. To a not insignificant degree it is explained by the "locking in effect" of corporate taxation.

Soft investments critical for growth

We know that new forms of capital are partly replacing investments in machinery and buildings as the profitable core of the capital base. However, complementary hardware investments are needed to restore volume expansion. The soft investments in R&D and marketing are needed to make volume expansion profitable.

As pointed out in the recent IUI long-term survey (Eliasson et al., 1985), soft investments are not easily financed through traditional capital market channels. More and easily available risk finance in equity markets is needed. And the equity markets in Sweden are still notoriously underdeveloped as they are in the other Nordic countries (see Special Study 2). Investment in new products demands increasing resources, while the product life-cycle grows shorter. This increases total risk exposure for firms. Thus, while the efficient allocation of capital continues to be the key to industrial expansion, we also have to conclude that important financial intermediation mechanisms needed for such efficient allocation are lacking because the financing system is still tied down by unnecessary regulation, and distorted through taxes in particular. (Compare with Chapter I).

5. Growth and Allocation of Human Resources

The allocation of human resources has been characterized by frequent bottlenecks throughout the crisis years of the 1970s. This situation worsened during the 1980s. The policy conclusion of several studies was that such bottlenecks, especially referring to technicians, had to be removed to facilitate industrial expansion.[1] The growth and transfer of knowledge through human capital are closely linked to the allocation of capital investments.

Full employment is still a prime Swedish policy target. A common view has been that some amount of inflation has to be allowed to reach the full employment target. However, the "new" experience of the 1970s has resulted in an awareness in the political system of the 1980s that the simple Phillips curve trade-off does not hold. As a consequence, some "holy" targets related to the income distribution and public sector ambitions are gradually given up in the name of restored growth. The so-called solidaric wage policy is one such traditional policy objective. A policy change based on the need to attain a high degree of flexibility in wage setting and labor market mobility is currently voiced from all political quarters. (See also Special Study 3).

The medium-term survey by the Ministry of Finance — which is "approved" by the Parliament as a guideline for economic policy — states the full employment target to be reached at the end of the decade as a level of frictional unemployment of some 2 per cent of the labor force. The Survey — like the Budget 1986/87 — emphasizes that new jobs be created in the private sector in order to fulfill this target.

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[1] According to figures from the Swedish National Institute of Economic Research the vacancies for white-collar workers (technical) in Swedish industry have increased significantly during all years of the 1980s. See also Deiaco (1986).

Public sector growth has to be reversed

As a consequence policymakers in principle have realized the importance of reversing the expansion of the public sector. This change in attitude is important since all employment growth over the past decade has been in the public sector. During the 1970s the public sector expanded by more than half a million jobs, while the private goods and energy production sectors lost almost a quarter of a million jobs. Another 125 thousand jobs in the private sector disappeared 1980−83, while the public sector created 65 thousand new jobs. For the whole period 1970−83 the average annual increase in the number of new jobs in the public sector has been 5.7 per cent. In the private manufacturing sector the average annual percentage decrease has been 1.5. However, transforming this new attitude into policy is not that easy. Some slow-down in public sector growth has been achieved. And it is *important to observe that the projection in the next section is based on the assumption that policymakers will gradually succeed in realizing* some of the public sector and taxation constraint that are now understood to be necessary for a return to a steady growth path. The balance between the public and the private sectors has in fact improved slightly by the 100 thousand new jobs created in the private service sector during the period. And the simulation analysis based on the IUI micro-to-macro model demonstrates that acceptable employment levels can be achieved as easily through private sector growth as through public sector growth and with smaller long-term distortions in the price system of the economy.[1]

The capacity of the labor market to smoothly reallocate labor from declining to expanding firms − without generating inflation or higher unemployment − will determine not only the rate of economic growth, but also the severity of the social problems of this adjustment. The reallocation problem[2] to a large extent is a matter of incentives of individuals. The recent long-term survey of IUI[3] lists the following bottlenecks or deficiencies in the labor market allocation process;

- The structural change of Swedish industry will place the burden of adjustment primarily on the middle-aged and older work force. The younger labor force is mobile and well prepared for the new job openings. For other groups early retirement and part time work are measures frequently used. These instruments are usually viewed by the unemployed as desirable.

- The structural change during the last two decades from basic industries to knowledge intensive industries has shifted the demand for labor. The IUI individual firm survey (Pousette, 1985, and Deiaco, 1986) indicates that the development towards a demand for labor with higher education is likely to continue.

- Labor market public training programs have been used frequently in Sweden. But it is hard to find evidence which justifies the extent of training (Björklund and Moffit, 1986). The welfare benefits associated with marginal expansion appear

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[1] For further details about the simulation analysis see Appendix to this chapter and Eliasson, Hanson and Oxelheim (1986).
[2] The propensity to change job has in Sweden dramatically decreased. According to Holmlund (1984) the number of persons with at least one change of employer in per cent of the number of persons with some employment experience has fallen from 13 per cent 1966 to 8 per cent 1982.
[3] Eliasson et al. (1985).

to be negative. And participation in such programs may even "label" the trainee as less fit for qualified jobs with the prospective employers. Such "stigma effects" will be disastrous in a labor market where the supply of simple manual jobs is draining up. And the labor market authorities become responsible for creating them through overly ambitious and expansive programs, involving people that do not need help to solve their problems.

− Labor market policies should be focused on the relatively small number of people who experience *serious* job market problems.

Solidaric wage policies may have to be relaxed

Many policy proposals have been advocated to improve the reallocation of labor needed for desired growth. The most radical proposal by Swedish standards may be that solidaric wage policies pushed by unions may have to be given up, or modified. A group of economists[1] in 1985 suggested the introduction of a fee-based rather than tax-based unemployment insurance system. Such a system could lead to higher mobility of labor, if labor in a fee system would prefer reduced unemployment benefits and larger wage dispersion.

An increase in both before and after-tax wage differentials − giving up solidaric wage policy ambitions completely − is an alternative way of creating a higher labor market flexibility. A number of studies[2] demonstrate that the decision to move and/or change jobs is sensitive to these differentials. And firms clearly respond to wage costs including taxes. Thus the need for an income tax reform is necessary for increased flexibility.

The negative growth effects of rigid wage structures are highlighted by experiments on the micro-to-macro model of the institute (see Eliasson and Lindberg, 1986). Since the IUI long-term survey[3] we have experienced difficulties of generating − in the model − long-term stable macroeconomic growth through traditional policies. Not even the large 1982 devaluation could be made to generate a strong expansion in the profitable end of the firm distribution (see Figure VI:10).

The most profitable firms may be growing faster than other firms, but this is not a strong tendency and profitable firms do not generally generate fast growth in their own employment. On the whole, the correlation between rates of return and output growth on the one hand and employment growth and wage increases on the other appears to be rather weak. While this may have helped to contain the rapid wage increase normally associated with devaluations it also suggests the reason for the absence of a significant growth response in output. A strong reorientation of labor

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[1] Calmfors et al. (1985).
[2] For a recent survey, see for instance Björklund (1986).
[3] Eliasson et al. (1985), Chapter VI.

Figure VI:10 Productivity and wage distributions 1982 and 1985 and simulated distributions 1985

Million SEK per employee
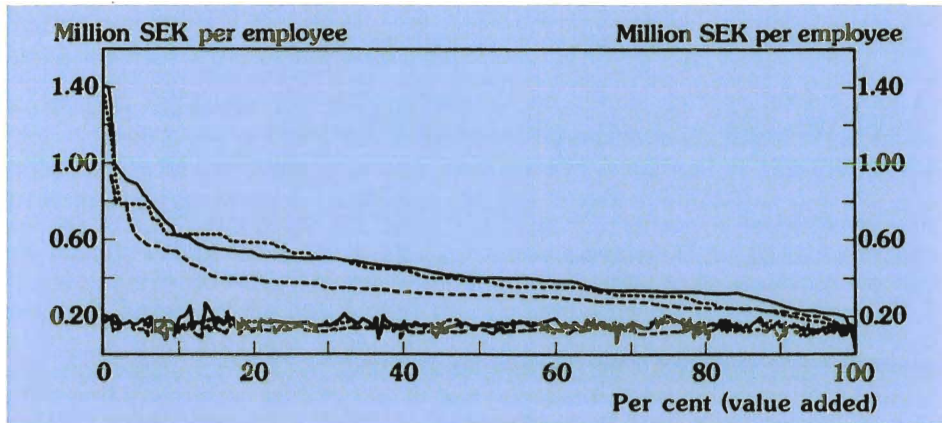
Note: The upper curves show distributions of value productivities, ranked in decreasing order over firms and weighted by value added. The lower curves show matching relative wage cost distributions.

The simulation began on the 1982 initial database (- - -). The outcome of the simulation (. . .) can be compared with the real 1985 state from the database (——).
Source: Eliasson and Lindberg (1986)

flows towards growing, high rate of return industries should have generated a temporary leftward-upward tilting of the wage distribution in Figure VI:10. Neither reality nor model simulations exhibit any of this. This is probably best explained by a rigid relative wage structure dependent on the earlier wage structure in Swedish industry, with much higher wages in basic industries and shipyards than in other industries. Not even the crisis years of the 1970s and the virtual – at last – closing down of the Swedish shipyards industry have been sufficient to break the rigid relative wage structure. The conjecture is clear; the rigid wage structure makes employment expansion in other – lower wage industries – expensive. Rather than accepting wage drift and being forced to raise the wage level of the entire organization to recruit labor, firms – willing to expand volume production – opt for slower growth in output and little change in employment. The only question is how much factor price distortions like this have retarded overall growth in manufacturing output during the last decade. It should be noted that the projection in the next section assumes – optimistically – that this rigid wage structure will gradually loosen up through this decade, and allow a gradual return to a slow and steady, but faster, expansion path.

Wage rigidities and inflation

The degree of flexibility in wage formation also affects inflation. We argued above that future developments in Swedish economic performance will be determined in a large part by the extent to which the *need* for low wage increases is matched by the *labor market's ability* to reallocate labor at reasonable low average wage increases. Schager (1985) indicates that the rate of wage increases is determined by the employer's ability to recruit labor quickly. According to Schager the current

Figure VI:11 Duration of vacancies (weeks) and open unemployment in per cent, 1964–84
Manufacturing occupations
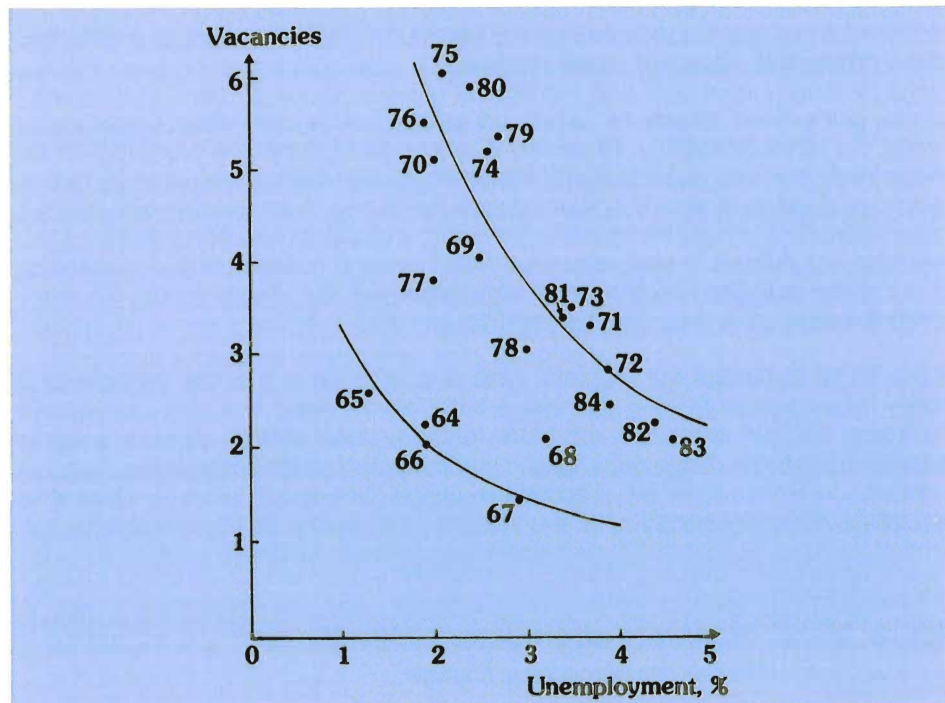
Source: Schager (1985)

"price" for a favorable recruitment environment is a level of open unemployment among industrial workers that is far higher than that needed in the 1960s at current wage dispersion. Figure VI:11 highlights the relation between the rate of open unemployment and the duration of vacancies in weeks. In the 1960s a vacancy could be filled within two weeks when the rate of unemployment was around 2 per cent. In the 1980s an unemployment rate of 4–5 per cent is needed in order to fill a vacancy within the same time. As is shown in Figure VI:11 the curve shifted sharply outward in the late 1960s. The shift reflects changes in attitudes as well as the cumulative effects of labor market and industrial policies. Thus, the low wage increases that are essential for Swedish competitiveness are achieved today through higher rates of unemployment. And this inflation-unemployment prone price structure of the economy has paradoxically been achieved by policies intended to secure full employment.

This closes the circle. The facts that the most profitable firms are not paying the highest wages and that all firms because of this have not been able to recruit people at the wages they are willing to pay have kept them from expanding employment at all.

Hence, unemployment has increased, and average wages have not expanded as much as the devaluation would suggest. The idea of the Phillips curve seems valid again.

6. Classical Wealth Effects Threaten Growth Prospects

While both gross and net (after tax) income distributions have become increasingly compressed during the last couple of decades, the last decade has witnessed an increasing skewness in the wealth distribution created by a disturbed price system and disorderly asset markets.[1]

Capital gains have largely remained unrealized, since they have accumulated among the already wealthy. However, it seems as high income earners with tax determined low net incomes are increasingly liquidating their capital gains, through realization of assets and/or through borrowing. A classical wealth effect is thus turning high (gross) income earners into net dissavers. The effects of this dissaving are difficult to evaluate. One would expect, however, that the resulting consumption is in the luxury range and predominantly affects import. To some extent the dissaving may also be used to pay wealth taxes.

Figure VI:12 illustrates the problem. One should observe that the trendbreak in money supply in late 1985 coincides with the relaxation of the quantitative restriction for the expansion of bank lending. Axell (1985) reports a close relationship between lagged changes in money supply and inflation in the Swedish economy. In Figure VI:12 we discuss the actual differences between alternative measures of money supply.

Figure VI:12 Monetary aggregate, 1976–86
12 months percentage change
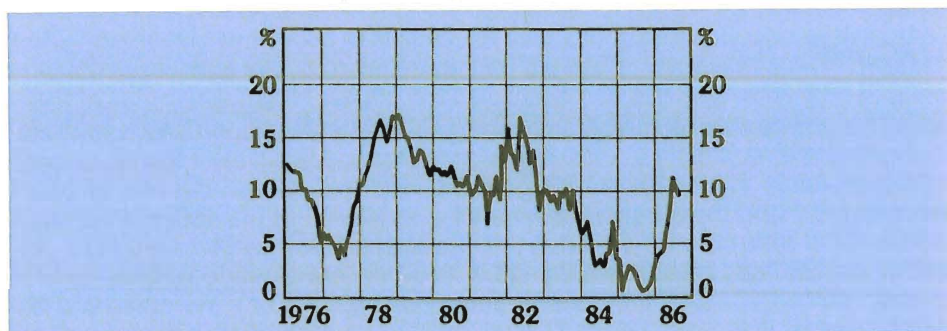
Note: The measure in the figure covers the public's deposits in banks, bank certificates bought at the time of emission, notes and coins.

Due to the open market operations applied by the Swedish Central Bank since mid 1982 the choice of measure to indicate money expansion is crucial. The Swedish Central Bank publishes regularly three different measures which differ drastically. Looking at the ordinary M3 measure, as in the figure, the 12 month change in per cent in November 1985 was −0.5. Then, it has been gradually increasing to 12.2 in September 1986. On the other hand, if we look at the broader M3 measure published by the Central Bank − including tax subsidized saving (allemanssparande) and treasury bills − we will find quite another development indicating a more stable growth in money supply amounting around 6−7 per cent. The third measure presented, covering M3 and tax subsidized saving (allemanssparande), also shows a dramatical increase from a rate of change of 1.9 per cent in September 1985 to 15.7 per cent in September 1986.
Source: Central Bank of Sweden

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[1] See Eliasson et al. (1985), especially Chapter VII and Special Study No. VI.

Deregulation of the Swedish financial system has been gradually enforced through the increased international integration of the Swedish economy, and is for all practical circumstances irreversible. Hence, the only policy option to contain the transformation of accumulated wealth into consumption and import is to support – to the extent it is possible – a domestic interest rate above the international rate and also to pursue restrictive domestic demand policies in support of a strong currency and a low inflation rate. This policy, which has been advocated by the Central Bank may, however, contain investment and hold back growth in output and employment in mature industries.

A critical problem in achieving macro economic balance remains in the permanent wedge inserted in the tax system between the real rate of interest the investor has to pay when borrowing to grow and the rate of interest after tax that the private saver receives. The first is high and positive, the second is still negative for large groups of private savers. As long as this wedge remains a deflationary gap will be maintained in the economy, and the only way to remove it is to depart from the distributional ambitions associated with tax policy.[1]

The conclusion of the above analysis, however, is that prudent long-term policy is to opt for relatively slow economic growth and a gradual but minor increase in open unemployment to achieve the optimistic scenario for the next five years embodied in the projected numbers of the following section. This scenario is critically dependent on an assumed fiscal restraint on the part of public authorities.

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[1] See Eliasson et al. (1985), Special Study VI.

7. The Swedish Economy 1985–90 – A Policy Projection

Sweden has accumulated large foreign and public sector debts during the crisis years of the 1970s. A reduction in the debt and the problems generated by the debt service, can only be achieved through growth in the private sector, notably through exports. The conditions for accomplishing this in the long run are basically good. From a technological point of view the competitive edge of Swedish export industries is good by international standards. We have identified the growth problem as predominantly a problem of domestic relative prices. That prices are still out of line is witnessed by recent observations that export industries are not able to keep up with foreign competitors in rapidly expanding international markets.

The international market scenario in Chapter II assumes slowly rising oil prices, an unchanged real value of the U.S. dollar and declining real interest rates. Our projections furthermore assume a contractive fiscal policy in Sweden that keeps private and public consumption down in order to raise savings, investments and exports. A moderately restrictive monetary policy is assumed and interest rate policies may affect domestic investment negatively. Increased investments will nevertheless mean that inflationary tendencies from monetary expansion will be balanced by growth of production. Inflation will continue to run ahead of the OECD average.

Thus, we implicitly assume that only a small portion of the "oil price gains" will be transformed into private and public consumption. If this cannot be achieved increased inflation poses a threat both to Swedish economic growth and the relatively optimistic growth scenario we have opted for.

Table VI:3 The Swedish economy, 1970–90
1980 prices
A. Balance of resources

	1985 Mill.SEK	Average annual change in volume, per cent			
		1970→75	1975→80	1980→85	1985→90
GDP	572 183	2.6	1.3	1.7	2.0
Imports	182 188	2.7	2.1	1.8	3.8
Total resources	754 371	2.6	1.5	1.8	2.4
Exports	200 223	3.8	3.8	5.1	4.0
Investments	111 553	1.2	−0.1	1.0	2.2
private	46 665	4.6	−2.3	3.5	3.7
public	34 733	−0.8	2.2	−1.5	1.5
residential	30 155	−2.5	0.3	0.7	0.5
Consumption	442 498	2.6	1.7	0.9	1.6
private	277 476	2.5	2.5	0.4	2.0
public	165 022	3.0	3.4	1.7	1.0
Inventory changes[a]	97				
Total demand	754 371	2.6	1.5	1.8	2.4

[a] Incl. statistical discrepancy

Table VI:3 (continued)

	1985 Mill.SEK	Average annual change, per cent			
		1970→75	1975→80	1980→85	1985→90
B. Households					
Disposable income	277 086	2.6	0.8	−0.5	2.1
Savings ratio, %	−0.1	4.0[a]	3.8[a]	1.2[a]	0.3 (1990)
C. Manufacturing and mining					
Production	124 852	2.7	−0.4	1.9	3.0
Productivity[b]		4.4	2.4	3.7	2.5
Investments	18 904	5.2	−4.2	0.8	5.0
Investments/Value added, %	15.7	16.6[a]	15.7[a]	14.1[a]	16.7[c] (1990)
D. Prices, etc.					
Producer prices		9.9	9.4	9.4	4.1
Export prices		11.0	8.2	8.9	3.9
Import prices		12.0	12.4	9.3	4.0
Consumer prices		8.0	10.5	9.0	4.4
E. External balance (% of GDP)					
Trade balance	1.9	0.7[a]	−0.9[a]	1.1[a]	2.9 (1990)
Current account (excl. interest payments)	1.6	0.6[a]	−1.7[a]	0.9[a]	1.9 (1990)
Interest payments, net	−2.7	0.1[a]	−0.4[a]	−2.5[a]	−1.7 (1990)
Net foreign liabilities[d]	−22.0	4.8[a]	−3.4[a]	−21.4[a]	−19.5 (1990)

[a] Arithmetic mean (5 years)
[b] Value added/employment
[c] At 1980 prices
[d] Comparable to net foreign liabilities in Figure VI:2, but with opposite sign

Source: National Accounts Statistics, IUI estimates

Our growth scenario is presented in Tables VI:3–VI:6. Table VI:3 shows a GDP forecast considerably below average GDP growth in the OECD. The faster increases in costs and prices assumed for the Swedish economy means that competitiveness is being continually eroded. The major demand source of growth is exports. However, Swedish export growth (4 %) is less than the assumed growth in world trade (5 %). Both export and import estimates are based on the assumption that Swedish export prices and domestic producer prices increase about 1 per cent faster per year than the foreign corresponding prices. We believe private consumption to be above our estimated annual average during the first half of the forecasting period and below during the second part of the period. The average annual increase in private consumption (2 %) explains partly the relatively high import growth projected.

GDP and export growth estimates correspond to an increase in manufacturing production of 3 per cent, which is a high growth figure compared to the development during the last 15 years. Swedish inflation (CPI) is predicted at 4.4

Table VI:4 Gross domestic product by sectors, 1970–90
1980 prices

	1985 Mill.SEK	1985 Per cent shares at 1980 prices	Average annual change in volume, per cent			
			1970→75	1975→80	1980→85	1985→90
Manufacturing and mining	124 852	21.8	2.7	−0.4	1.9	3.0
Agriculture, forestry	18 858	3.3	−0.3	−0.4	2.3	1.5
Construction	40 930	7.2	0.4	1.3	1.1	1.0
All private services	181 507	31.7	3.5	1.7	1.3	2.0
Production in public sectors	126 216	22.1	3.8	3.4	1.7	1.0
Commodity taxes and subsidies, stat. discrepancy						
Electricity, gas	79 820	13.9				2.5
GDP	572 183	100.0	2.6	1.3	1.7	2.0

Sources: National Accounts Statistics, IUI estimates

Table VI:5 Balance of manpower resources, 1970–90
1 000 pers.

	1970	1980	1985	Changes, per cent per annum			
				1970→75	1975→80	1980→85	1985→90
Population	8 081	8 318	8 358	0.3	0.3	0.1	0.2
Population of working age (16–74 years)	5 864	6 040	6 118	0.2	0.4	0.3	0.2
Labor force	3 913	4 318	4 424	1.1	0.9	0.5	0.5
Employment							
Manufacturing	1 055	981	908	−0.1	−1.3	−1.5	0.5
Private services	1 328	1 390	1 444	0.8	0.2	0.8	0.5
Public sector	806	1 300	1 411	5.3	4.5	1.7	1.0
Other[a]	665	561	536	−2.4	−1.0	−0.9	−0.8
Total employment	3 854	4 232	4 299	1.1	0.8	0.3	0.5
Unemployment[b]	59	86	125	2.6	5.1	7.8	1.2
Employed in labor market programs	71	124	178	5.8	5.7	7.5	−3.4
Labor force participation rate, %	66.7	71.5	72.3				

[a] Difference
[b] The rate of unemployment is expected to increase from 2.8 per cent 1985 to 2.9 per cent 1990

Sources: AKU, IUI estimates

per cent compared to an assumed OECD average of 3.5 per cent. Manufacturing investments are assumed to grow at an optimistic annual rate of 5 per cent. We believe investment decisions to be stimulated by a gradually decreasing Swedish real rate of interest.

Table VI:6 Public sector, 1960–90
Per cent of GDP at market prices

	1960	1970	1980	1985	1990
1 Direct taxes	14.9	20.3	21.7	21.7	22.0
2 Social security contribution	3.6	7.6	14.2	12.6	13.2
3 Indirect taxes	10.0	12.6	13.6	16.3	16.2
4 Total taxes	28.5	40.5	49.5	50.6	51.4
5 Transfers to households	7.9	11.3	18.6	19.2	19.0
6 Interest payments	1.7	1.9	4.1	8.5	5.5
7 Total transfers to private sector	11.4	15.9	29.3	34.3	29.6
8 Public consumption	15.4	21.4	28.8	27.7	27.9
9 Public investment	4.4	6.2	4.2	3.1	3.1
10 Public spending	31.0	43.9	62.3	65.1	60.6

Sources: National Accounts Statistics, IUI estimates

Our scenario is based on an expected increase in hourly earnings of 6.5 per cent per annum. The yearly increases in productivity are assumed to be 2.5 per cent in industry and 3.0 per cent in agriculture and forestry. Lower increases in productivity or 1.5 per cent are expected in construction and private services.

The estimated changes in inflation and hourly earnings provide a rise in real disposable income, together allowing both an increase in private consumption and a slight improvement of the saving ratio from −0.1 per cent 1985 to 0.3 per cent 1990. Our projection assumes an almost unchanged tax ratio in per cent of GDP.

Our price scenario is built on the assumption of unchanged profitability of manufacturing industries during 1985–90 as compared to 1985.

Transfers to household − including interest rates and subsidies − will be unchanged as per cent of GDP, while subsidies to corporations will substantially decrease during the forecasting period.

In conclusion we can see current account improvements but with internal imbalances prevailing in the Swedish economy throughout the forecasting period. Our scenario will reduce the fiscal deficit to about 15–20 billion SEK at the end of this decade. But the deficit is still high and all market distortions due to an extremely high tax pressure are still there.

Appendix

Note on Policy Simulation

The IUI micro-to-macro (M-M) model has been used for policy simulation and consistency testing[1] of the projections through 1990. The tests predominantly concerned consistency between relative prices, rates of return and output growth rates on the one hand and assumptions related to the interest rate, foreign prices and technical specifications of new, best practice investments, on the other. The idea was to clarify which mechanisms and policies that would be capable of generating the growth scenario presented in the chapter. The traditional Keynesian, national accounts consistency is treated in the model as an identity. However, given a different model there will of course be a different set of consistent values for the variables. The key problem in the M-M model is to get prices right and the policy problem is what sort of relative price developments that is compatible with the growth projections we have settled for.

To understand the experiments that we have used to support[2] our policy discussion the following three mechanisms, simultaneously at work in our model, should be kept in mind

1) Firms under competitive pressure in foreign or domestic markets respond in the short term through minimizing slack thereby pushing activity levels closer to "maximum possible" levels, and increasing productivity.

2) Relative price changes partly change the relative development in factor and product prices, partly tilt profit margins more in favor of export deliveries.

3) Relative price changes – even small ones – at the right time can trigger a Keynesian investment accelerator demand multiplier wave of increased economic activity.

With sufficient resources available for this accelerator-multiplier mechanism to be non-inflationary and work in favor of an export boom initially lower wages can generate much higher output and faster growth in real wages within a relatively brief period. This is exactly what happens in some of the experiments. The slack, necessary for the favorable price development is generated through a temporary tax on domestic consumption. Of course this is exactly the effect desired from a devaluation, as long as income earners do not recover their lost income through higher wage demands.

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[1] A technical presentation of the tests has been written by Gunnar Eliasson, Ken Hanson and Lars Oxelheim, IUI memo, dated Dec. 22 1986.
[2] To be explained in detail in Eliasson, Hansson and Oxelheim (1986).

The projection opted for in the scenario represents a balance on a knife edge. *First* of all, extreme, and for the Swedish welfare state unusual fiscal constraint has been assumed. *Second*, income earners are assumed not to seek compensation in the form of higher wages. *Third*, a modest rise in unemployment has to be temporarily − at least − allowed. These assumptions are decisive in forcing the slight tilting of relative factor and product prices, needed in the scenario assumed in Chapter II to spin off a slow motion accelerator multiplier development over the next five years. Low inflation in foreign markets and the assumed fixed exchange rate makes it impossible to achieve relative wage adjustment through inflation. With downward flexibility in nominal wages this would of course have been easier to achieve. We do not think this is possible. In addition, the micro-macro model included no easy way of reorganizing the labor market to achieve this possibility. Lowering or raising the interest rate has only marginal effects on output growth during the 5 year period considered.

Our simulation analyses furthermore emphazise some critical policy implications for Swedish growth. *First*, making it difficult to recruit labor for expanding firms has significant, negative effects on growth in output, raises inflation and disturbs the external balance.

Second, to secure the projection presented with a zero public deficit by 1990 (as compared to 15−20 billion SEK in the scenario) it may be needed to raise taxes temporarily and use the proceeds to reduce the public deficit. However, the scenario was wrecked if public expenditures were allowed to rise faster than the 1 per cent per annum imposed in most experiments.

Finally, an unfavorable tilt of foreign price development in favor of consumer and investment goods industries not only puts raw material producers under cost pressure. The expansion generated in other domestic industries also drives up factor prices to the extent that the whole sector is imperiled, or rather pushed into the same "crisis" situation as in the mid 1970s. This however, has not significantly and negatively affected the macro projection by 1990.

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