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ABSTRACT

Outward Investment, Employment and Wages in Swedish Multinationals*

Examining detailed data on Swedish MNCs during the period 1986-1994, this paper shows that there are signs of very notable structural changes in the home country operations of these corporations. It also shows that the character of these changes varies according to economic conditions in the home country. In the 1980s, when the Swedish economy was characterized as having high taxes, high inflation rates, and a tight labour market, relatively attractive jobs within the MNCs were relocated from Swedish plants to foreign affiliates. In the 1990s, by contrast, when the financial crisis had necessitated a host of micro and macroeconomic reforms, the location decisions of the MNCs were more favourable for the Swedish economy. The new jobs created by the MNCs were found in activities with relatively high productivity and wages. This suggests that the home country effects of FDI are, to a large extent, determined by the home country's economic environment.

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NON-TECHNICAL SUMMARY

The debate on the home country effects of foreign direct investment (FDI) has re-emerged on the political agenda during the past decade. The main reason is the continuing reduction of international trade and investment barriers, which has resulted in a boom in foreign direct investment, particularly in the OECD area. This increase in FDI flows is expected to improve global efficiency and welfare, but the debate in several important home countries has also revealed worries about negative consequences of outward investment. In particular, it has been feared that investment abroad may replace exports from the home country, and that that this will lead to the loss of investment and jobs.

For a long time, Sweden was one of the few home countries where these worries appeared weak: the predominant view was instead that outward FDI would benefit both Sweden and Swedish multinational corporations (MNCs). This unreservedly positive attitude has begun to change during the past decade. The recent Swedish debate has not only brought up the old worries about export losses, but also new questions about the structural effects of outward FDI. The liberalization of international trade and investment, together with advances in telecommunications and information technology, have made it possible for MNCs to divide their production chain into several individual components that can be located in different countries. The new key question in the Swedish home country debate is 'What jobs are left at home?'

Examining detailed data for the home country operations of Swedish MNCs during the period 1986–94, we argue that there are signs of very notable structural changes in the home country operations of these corporations. The annual gross changes in employment are remarkably large. On average, one out of five domestic jobs have disappeared every year from the largest MNCs, mainly through sales of plants to other firms, while almost as many new jobs have appeared, mainly as a result of the acquisition of new plants. The changes in the foreign affiliates of Swedish MNCs have been almost as large. Arguably, these large changes give much scope for structural change.

The pattern of structural change indicates that the jobs lost in Swedish plants during the late 1980s paid higher wages than the new jobs that were created. In other words, the home country operations of Swedish MNCs were becoming less advanced, with some specialization on low-wage jobs, during this period. During the first half of the 1990s, this pattern was reversed, and an increasing number of jobs with relatively high wages were added to the domestic operations of the MNCs. We argue that the difference between these two time periods is related to differences in the overall business environment. Sweden was not a very attractive location for advanced operations between 1986 and 1990, because of severe macroeconomic

imbalances as well as weaknesses in areas such as taxation and education. Various institutional reforms, partly brought about by the financial crisis of 1991–92, created a more favourable macroeconomic regime, helping to raise the competitiveness of Sweden towards the mid-1990s.

The policy implication of these findings is that a competitive business environment is becoming an increasingly important determinant of economic structure. It has for a long time been known that a favourable business environment (including a stable macroeconomic environment, access to skilled labour, appropriate incentives, and so forth) is necessary to attract inward FDI into sectors and activities with ‘good’ jobs. The main conclusion of the present study is that the same may be necessary to keep the ‘good’ jobs provided by the country’s own multinational corporations.

OUTWARD INVESTMENT, EMPLOYMENT AND WAGES IN SWEDISH MULTINATIONALS

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1. INTRODUCTION

The debate on the home country effects of foreign direct investment (FDI), which was particularly lively in the U.S. some 20 years ago, has re-emerged on the agenda during the past decade. The main reason is the accelerated reduction of trade and investment barriers throughout the world, resulting both from multilateral trade liberalization and regional integration. This has created new, larger markets and removed important institutional restrictions on where plants can be located. In addition, advances in telecommunications and information technology have made it easier to organize and manage international production networks. The result has been a boom in foreign direct investment, particularly in the OECD area.

Although this increase in cross-border investment is expected to improve global efficiency and welfare, it is not obvious that the benefits will be distributed equally between the countries and regions involved. While those regions that are net recipients of FDI are strengthened by inflows of foreign capital and technology – which explains why most countries have chosen to promote inward investment – there is often more debate about possible negative consequences in the countries that are large net outward investors. In particular, politicians and labor representatives in many home countries have feared that investment abroad will replace exports from the home country, and that that this will lead to the loss of investment and jobs.

Unlike the U.S. and most other major home countries, however, Sweden was not much affected by these worries before the 1990s. On the contrary, the Swedish debate was for a long time characterized by a consensus that outward FDI would benefit both Sweden and Swedish multinational corporations (MNCs). The predominant view was “What’s good for Volvo is good for Sweden”. This unreservedly positive attitude towards outward investment by Swedish firms has

begun to change during the past decade. The recent Swedish debate has not only brought up the old worries about export losses, but also new questions about the structural effects of outward FDI. The contraction in domestic manufacturing employment following the financial crisis of the early 1990s is one reason for the new views. After decades of nearly full employment, Sweden suddenly had to manage open unemployment rates of over 10 percent. The accelerating internationalization of Swedish industry has been even more important. Companies like Volvo, Saab, Asea, and Astra are no longer Swedish, but have instead been acquired by (or merged with) large foreign MNCs like Ford, General Motors, Brown Boveri, and Zeneca. The continuing expansion of the remaining Swedish MNCs has largely taken place abroad. By 1997, only 37 percent of the jobs in the 80 largest Swedish MNCs were found in Sweden (NUTEK 1999). Instead of horizontal investment that aims to imitate the activities of the parent company in different countries, these MNCs are increasingly organizing vertical production systems that comprise several countries. By dividing up the value chain into several independent components and making individual location decisions for each of these links, they can now utilize the comparative advantages of several countries. Labor-intensive parts of production end up in low-wage countries and knowledge-intensive operations in countries with a relatively good supply of skilled labor. It is no longer obvious that the “best” activities are kept in Sweden. The new key question in the Swedish home country debate is therefore “Which parts of the value chain are kept at home?”

In this paper, we discuss the changing views on the home country effects of FDI, with particular emphasis on the structural impact of outward investment. Section 2 briefly reviews the old debate on home country effects, while section 3 looks at the more recent discussion about structural effects. Section 4 discusses some of factors that determine what operations MNCs decide to locate to the home country, and section 5 concludes the paper.

2. THE OLD DEBATE: COMPLEMENTARITY OR SUBSTITUTION?

The question that has been discussed most frequently in the home country debate is whether production abroad complements or substitutes for exports by the parent

company or by other firms in the home country.¹ The debate has re-emerged from time to time, without definite conclusions, because of two complications. A first problem is that the net impact of FDI on home country exports (or investment or employment) cannot be determined theoretically, since it combines several separate effects that are sometimes of opposite signs. On the one hand, it is clear that foreign production normally replaces some previous home country exports of finished goods. On the other hand, FDI also tends to promote exports of intermediate goods from the parent company or various home country suppliers to the new foreign affiliates. The net impact of these two effects is likely to vary from case to case, depending particularly on how total foreign sales are affected by the foreign direct investment decision. The larger the increase in total foreign sales resulting from the establishment of a foreign affiliate, the more likely it is that the export loss in terms of finished goods can be compensated for by an increase in the export of intermediate goods to the affiliate. In addition, it is possible that the presence of MNCs facilitates the diffusion of information about other producers from the home country, with positive export effects as a result.

A second problem is that it is hard to judge what would have happened to exports, employment, and investment if the MNCs had not been able to invest abroad. This is a particular problem if empirical results suggest that outward investment has been followed by job losses in the home country. Would the MNCs have been able to maintain (or even increase) the market share they had carved out exporting from the home country, or would they have been driven out of the market by their foreign competitors, leading to a reduction in home country exports and employment even without FDI?

In spite of these complications, the summary assessment in the literature is that there is a complementary relationship between FDI and home country exports. For instance, studies based on data from the United States have consistently shown a positive correlation or no correlation at all between production by American firms in a specific country and American exports to that market (Blomström et al. 1988). For a long time, Swedish studies also found positive correlations between foreign production and exports. The most notable studies in this area have been undertaken by Birgitta Swedenborg. In her most comprehensive study, Swedenborg (1982), she

¹ See Blomström and Kokko (1994) for a survey of the literature.

concluded that an increase in foreign production by SEK 100 would result in an increase in exports from the parent company to the subsidiaries by SEK 12 and a decrease in exports to other customers in the recipient country by SEK 2. The net effect was thus an increase in exports of SEK 10.² Blomström et al. (1988) and Swedenborg (2000) provide more refined analyses and add several more years of data, but reach similar results.

Some recent Swedish analyses have found negative correlations between foreign and domestic production. For instance, Svensson (1996) claims that rising exports by Swedish foreign subsidiaries to third countries cause a fall in exports by the parent company to these countries (which earlier analyses failed to take into account). Accounting for this effect, it appears that foreign production now has a moderate negative net effect on exports by the parent company. However, neither Svensson (1996) nor other observers have suggested any measures to limit the foreign expansion of Swedish industry, even if it may lead to export substitution. The reason is that MNCs have no alternatives to foreign expansion. While different studies have assumed different “survival rates” for exports (i.e. the proportion of the affiliate’s market share that the parent company can retain by exporting if the affiliate is closed down), almost all studies agree that production presence abroad is essential for competitiveness. For instance, the Swedish “Direct Investment Committee”, a research group commissioned by government to study the effects of FDI, assumed survival levels of between 2 and 8 percent for standard products (SOU 1981:33). The general view from many microeconomic and case studies is thus that the multinationals would not have been able to maintain their international market shares in the long term if it had not been possible for them to produce abroad.

The view that outward FDI was inevitable was not only held by academics in Sweden. Unlike labor organizations in many other countries, the Swedish trade unions actually supported outward investment by Swedish multinationals for a long time. Blomström and Kokko (1997) argue that this was the result of a very special combination of circumstances. In addition to the apparent complementarity between foreign and domestic production demonstrated by repeated academic studies, Sweden

² Swedenborg’s study was commissioned by a government committee set up to analyze the home country effects of FDI (“The Direct Investment Committee”) which in several different reports reached similar conclusions regarding the effects of foreign direct investment. See, for example, SOU 1981:33.

was characterized by a welfare state guaranteeing full employment, a centralized trade union organization, and a tradition of co-determination and labor participation on the boards of even the largest MNCs. Moreover, international capital flows were controlled, and the labor unions were represented in the Central Bank committee monitoring applications for foreign investment permits. As a result, there did not appear to be any great risk for unexpected unemployment as a result of foreign direct investment. The structural effects of FDI were also perceived as positive. The new jobs created at home were typically “better” in terms of productivity and wages than those that were exported to foreign affiliates – foreign wages were lower and operations in foreign affiliates were more labor intensive than the operations in Sweden.

3. THE NEW DEBATE: STRUCTURAL EFFECTS ON THE HOME ECONOMY

The continuing internationalization of the Swedish economy has led to changes in Swedish attitudes towards FDI during the past decade. On the one hand, it has become obvious that Sweden is becoming less important for most Swedish MNCs, both as a production site and as a market. Almost two-thirds of the employment in Swedish MNCs was found outside Sweden in 1998, and over three-fourths of the total sales of Swedish MNCs (excluding intra-firm transactions) went to foreign customers (Strandell 1999). It is no longer obvious that what is good for Swedish MNCs is also good for Sweden. On the other hand, it is still clear that Swedish MNCs must be allowed to adapt to the changing international environment, where the EU rather than Sweden is the new home market. To maintain their market shares in tough international competition, they must set up international production networks that exploit the comparative advantages of several different countries. In many industries, it is also necessary to locate important parts of the production process to those regions where the main markets are found. Restricting the location choices of Swedish firms would inevitably reduce their competitiveness, and lead to job losses in Sweden as well as abroad.

The necessity to accept the internationalization of MNC production, and the observation that MNCs are engaging in an international division of labor within the firm, has shifted attention away from the old questions concerning export substitution.

Instead of focusing solely on quantitative issues, qualitative issues have become more important. The question is not only how many jobs Swedish MNCs decide to keep at home, but also how their domestic operations change during this process of internationalization.

To answer this question, it is first necessary to take a closer look at the extent of restructuring in Swedish MNCs. Table 1 summarizes some highly aggregated data on the international distribution of employment in Swedish manufacturing MNCs during the period 1986-1994.³ The total number of jobs in these MNCs fell by about 21 percent during the period, with the entire reduction taking place in Sweden, where the fall was over 35 percent. As a result, the foreign employment share grew from about 41 percent in 1986 to well over 50 percent in 1994: as noted above, the foreign employment share has grown further since that time, to nearly two-thirds of the total. It is clear that there has been a significant shift of production from Swedish plants to foreign affiliates of Swedish MNCs.

Table 1. **Distribution of Employment in Swedish Manufacturing MNCs, 1986-1994 (number of employees).**

Year	Total employment, Swedish MNCs	Employment in Sweden	Employment in foreign affiliates	Share of employment in foreign affiliates
1986	632,794	373,806	258,988	40.9
1990	559,679	259,911	299,768	53.6
1994	499,868	236,442	263,426	52.7

Source: IUI database.

This shift has not been evenly distributed across industries - in fact, parent employment in Sweden has increased in some sectors, in spite of the overall contraction of home country operations. Figure 1 shows how the restructuring of employment in 17 of the largest Swedish MNCs have been distributed across 12 three and four-digit industry groups between 1986 and 1994 (data for larger samples are not available). These 17 MNCs accounted for some 57 percent of the domestic

³ The data are from surveys of Swedish MNCs conducted by IUI, the Research Institute of Industrial Economics, in Stockholm. The IUI data cover almost all Swedish MNCs in the manufacturing sector with over 50 domestic employees and wholly-owned production affiliates abroad.

employment and 60 percent of the foreign employment of the Swedish MNCs in Table 1. Two features are notable. Firstly, Swedish employment has fallen in all industries except pharmaceuticals and telecommunications equipment. In particular, there has been a large employment reduction in the auto sector. Secondly, the employment changes were in opposite directions in 8 out of 12 industries, which suggests that significant relocations of production were taking place.

Figure 1. **Changes in Domestic and Foreign Employment, 3 and 4-Digit Industries 1986-1994, 17 Swedish MNCs (number of jobs).**

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Although these data suggest a considerable change, they actually underestimate the true extent of restructuring, since they only summarize the net results of an underlying process of job creation and job destruction. The gross changes in employment are significantly larger than what is revealed by the net figures. Again, data on gross changes are not available for the entire population of Swedish MNCs, but a couple of recent studies have examined sub-samples of firms. For instance, Hakkala and Kokko (2000) studied the turnover of labor in the domestic operations of the 30 largest Swedish MNCs (accounting for 80 percent of the domestic employment of the firms in Table 1), and found average annual gross losses of jobs of more than 20 per cent. However, since the average gross rate of job creation was nearly 18 percent, the net change was only about - 3 percent. Distinguishing between employment changes from the entry and exit of entire plants, and changes occurring in surviving plants, they also found that the changes due to entry and exit of plants dominated. In other words, large MNCs adjusted mainly by acquiring or selling entire plants rather than increasing or reducing employment in plants that existed throughout the period.⁴ Table 2 summarizes some of their findings regarding employment dynamics.

Table 2. **Employment Dynamics: Changes in Domestic Employment 1986-1994, 30 Largest Industrial MNCs (per cent of total employment in**

⁴ The great majority of plants that exited the sample were sold to other companies rather than closed down. Similarly, the majority of plants entering the sample were acquired from other firms rather than established from nil.

sample).

Year	Net change %	Entry %	Exit %	Expansion %	Contraction %	New jobs (2+4) %	Lost jobs (3+5) %
	1	2	3	4	5	6	7
1986	-0,5	11,0	-12,8	3,4	-2,1	14,4	-14,8
1987	4,4	15,0	-11,5	4,1	-3,2	19,1	-14,7
1988	6,5	22,8	-17,3	4,4	-3,4	27,2	-20,7
1989	-4,6	7,0	-11,1	3,2	-3,6	10,1	-14,7
1990	-3,2	16,5	-20,2	6,6	-6,0	23,1	-26,2
1991	-11,8	14,0	-22,2	3,5	-7,2	17,5	-29,3
1992	-8,4	9,5	-11,8	1,6	-7,7	11,2	-19,6
1993	-4,7	14,0	-16,1	2,8	-5,4	16,8	-21,5
1994	-3,6	14,6	-21,3	6,9	-3,7	21,5	-25,0
Average 1986-1994	-2,9	13,8	-16,0	4,0	-4,7	17,9	-20,7

Source: Hakkala and Kokko (2000), Table 3.

Another indication of the restructuring process is discussed by Fors and Kokko (2000), who examined the changes in the population of plants belonging to the 17 MNCs included in Figure 1. They found that more than half of the 229 Swedish plants that existed in 1986 had disappeared from the population by 1990, mainly as a result of sales to other firms. Simultaneously, the 17 MNCs had established or acquired 105 new plants in Sweden. The changes in the population of foreign plants were almost as large. 119 of the 304 foreign affiliates existing in 1986 had disappeared by 1990, while 205 new affiliates had been established over the same period. Figure 2 shows that the development between 1990 and 1994 was similar, with the exception that the number of new Swedish plants was much lower than the number of disappearing plants, reflecting the contraction in home operations as a result of the financial crisis of the early 1990s.

Figure 2. **Plant Dynamics: Changes in the Population of Domestic and Foreign Plants 1986-1994, 17 Swedish MNCs**

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Both Fors and Kokko (2000) and Hakkala and Kokko (2000) argued that these changes within the MNCs are signs of very significant structural adjustment. The sale

(or closure) of old plants and the acquisition (or establishment) of new ones is arguably not a random process, but instead the result of strategic choices on the part of the MNCs. The liberalization of international trade and investment and the development of telecommunications and IT during the past decades have made it easier to restructure operations to exploit the comparative advantages of the nations and regions where the MNCs operate. Arguably, Swedish MNCs have to a large extent taken advantage of these opportunities.

The second step is to examine what kinds of jobs have been concentrated to Sweden, and what jobs have moved abroad. With access to comprehensive micro data on the employment distribution in the domestic and foreign operations of Swedish MNCs, it would have been possible to describe these changes in detail. However, existing statistics are too aggregated for this purpose, with one exception: research and development (R&D) activities. We know that Swedish MNCs have largely concentrated their R&D to Sweden instead of relocating it to their foreign subsidiaries. Although the home country share of R&D expenditures has fallen gradually, from 91 percent in 1970 to 75 percent in 1994, which is the latest year for which we have figures, parent companies still dominate the research activities of these multinationals (Braunerhjelm and Ekholm 1998). Most Swedish MNCs have also chosen to keep their headquarters at home, although certain headquarter functions, such as financing, have occasionally been relocated abroad. For other functions, the picture is less clear. For instance, the data in Figure 1 allow us to track changes in the industrial distribution of domestic and foreign production, but we cannot see how different kinds of jobs are distributed within each industry. It is also difficult to tell whether the jobs gained in pharmaceuticals and telecommunications are “better” or “worse” than those lost in the auto sector. It is therefore necessary to look at various indirect measures of job quality.

Some evidence on the changes in job characteristics are presented by Blomström et al. (1997), who compared the employment effects of Swedish and U.S. foreign direct investment. For the U.S., they found a negative correlation between domestic employment and foreign production. While an increase of USD 1 million in net sales by the parent company (a proxy for production) resulted in the creation of 6 new jobs in the parent company, a corresponding sales increase by the foreign subsidiaries resulted in the loss of one job in the parent company. The main reason for

this was that U.S. multinationals to a large extent relocated labor-intensive production to low-wage countries. This suggests a labor division that reflects the comparative advantages of the U.S., which is arguably relatively well endowed with skilled labor: white-collar jobs are kept in the U.S. while blue-collar jobs are relocated to low-wage countries.

The results for Sweden, by contrast, indicated that foreign direct investment led to higher domestic employment, albeit at a falling rate since the 1970s. For example, in 1990, a production increase of USD 1 million in foreign subsidiaries resulted in 1 new job in the parent company. This expansion mainly concerned blue-collar jobs. In other words, up to at least 1990, it appeared as though the expansion of Swedish multinationals led to increases in relatively unskilled operations in Sweden. Blomström et al. (1997) interpreted this pattern as a reflection of severe shortcomings in the conditions for highly advanced production in Sweden.

Another source of information is wage data. A first observation is that the average wage per employee in the foreign operations of Swedish MNCs has risen significantly faster than that in the Swedish operations. In 1970, the average wage in the foreign affiliates of Swedish MNC was about 65 percent of the average wage in Swedish operations. By 1994, affiliate wages had increased to 92 percent of parent wages (Blomström and Fors 1999). Swedish subsidiaries in industrialized countries actually paid slightly higher wages than the parent companies in Sweden. It has not been possible to trace any comparable development in U.S. firms. It is also notable that the wages in the foreign affiliates of Swedish MNC have increased rapidly in comparison with local host country wages. Table 3 shows that the wage premium paid by Swedish MNCs (in excess of the host country's average manufacturing wage rate) increased in 12 out of 15 OECD countries between 1970 and 1994 (or 1990).

Table 3. **Wages in Swedish subsidiaries in relation to average manufacturing wages in the host country, 1970-1994.**

Host country	1970	1990	1994
Australia	1.01	1.36	
Belgium	1.66	1.90	--
Denmark	1.17	1.25	--
England	1.24	--	1.32
Finland	1.21	--	1.43

<i>Greece</i>	2.56	--	1.54
<i>Italy</i>	1.78	--	1.22
Canada	1.18	--	1.37
Netherlands	1.15	--	1.17
<i>Norway</i>	1.29	--	1.05
Portugal	1.18	--	2.20
Spain	1.62	--	1.99
Germany	1.22	--	1.43
USA	1.09	--	1.30
Austria	1.33	--	1.61

Sources: Research Institute of Industrial Economics' (IUI) database and UNIDO's wage statistics.

The relatively weak wage development in Sweden is partly due to the fact that incomes in other OECD countries have converged to and overtaken Swedish incomes. In the early 1970s, Sweden was ranked as the world's third richest country as indicated by comparisons of nominal GDP per capita figures; by the mid-1990s, Sweden could barely make it into the top-20 group. This decline was undoubtedly related to the problems confronting the Swedish welfare state during most of the 1970s and 1980s, with an overgrown public sector, high taxes, weak productivity growth, and inflation. The repeated devaluations of the Swedish currency during this period also played an important role. For instance, the fastest rate of catch-up in the wage comparisons occurred in the early 1980s when the Swedish Krona was devalued several times, by over 25 percent in all, and the early 1990s when the collapse of the fixed exchange rate regime led to a rapid depreciation of the currency. These developments would have led to a relative decline in Swedish wages even if the job structure in the domestic operations of Swedish MNCs had not changed much. This notwithstanding, the rapid wage increases in the foreign affiliates indicate that the jobs outside Sweden have become more advanced over time. What is not clear from a comparison of average wages at home and abroad is whether the quality improvement in foreign jobs has occurred at the expense of domestic jobs.

Figure 3 presents a comparison of wages in the Swedish manufacturing sector and two types of domestic plants belonging to the 30 largest Swedish MNCs: plants with expanding and contracting employment. Very notably, it appears that the jobs lost during the late 1980s were largely in plants that paid relatively high wages, whereas the new jobs were created in plants with significantly lower average wages. This situation is unusual, since most studies have found that the wages in MNCs are

relatively high compared to non-multinational firms. In Sweden, domestic MNCs have typically paid 5-10 percent higher wages than non-multinational firms do. It is difficult to explain the wage pattern in Figure 3 unless Swedish MNCs transferred relatively advanced operations to their foreign subsidiaries during the late 1980s, and specialized in less demanding operations at home during that period. Hence, the wage comparison confirms the argument from Blomström *et al.* (1997), that FDI probably contributed to a hollowing out of Swedish industry up to the early 1990s. After that time, the pattern has become more normal, with expanding as well as contracting plants paying wages that are significantly higher than those in non-multinational firms.

Figure 3. **Average Wages in Expanding and Contracting Home-Country Plants, 30 Largest Swedish Manufacturing MNCs (100 = average wage for rest of Swedish manufacturing sector)**

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4. DETERMINANTS OF HOME COUNTRY PRODUCTION STRUCTURE

Unlike the U.S., where outward FDI and comparative advantages in skilled labor have led to structural changes favoring advanced operations, Sweden was apparently not considered as the optimal location for high-tech operations during the late 1980s. The production decisions of Swedish MNCs contributed to a relocation of relatively high-paying jobs to foreign affiliates, and an increasing focus on lower-paying jobs in domestic manufacturing (although R&D remained concentrated to Sweden). By the mid-1990s, this pattern had changed, so that the new jobs created in domestic plants paid at least as high wages as the jobs that were given up. The obvious question is why the home country effects of Swedish and U.S. foreign investment were so different up to 1990, and why the situation has changed since that time.

To address this question, it is necessary to make some comments on the changes in the Swedish business environment during the period since the late 1980s. With business environment, we mean both the institutional setting and the supply and demand conditions in important factor markets in Sweden. The issues we will

highlight are hardly surprising: macroeconomic conditions, the labor market, taxation, education, and R&D.

The key issue is arguably the overall macroeconomic environment. Firstly, it should be noted that the late 1980s marked the peak of the Swedish bubble economy, with full employment, high asset prices, and high inflation. The combination of an inflation rate that was higher than that in the rest of Europe and an exchange rate fixed to the ERM was rapidly eroding Swedish export competitiveness. Sweden had no intention to join the European Community, which was busy establishing the Single European Market. In this environment, it was difficult and expensive to expand Swedish production, and the position outside the Single Market raised fears about Fortress Europe. Foreign locations were viable alternatives for many new ventures, not only because production costs were lower and fixed assets were cheaper than in Sweden, but also because other countries (the 12 EC countries) could guarantee access to the European market. The boom in Swedish outward investment, mainly in the EC region, appeared to be a rational reaction to differences in production conditions.

The situation changed dramatically with the financial and currency crisis that erupted in 1991-92. The crisis in the financial sector had very notable real effects, as unemployment increased from less than two percent to well over 10 percent in less than two years. This improved the opportunities to find attractive employees as well as the possibilities to avoid rapid wage increases for several years. The fixed exchange rate was abandoned, and the currency was allowed to float. It quickly depreciated by some 25 percent against the German Mark and 40 percent against the U.S. dollar, and restored export competitiveness. Price stability became the new dominant objective in macroeconomic management, and was quickly achieved: annual inflation was kept below two percent in spite of the increase in import prices. The new macroeconomic regime simply provided a better investment climate, and it is likely that this explains much of the differences in the production decisions of Swedish MNCs between the late 1980s and the mid-1990s.

The situation in the year 2000 remains favorable in terms of macroeconomic conditions. However, the reduction in unemployment that has been achieved in recent years, and the slow increase in the rate of wage inflation suggests that some institutional reform in the labor market may be needed if Sweden is to remain competitive in the long run. Two issues appear particularly important. Firstly, it is

important to maintain a low level of equilibrium unemployment. This reduces the pressure on the government budget, and facilitates future reductions of the overall tax burden, which is significantly heavier than in most other European countries. Secondly, a high degree of flexibility is needed to facilitate the adjustment to a changing international environment. This is particularly important, since it is not possible to actively use the exchange rate as an instrument of adjustment. The Krona is floating, and the scope for intervention is very limited: with possible future membership in the European Monetary Union, exchange rate changes will be ruled out per definition.

It is likely that roughly the same reforms are needed to achieve both low equilibrium unemployment and higher labor market flexibility. Calmfors and Holmlund (1999) point to a number of specific reform requirements: lower compensation levels and shorter compensation periods in the unemployment insurance, clear links between the overall level of unemployment and the contributions to the insurance system, investments in tertiary education as well as adult education, and reductions in personal income taxes. In addition, Blomström (1999) calls for larger wage dispersion and less "solidarity" in wage negotiations. He argues that wage increases for key personnel or even individual experts often lead to demands for wage increases throughout the organization, because of the egalitarian Swedish traditions. This feeds wage inflation, and tends to raise the costs for high-tech investments in Sweden.

Apart from the overall macroeconomic environment and the tight labor market, it is possible to point to several other factors that reduced the attractiveness of Sweden as an investment location in the late 1980s. Taxation is one such area. Regarding corporate taxes, it should be noted that Sweden compares favorably with most OECD countries. The nominal corporate tax rate, at 28 percent, is relatively low in an international comparison, but it should be noted that effective taxation of corporate profits is even lower. After various deductions, Swedish firms pay an average profit tax of 14 percent, to be compared with effective tax rates in e.g. the U.S. and France of over 30 percent. Swedish MNCs on average pay less than 10 percent, which clearly shows that high corporate taxes do not contribute much to making Sweden unattractive for modern industry (Strandell 1999).

The aggregate tax burden, and in particular the taxation of personal income

and wealth, however, has been higher in Sweden than in most other countries. Before a radical tax reform around 1991, high-income earners typically faced marginal income tax rates exceeding 70 percent. The heavy taxation of personal incomes arguably had a significant impact on the corporate sector. For instance, high Swedish income taxes have been identified as major motives for the relocation of various advanced functions to foreign affiliates. These relocations have allowed many Swedish key employees to move to the foreign affiliates, where they have benefited from very large increases in net incomes thanks to lower foreign income taxes (Braunerhjelm och Lindqvist 1999). It is also clear that several foreign investment projects have been motivated by the shortage of skilled professionals in Sweden: the high and progressive income taxes reduced the return to education, and contributed to relatively low enrolment rates in tertiary education, particularly technical universities. Moreover, several large family controlled MNCs have chosen to relocate their headquarters abroad in order to facilitate the transfer of ownership to younger generations, which is difficult in Sweden because of high inheritance taxes – Tetra Pak and IKEA are the prime examples. It is likely that the 1991 income tax reform, which reduced the highest marginal income tax rates to 50 percent (which was subsequently raised to 55 percent), has contributed to an improvement in the Swedish business climate for advanced manufacturing operations. Further reductions are probably necessary to improve the possibilities to compete for MNC investments in the future (Blomström 1999).

The area where the shortcomings in the Swedish business environment were perhaps most notable in the early 1990s was higher education. In comparison with other OECD countries, Swedish manufacturing exhibited a low ratio of professionals with tertiary education to total employment, partly because the public sector had absorbed a high share of the educated labor force. In particular, there was a lack of employees with higher technical, mathematical, and scientific education among the younger cohorts, aged 25-34 years (NUTEK 1999). The reason was mainly the low return to higher education because of the progressive income taxes, in combination with limited public investment in qualified university programs. In fact, Björklund (1999) reports that the return to education fell between the late 1960s and the 1980s. In the 1960s, an extra year of higher education led to an average increase in hourly earnings (for men) of 9 percent. Two decades later, this figure had fallen by half.

Moreover, public investments were biased towards primary and secondary education rather than higher academic programs. It has often been pointed out that the costs per child in the public day care system were several times larger than the costs for an average university student.

Internationalization has already led to significant reforms in the educational system. In particular, investments have been made to expand small and medium-sized regional universities and colleges, and the great majority of unemployed people have been retrained in various adult education programs. Although these measures have undoubtedly had some beneficial impact, it is not likely that their full effect has materialized yet. Yet, there is reason to doubt whether an expansion of the public education system will be sufficient to strengthen the human capital base of Swedish industry. It is unlikely that increasing the capacity of universities and colleges will automatically create the right mix of skills and capacities. Instead, it is imperative to improve the incentives for young people considering enrolling in demanding higher education programs. Higher returns to education - through higher wages for qualified professionals - should be preferred before increases in subsidies to students: one of the main objectives is to allow demand conditions to influence the return to education.

In this context, it is also necessary to comment on the high Swedish investments in research and development (R&D). Total Swedish R&D investments have been very high for at least two decades, with the ratio of R&D spending to GDP reaching 3.7 percent in 1997 (which gives Sweden the top international position in this specific category). Swedish MNCs spent an average 20 percent of their value added on R&D the same year, which is also exceptionally high. There is an obvious contradiction between these massive R&D investments, and the relative shortage of highly skilled professionals in industry (and the bias towards low-wage jobs during the late 1980s). A possible explanation is offered by Jakobsson (1999), who argues that R&D and other strategic company functions are concentrated to Sweden for historical reasons. It is tradition rather than superior conditions for advanced R&D that has explained the decision to continue using Sweden as the R&D base of Swedish MNCs. Moreover, Jakobsson points out that these investments are not equally distributed across firms, but that the four leading MNCs account for two-thirds of total R&D in manufacturing. His conclusion is that the exceptional position of Sweden is not likely to survive in the future, unless the conditions for high-tech operations are

improved.

Another paradox related to Swedish R&D is the weak export performance in advanced industries. The returns to R&D in the form of growth or development of high-tech production have been considered disappointing. The reasons for this have been examined in a number of studies. The studies receiving most attention to date of Sweden's low return from R&D have focused on the character of the R&D activities that have been undertaken. For example, OECD (1986) claimed that Swedish research has been relatively ineffective and has not focused enough on high-tech industry. It has also been claimed that an excessive share of Swedish R&D has been devoted to rationalizing the production of low-tech and medium-tech products, such as paper and pulp, and to other activities that do not generate high-tech production and exports, e.g. housing and energy research (Blomström et al. 1990). A further explanation for the low technology content of Swedish exports is based on the "technical balance of trade". According to a government committee analyzing economic growth issues (the "Swedish Productivity Delegation"), the fact that Sweden is a net exporter of licenses, patents and "know-how" suggests that Sweden's exports are more high-tech than they may seem from studying the normal trade statistics (SOU 1991:82).

One common element linking all of these explanations for the Swedish "R&D enigma" is the view that as long as companies' research is successful (in the sense that it generates new, high-tech products), then Sweden's high-tech production should increase (given that production rights, for example in the form of licenses, are not sold abroad). However, it is clear that there is no immediate correlation between the two. We have argued above that competitive assets such as research results, which are transferable within a firm over national borders, and which can be utilized for production both in the home country and abroad, cannot guarantee the long-term competitiveness of the home country. A few decades ago, it could be expected that successful MNCs would locate a large share of their advanced and strategic operations in the home country. Various natural and man-made trade barriers made it relatively expensive to extend the production chain across international boundaries and long geographic distances, and contributed to a concentration of activities in the home country. This is no longer the case. MNCs will consider several alternative locations for all of the individual links in their production chain, and the home country will be chosen only when the production conditions in the home country are at least as

favorable as the conditions elsewhere. In other words, it is becoming increasingly important for the home country to be able to offer an attractive and competitive business environment.

5. CONCLUSIONS

The attention in the Swedish debate on the home country effects of FDI has shifted from old questions concerning the effects of outward FDI on the amount of home country exports to newer questions focusing on the structural effects of FDI on home country production. The liberalization of international trade and investment, together with advances in telecommunications and information technology, have made it possible for MNCs to divide their production chain into several individual components that can be located in different countries. How are home country operations restructured when MNCs outgrow their home economy and set up international production networks that exploit the comparative advantages of several countries? What jobs are left at home?

Examining detailed data for the home country operations of Swedish MNCs during the period 1986-1994, we have argued that there are signs of very notable structural changes in the home country operations of these corporations. The annual gross changes in employment are remarkably large. On average, one out of five domestic jobs have disappeared every year from the largest MNCs, mainly through sales of plants to other firms, while almost equally many new jobs have appeared, mainly as a result of the acquisition of new plants. The changes in the foreign affiliates of Swedish MNCs have been almost as large. Arguably, these large changes give much scope for structural change.

The pattern of structural change is remarkable, particularly for the late 1980s. The jobs lost in Swedish plants during this period paid higher wages than the new jobs that were created. In other words, the home country operations of Swedish MNCs were becoming less advanced, with some specialization on low-wage jobs. During the first half of the 1990s, this pattern was reversed, and an increasing number of jobs with relatively high wages were added to the MNCs. We have argued that the difference between these two time periods was related to differences in the overall business environment. Sweden was not a very attractive location for advanced operations between 1986 and 1990, because of severe macroeconomic imbalances as

well as weaknesses in areas such as taxation and education. Various institutional reforms, partly brought about by a severe financial crisis in 1991-1992, and a more favorable macroeconomic regime contributed to raise the competitiveness of Sweden towards the mid-1990s. The policy implication of these findings is that a competitive business environment is becoming an increasingly important determinant of economic structure. It has for a long time been known that a favorable business environment - including a stable macroeconomic environment, access to skilled labor, appropriate incentives, and so forth - is necessary to attract FDI in sectors and activities with “good” jobs. The main conclusion of the present study is that the same may be necessary to keep the “good” jobs provided by the country’s own multinational corporations.

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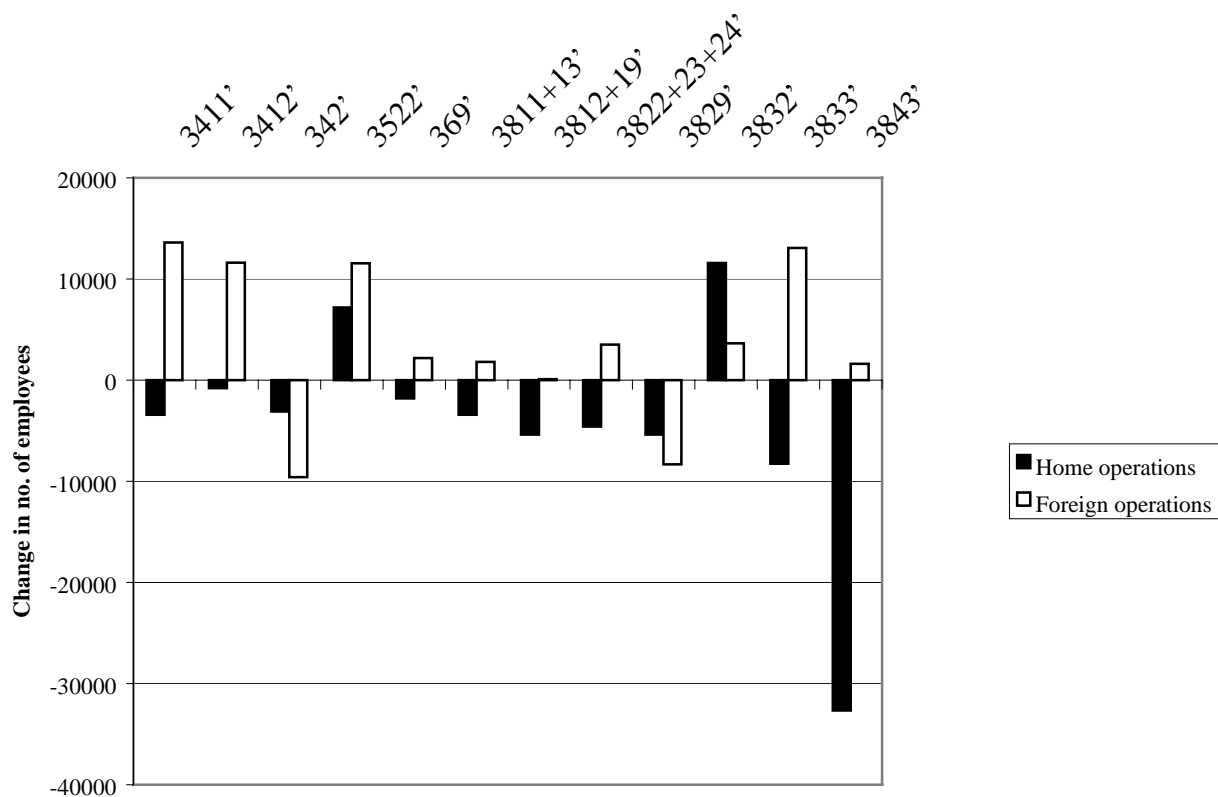
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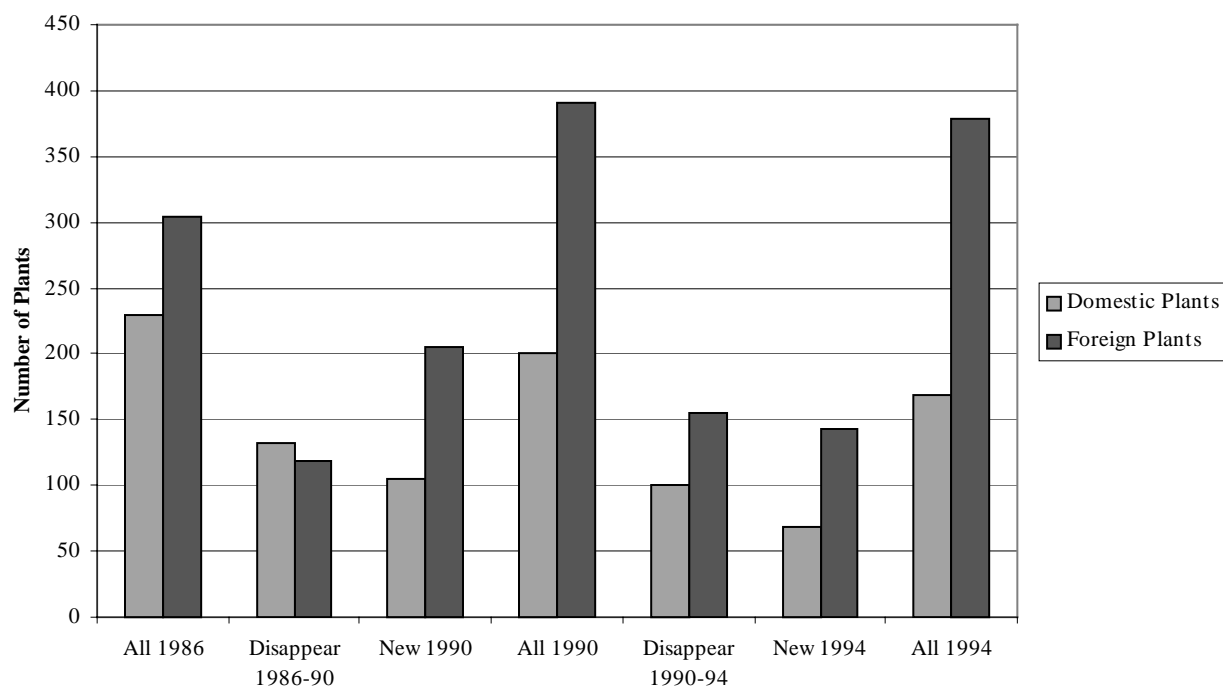
Figure 1 **Changes in Domestic and Foreign Employment, 3 and 4-Digit Industries 1986-1994, 17 Swedish MNCs.**

Source: IUI and Statistics Sweden. Industry categories:



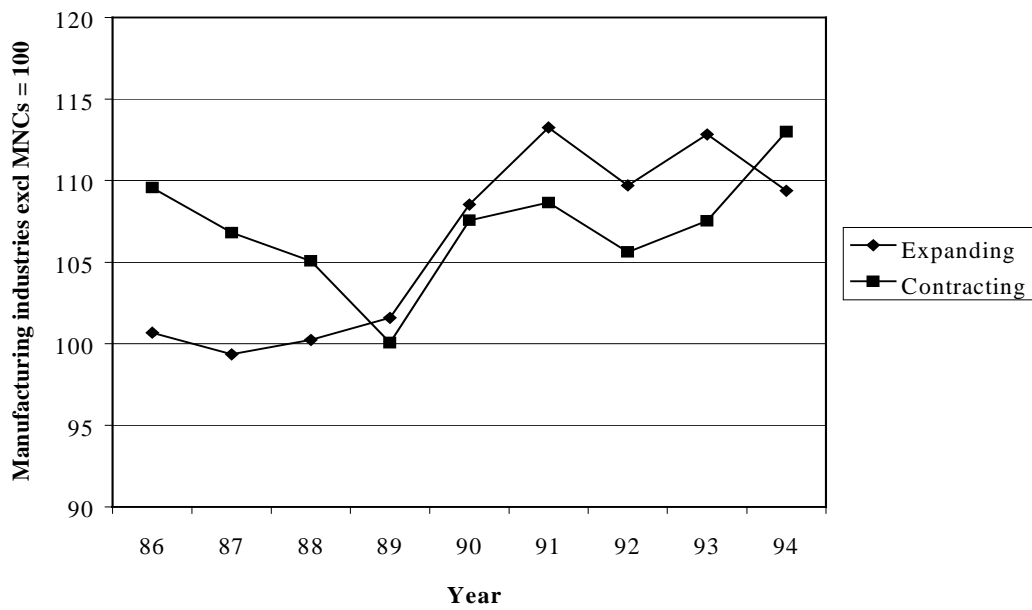
- 3411 Pulp, paper and paperboard
- 3412 Containers and boxes of paper and paperboard
- 342 Printing and publishing
- 3522 Pharmaceuticals
- 369 Non-metallic products n.e.c.
- 3811+13 Fabricated metal products: hand tools and structural metal products
- 3812+19 Furnitures and other fabricated metal products n.e.c.
- 3822+23+34 Agricultural, metal and wood working, and special industrial machinery
- 3829 Machiner n.e.c.
- 3832 Radio, TV, and telecommunications equipment
- 3833 Electrical appliances
- 3843 Motor vehicles

Figure 2. *Plant Dynamics: Changes in the Population of Domestic and Foreign Plants 1986-1994, 17 Swedish MNCs.*



Source: IUI and Statistics Sweden.

Figure 3. **Average Wages in Expanding and Contracting Home-Country Plants, 30 Largest Swedish Manufacturing MNCs (100 = average wage for rest Swedish manufacturing sector)**



Source: IUI and Statistics Sweden.