

IMF PAPER ON POLICY ANALYSIS
AND ASSESSMENT

© 1993 International Monetary Fund

This is a *Paper on Policy Analysis and Assessment* and the author(s) would welcome any comments on the present text. Citations should refer to a *Paper on Policy Analysis and Assessment* of the International Monetary Fund, mentioning the author(s) and the date of issuance. The views expressed are those of the author(s) and do not necessarily represent those of the Fund.

PPAA/93/18

INTERNATIONAL MONETARY FUND

The Structural Crisis in the Swedish Economy: Role of Labor Markets

by

Ramana Ramaswamy, European I Department 1/

December 1993

Abstract

This paper argues that Sweden's structural problems of slow productivity growth and high wage inflation can be linked in an important way to the institutional features of its labor market, which is characterized by a combination of centralized bargaining and wage equalization. In particular, Sweden's high wage inflation in the 1980s was due to the combined impact of the breakdown of the leading role assigned to the traded goods sector in wage determination and high wage drift. Slow productivity growth is attributed to the inappropriateness of the policy of wage equalization in an environment in which flexible work practices have become increasingly important.

JEL Classification Number:

J30

1/ I am grateful to Desmond Lachman, Martin Fetherston, John Green, and Francesco Caramazza for comments on earlier drafts of this paper. I also benefitted from the discussion on this paper in the European I Lunchtime Seminar series.

1. Introduction

The Swedish economy is currently in its worst post-war recession. Real GDP declined by over 7 percent between the peak in the first quarter of 1990 to the first quarter of 1993. Sweden's historic experience of maintaining one of the lowest rates of unemployment among the industrial countries has disappeared during the current recession. The unemployment rate (including both 'open' unemployment and participation in labor market programs) has increased from about 2 1/2 percent of the labor force in 1990 to almost 13 percent of the labor force in the first quarter of 1993. There has also been a dramatic deterioration in Sweden's public finances in recent years, with the central government's overall borrowing requirement rising to over 16 percent of GDP in 1992/93.

The current recession was precipitated by the big credit-led expansion of both consumption and investment in the latter half of the 1980s, which eventually paved the way for financial consolidation, resulting in a sharp decline in domestic demand beginning in the second quarter of 1990. However, in addition to the bursting of the asset-price bubble, the current crisis also has its origins in the underlying structural problems of the Swedish economy -- in particular, the long-term productivity slowdown and high wage inflation; this is reflected in part by the large labor shedding in manufacturing that preceded the current recession. Chart 1 shows that the growth of labor productivity in manufacturing in Sweden has been, in general, slower than the average for the European Community since 1976. This has resulted in an increasing productivity gap with respect to the

European Community and a relative decline in Swedish living standards. While Sweden's private per capita consumption ranked fifth among the OECD countries in 1970, it had slipped to the twelfth position by 1990. ^{1/} The Swedish economy also suffered from problems of external competitiveness in the 1980s. Following a period of rapid growth of nominal wages and slow growth of productivity, resulting in rising relative unit labor costs, Sweden's external sector has been characterized by a rising import-penetration ratio and falling export market shares in the 1980s (see Chart 2).

The hypothesis advanced in this paper is that the long-term problems of slow productivity growth and high wage inflation, while being affected by factors which are complex and multi-faceted, can be linked in an important way to specific features of the Swedish labor market--in particular, to the way in which the wage bargaining system evolved over time. The following sections of this paper outline the main institutional features of the Swedish labor market and analyze the reasons for the high wage inflation and slow productivity growth.

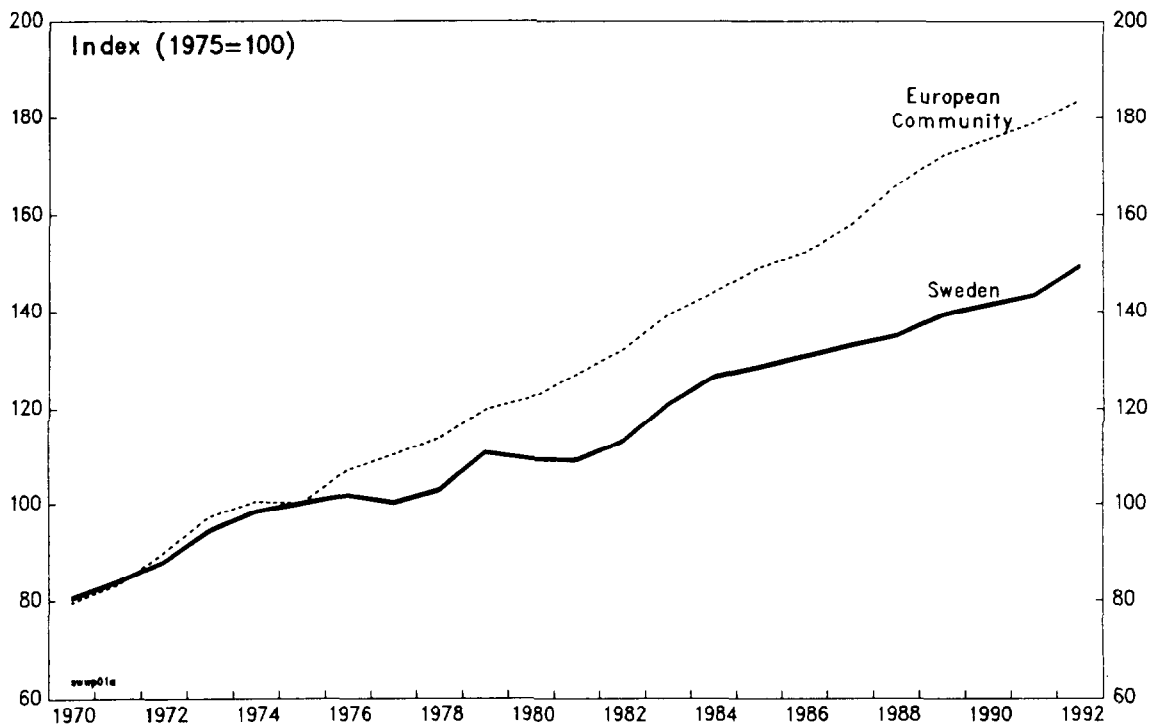
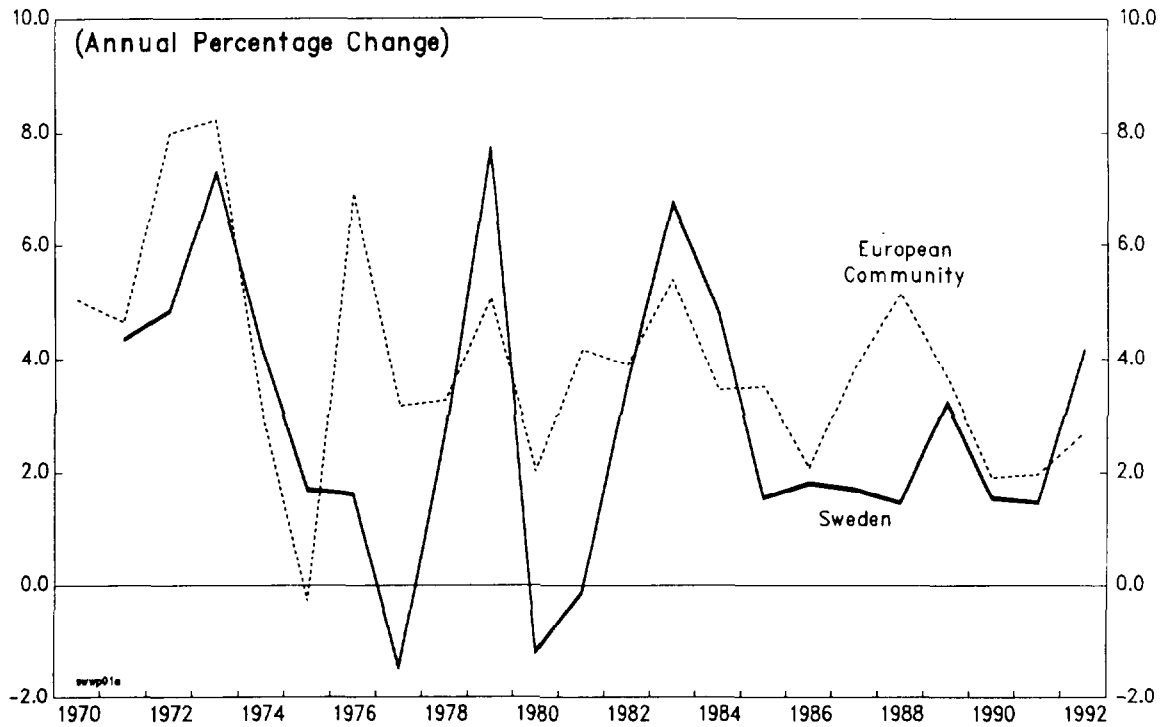
2. Institutional Framework of the Labor Market

The so-called 'Swedish model', usually identified with an advanced welfare state, has attracted attention from many quarters for its apparent earlier success. One of the distinctive features of the Swedish model has been its unique labor market institution, which combines centralized

^{1/} See Lindbeck (1990).

CHART 1
SWEDEN

Trends in Manufacturing Productivity

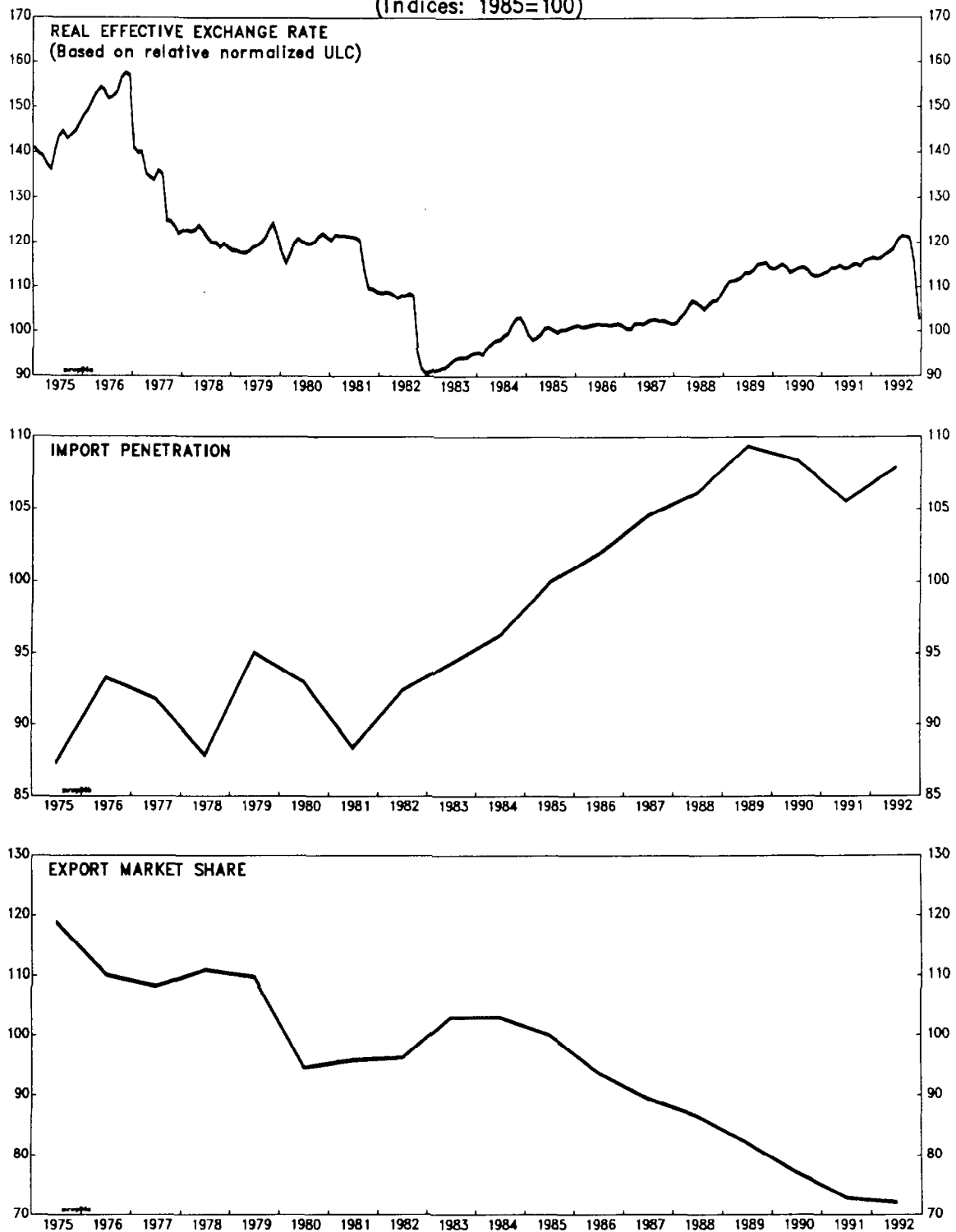


Sources: IMF, World Economic Outlook; SCB, National Accounts.

CHART 2
SWEDEN

COMPETITIVENESS, IMPORT PENETRATION
AND EXPORT MARKET SHARE

(Indices: 1985=100)



Sources: IMF, World Economic Outlook; staff calculations.

bargaining with a policy of wage equalization, designed with a view to promoting a favorable macroeconomic performance. 1/

The main institutional features of the Swedish labor market are as follows. Wage negotiations in Sweden have been conducted since almost the 1930s between centralized trade unions and a centralized employers' organization. There are effectively two centralized unions in Sweden--one represents all blue collar workers (LO) and the other represents all white collar workers (TCO). Since almost 80 percent of Swedish workers are unionized, these centralized unions are truly encompassing and determine the wages for literally all workers. The employers are represented by the encompassing Swedish Employers Confederation (SAF). While wage negotiations are conducted at the central level, the system also allowed for "wage drift", whereby the central wages are topped up at the local level. There is some debate in the Swedish literature about whether the wage drift is independent of the central negotiations or is actually planned for in these central negotiations. It has, however, been the case that wage drift has taken on an increasingly independent character after 1983, signalling a substantial loosening of the centralized bargaining system.

While some form of centralized wage bargaining is common to all the Nordic countries, the Swedish trade unions have been unique in pursuing an explicit policy of 'solidaristic wages', or wage equalization, as an important objective of the bargaining process. The concept of solidaristic wages was initially conceived as equal pay for equal work. However in the

1/ Detailed discussions of the 'Swedish Model', especially its link with macroeconomic performance, can be found in Bosworth and Rivlin (1987) and Lundberg (1985).

1970s, the unions pursued an aggressive policy of across the board wage equalization with little consideration for the nature of the work performed. Consequently, by the early 1980s, Swedish wage differentials were substantially lower than in other OECD countries. Estimates provided by the Swedish Ministry of Finance, indicate that the wage spread for industrial workers, calculated as the difference between the highest and lowest deciles in 1984, was 34 percent for Sweden in contrast to 210 percent for the United Kingdom and 490 percent for the United States. By 1990, the wage spread for Sweden had increased somewhat to 45 percent, due to a weakening of centralized bargaining.

a. The Rehn-Meidner Model: Solidaristic Wages and Structural Change

The combination of centralized bargaining and wage equalization in the labor market constituted the so-called Rehn-Meidner model's strategy of promoting structural change and growth. The Rehn-Meidner model derives its name from the two trade union economists, Gosta Rehn and Rudolf Meidner, who were instrumental in outlining the economic arguments for the Swedish model in the early 1960s. In terms of the framework set out in this model, the concept of solidaristic wages has a two fold effect. Firstly, it imposes a high wage cost on low technology sectors and inefficient firms by not giving them the freedom to lower wages. Hence, under this wage bargaining system, the low productive sectors will either have to rationalize and become more efficient, or will have to go out of operation. In contrast, workers in the high technology sectors are not given the freedom to negotiate higher wages

in spite of their relatively higher productivity. This allows the high technology enterprises to generate relatively higher rates of profit which could be invested for faster growth. Displaced workers from the low technology sectors provide the labor supply for the expanding high technology sectors. Centralized retraining schemes aid the workers to shift from the low technology to high technology sectors. Over time, this policy of penalizing the low productive sectors and providing incentives for the high productive sectors would increase the share of dynamic, high technology enterprises in total production. Since Sweden has traditionally been an economy with high average wages and labor shortages, the wage equalization policy was conceived as advantageous for rapidly transforming the technological basis of the economy and promoting high growth without hitting the labor supply constraint.

A crucial assumption behind the Rehn-Meidner model is that this forcible retrenchment and retraining of workers ensures a faster process of structural change and growth than in a system where workers respond to wage differentials in moving from the low to the high technology sectors and in acquiring skills. The validity of this assumption is discussed later on in this paper. The Rehn-Meidner model is essentially supply-side oriented. The state is discouraged from intervening with demand management policies to absorb retrenched workers. Instead, the state is supposed to operate a tight monetary and fiscal policy with the accent being on supply side measures such as providing retraining schemes and matching skills with vacancies.

A brief discussion of the Swedish labor market policies is called for in this context. Swedish labor market policies are separated into the 'active' and 'passive' components. The active measures consist of centrally provided training schemes, relief work, subsidized employment and special measures for youth training. The passive measures are unemployment compensation and early retirement pensions. The main theme of Swedish labor market policies has been to discourage dependency on unemployment benefits and instead foster an environment in which workers are induced to be mobile between occupations through retraining. It has been estimated that in the period 1985-90, active measures constituted about 57 percent of the total expenditure on labor market policies. This contrasts sharply with a figure of 28 percent for Western Europe. Training programs in Sweden offer the equivalent of unemployment compensation for participants. In contrast, workers on relief work are paid market wages.

b. The EFO Model: Traded Goods Sector and Wage Determination

The so-called EFO model constitutes the other main component of the Swedish model. It derives its name from the initials of the three economists of the white collar trade union, the employers organization and the blue collar trade union - Edgren, Faxen and Odhner - who were instrumental in outlining the consensus view on wage bargaining between the Swedish employers and workers. ^{1/} While the emphasis of the Rehn-Meidner model was on promoting structural change and growth, the EFO model was concerned

^{1/} See Edgren, Faxen and Odhner (1973)

with preserving the competitiveness of the Swedish economy by controlling the rate of growth of wages. Together, these two models sought to provide the framework in which policies for both growth and competitiveness could be pursued simultaneously.

The main thrust of the EFO model was to maintain the international competitiveness of Swedish industry. Hence, in the competitive sector, or the sector open to foreign trade, the wage increase was to be determined by the sum of international price inflation and the rate of growth of labor productivity in this sector. This method of determining wage increases would maintain Swedish tradeable goods prices on par with those of its competitors. However, the policy of wage equalization adopted by the trade unions simultaneously dictated that an equal wage increase had to be given to the non-traded sector. Since the rate of growth of productivity is relatively lower in non-tradeables, the wage setting process implied by the EFO model, built in an inflationary process in the non-tradeables sector. In theoretical terms, inflation in the non-tradeable goods sector does not constitute an immediate threat to the competitiveness of the traded goods sector. Nevertheless, over the long run, high rates of inflation in the sheltered sector has the potential to erode the competitiveness of the traded goods sector through the repercussion effects in wage bargaining.

3. The Problems of the Swedish Model

As pointed out earlier, while the Swedish economy performed rather well until the mid 1970s, serious competitiveness problems emerged thereafter.

Productivity growth slowed down and wage inflation averaged more than 8 percent per annum in the 1980s. While Sweden managed to avoid high unemployment through a large devaluation in 1981-82 and a substantial expansion of the public sector thereafter, its external competitiveness suffered and Sweden's per capita GNP dropped to the OECD average in 1990 after being 10 percent above average in 1970. 1/

a. High Wage Inflation

Sweden's problems with high wage inflation have to do with the way in which centralized negotiations have come to be conducted in practice. In theory, a centralized wage bargaining system, by internalizing various externalities of decentralized bargaining, is expected to achieve a relatively low wage inflation. For instance, the centralized union is unlikely to push for a wage increase that leads to excessive unemployment; unlike a decentralized union, the central union cannot pass on the burden of funding unemployment benefits to other unions. Also, it is difficult for a centralized union to secure real wage increases simply by obtaining nominal wage increases, whereas a decentralized union, operating in isolation, can do so. 2/

Hence, in general, there is less of an incentive for centralized unions to demand excessively high nominal wages. There are three main reasons why Sweden was unable to tap these potential benefits of centralized bargaining,

1/ See Lindbeck (1990) for a more detailed description of these developments.

2/ See Calmfors and Driffil (1988) and Ramaswamy and Rowthorn (1993) for a detailed discussion of how centralized bargaining internalizes the various externalities of decentralized bargaining.

especially in the 1980s. These are: (i) the multi-level bargaining structure in Sweden in which wage drift accounted for a significant part of the overall settlements; (ii) the breakdown of the EFO model in the 1980s; and (iii) the impact of labor market programs in situations of very low unemployment. Each of these factors is taken up for analysis below. The analysis is primarily qualitative and no attempt is made to quantify the importance of the different factors in causing wage inflation.

Firstly, it has been strongly argued that Sweden's multi-tiered system of wage bargaining has proved to be a constraint on controlling wage inflation. ^{1/} As pointed out earlier, centrally negotiated wages in Sweden are subject to further increases at the local level (wage drift). Anticipating the subsequent wage drift, the central union usually decides on the initial nominal wage increase which is compatible with a given final real wage target. The real wage target is usually set with a view to maintaining a low rate of unemployment - an important objective for the central union. This system works fairly well in an environment characterized by relatively high productivity growth and high exogenous price inflation - as was the case with the terms of trade shocks in the 1970s. The central union's concern for the overall rate of unemployment, moderates the initial or centrally determined nominal wage increase. However, multi-level bargaining does not work well in the context of low productivity growth and low exogenous price inflation - as was the case during much of the 1980s when international inflation was low, and there were no major increases in indirect taxes or institutionally set prices in agriculture;

^{1/} See Lindbeck (1990) and Calmfors (1993a).

the real wage target for the centralized union, in this environment, may dictate negligible, or even negative nominal wage increases, because of the anticipated wage drift. If the central union persists with its real wage target, and desists from procuring any nominal wage increases at the central level, it is likely to have severe legitimacy problems with the membership. Hence, the central union is forced into bargaining for a nominal wage increase that is not warranted by the productivity performance or employment target. This seems to have happened especially during the mid 1980s in Sweden, when the increase in real wages was higher than that warranted by productivity considerations. High unemployment was avoided only by the big devaluations in 1981-82 and the expansion of the public sector thereafter; by the end of the 1980s, public sector employment accounted for almost 30 percent of total employment.

The second reason for the declining competitiveness of the Swedish economy in the 1980s was due to the gradual abandonment of the rules of the EFO model. The EFO model--based on the leading role of the traded goods sector--failed to provide the basis for wage negotiations in 1983, when the engineering workers broke off from centralized negotiations and concluded a separate wage agreement. Simultaneously, workers in the non-traded goods sector started negotiating their wages independently of its implications for the competitiveness of the traded goods sector. This was particularly the case with the public sector workers. Since, the non-traded goods sector did not have any exogenous norm as an anchor for determining the wage increase, the wages negotiated in this sector turned out to be far too high for maintaining the competitive requirements of the traded goods sector. With

the breakdown of the discipline provided by the EFO model, uncoordinated, competitive wage increases in the form of increasing wage drift occurred in all sectors of the Swedish economy. In the 1970s, wage drift accounted for between 25 and 30 percent of total wage increases. By the end of the 1980s, wage drift constituted more than 40 percent of total wage increases.

Thirdly, there are reasons to believe that labor market programs may actually tend to have a wage increasing impact. 1/ This particular viewpoint stands in contrast to the more traditional view 2/ that labor market programs reduce real wage growth and contribute to low unemployment. The argument for the wage reducing impact of labor market programs is based on the "insider-outsider" framework of labor market analysis. Accordingly, it is argued that labor market programs--especially training programs and relief work, which help to avoid problems of long-term unemployment and de-skilling of the labor force, promote more effective competition for jobs and reduce upward pressure on wages. However, Calmfors argues that at very low rates of unemployment (as happened in Sweden between 1974-77 and 1987-1990, when the open unemployment rate averaged less than 1 1/2 percent), the wage reducing impact of labor market programs may cease to operate. This is because labor market programs (especially "relief work," which is paid at market wages) now serve the role of giving employed workers, or "insiders" the guarantee of avoiding open unemployment, rather than enabling the unemployed "outsiders" to compete effectively for jobs. In other words, at

1/ See Calmfors (1993b).

2/ See, for instance, Jackman, Layard and Nickell (1991) for a detailed discussion of the impact of labor market programs.

very low rates of unemployment, the wage increasing impact of 'active' labor market programs predominates over its wage reducing role.

b. Slow Productivity Growth

The analysis of long-term trends in productivity is a complex issue. A number of different factors, such as for instance, the savings-investment behavior, educational attainment and the incentive mechanisms available for innovativeness, influence the productivity performance of the economy. ^{1/} In the case of Sweden, additional factors which have a bearing on the long-run productivity performance are its large public sector and generous welfare state. ^{2/} However, the literature has found it difficult to identify the empirical importance of these various factors in explaining the productivity performance of an economy. In analyzing Sweden's relatively poor productivity performance after the mid 1970s, this paper focuses mainly on the impact which the incentive mechanisms operating in the labor market had on productivity--particularly, the role of solidaristic wages. Other explanations are not taken up for analysis in this paper, not because they are unimportant, but because there has so far been no systematic analysis of the link between wage bargaining institutions and productivity in manufacturing. The analysis is basically qualitative, suggesting possible causa-

^{1/} See Baumol, Blackman and Wolf (1989) for a detailed analysis of the factors influencing productivity in the long run.

^{2/} Lindbeck (1990) has argued that the generous welfare state and the large public sector are partly to blame for Sweden's poor productivity performance.

tion mechanisms, rather than providing an exhaustive empirically testable explanation for the productivity slowdown.

The Rehn-Meidner model's strategy of combining centralized bargaining and wage equalization seemed appropriate in the 1960s and early 1970s when the main purpose was to shift workers from the low technology to high technology industries, where they could take advantage of the rapid international transmission of technical knowledge. This strategy contributed towards enhancing both the average levels of productivity and living standards. However, Sweden's successful period of technological "catching-up" implied that by the mid 1970s, a substantial part of Swedish industry was already technologically advanced. ^{1/} Hence, further productivity growth could not be sustained by shifting workers between different sectors of the economy through the solidaristic wage policy. Instead, rapid growth of productivity could only be obtained endogenously, by increasing the efficiency with which existing enterprises operated. This required the creation of appropriate incentive mechanisms that would allow firms to increase productivity by restructuring their enterprises and motivating workers to enhance their human capital.

A wage bargaining system which relied on centralized bargaining and wage equalization did not prove appropriate to the changed circumstances of the 1980s and 1990s. In addition to the diminished prospects for a further period of "catching-up," new developments in the organization of work during this period also warranted a change in the wage formation regime. These

^{1/} The changing technological structure of Swedish industry is documented in Eliasson *et. al.* (1990).

developments, which have involved a shift from standardized assembly line production ("Fordism") to flexible work practices ("post-Fordism") in many industrial countries, have been documented by a number of studies. 1/ A distinctive feature of the "post-Fordist" environment is the much greater diversity between individual firms. There is a lot of variation in the level of effort, diligence and skills that firms expect of their workers under a system of flexible work practices. Consequently, efficiency wage considerations require large variations in the remuneration schemes offered by different firms for increasing productivity. In this context, to persist with a labor market institution which compressed wage differentials drastically, was not compatible with providing both enterprises and workers the right incentives for increasing productivity endogenously. 2/

The system of centralized training schemes which operated in Sweden also proved inappropriate for obtaining productivity increases in the new circumstances. Centralized training schemes, by their very nature, impart mainly general skills. However, the new technology of the "post-Fordist" environment required a much greater emphasis on firm-specific skills. This, in turn, implied that firms had to play a greater role in the training of workers. However, the policy of solidaristic wages mitigated against greater reliance on firm-specific training. In order to find it optimal to

1/ See, for instance, the discussion in Milgrom and Roberts (1990). Organization of firms on 'post-Fordist' lines is said to have become increasingly important since the mid-1970s. Eliasson *et. al.* (1990) document some of these changes for Sweden.

2/ See Ramaswamy and Rowthorn (1993) for a more formal treatment of the relationship between the wage bargaining system, profitability and productivity.

offer in-house training, firms required the freedom to devise their own internal wage differentials and promotion schemes to motivate workers to enhance their human capital, as well as avoid the moral hazard problems inherent in such training. For example, firms needed the flexibility to offer a steeply increasing age-related wage profile, so that workers did not have an incentive to leave the firm once they finished receiving training. Once again, the rigidity imposed by the system of centralized bargaining and solidaristic wages, precluded firms from tailoring their own unique remuneration schemes to offer the optimal amount of internal training to enhance productivity.

4. Conclusion

This paper has outlined some of the structural problems underlying the current crisis in the Swedish economy. These have been identified as high wage inflation and slow productivity growth over the long-run. Sweden's problems with high wage inflation were due to the combined impact of multi-level bargaining, the breakdown of the leading role of the traded goods sector in wage determination and the operation of labor market programs in conditions of extremely low unemployment. Slow growth of productivity, in turn, has been attributed to the inappropriateness of solidaristic wages in an environment in which flexible working practices have become more prevalent and a greater emphasis is placed on "endogenous" growth. These structural problems suggest the need for far reaching institutional changes

in the Swedish labor market - particularly, a move towards single level wage bargaining and a greater degree of flexibility in determining wage differentials.

References

- Baumol, W.J., S.B. Blackman, and E.N. Wolff, *Productivity and American Leadership: The Long View* (Cambridge, MA: MIT Press, 1989).
- Bosworth, B. and A. Rivlin (eds.), *The Swedish Economy* (Washington, DC: Brookings, 1987).
- Calmfors, L. and J. Driffil, "Bargaining Structure, Corporatism and Macroeconomic Performance," *Economic Policy*, No. 6 (April 1988), pp.14-61.
- Calmfors, L., *Centralization of Wage Bargaining and Macroeconomic Performance: A Survey*, Institute for International Economic Studies (Stockholm), Seminar Paper No. 536, 1993a.
- Calmfors, L., "Lessons from the Macroeconomic Experience of Sweden," *European Journal of Political Economy*, vol. 9 (March 1993b), pp. 25-72.
- Edgren, G., K-O. Faxen, and C.E. Odhner, *Wage Formation and the Economy* (George Allen and Unwin, 1973).
- Eliasson, G. et. al, *The Knowledge Based Information Economy*, The Industrial Institute for Economic and Social Research, (Stockholm 1990).
- Jackman, R., R. Layard, and S.J. Nickell, *Unemployment* (Oxford University Press, 1991).
- Lindbeck, A., *The Swedish Experience*, Institute for International Economic Studies (Stockholm), Seminar Paper No. 482, 1990.
- Lundberg, E., "The Rise and Fall of the Swedish Model," *Journal of Economic Literature*, vol. xxiii (March 1985), pp. 1-36.
- Milgrom, P. and J. Roberts, "The Economics of Modern Manufacturing: Technology, Strategy and Organization," *The American Economic Review*, vol. 80 (No. 3, June 1990), pp 511-28.
- Ramaswamy, R. and R. Rowthorn, *Centralized Bargaining, Efficiency Wages and Flexibility*, IMF Working Paper No. WP/93/25 (Washington: International Monetary Fund, 1993).