The Changing Impact of Globalisation: The Case of Sweden

Invest in Sweden Agency

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The Changing Impact of Globalisation: The Case of Sweden

Thomas Andersson and Daniel Friberg
December 2005

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List of abbreviations

FDI	Foreign Direct Investment
GDP	Gross Domestic Product
Greenfield FDI	Establishments set up from scratch
HQ	Headquarters
ICT	Information and Communication Technologies
IPA	Investment Promotion Agency
IPR	Intellectual Property Rights
M&A	Mergers and Acquisitions
MNE	Multinational Enterprise
RCA	Revealed Comparative Advantage
R&D	Research and Development
SME	Small and Medium-sized Enterprises
TFP	Total Factor Productivity

Terminology

Outsourcing	A company moves an activity from within the organisation to an external supplier
Offshoring	Re-location of production abroad irrespective of organisational form

Organisations

IKED	International Organisation for Knowledge Economy and Enterprise Development
ISA	Invest in Sweden Agency
IUI	Industrial Institute for Economic and Social Research
OECD	Organisation for Economic Cooperation and Development
SACO	The Swedish Confederation of Professional Associations
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organisation
WAIPA	World Association of Investment Promotion Agencies
WTO	World Trade Organisation

Foreword

The effects of foreign direct investment (FDI) are analysed today in a more balanced way than before. For that reason, Invest in Sweden Agency (ISA) wanted to take a closer look at this issue, especially in view of the mandate the Government has given ISA to propose measures to improve the investment climate in Sweden.

The International Organisation for Knowledge Economy and Enterprise Development (IKED) was assigned to study possible good, bad and/or mixed effects of FDI and the reasons why the effects occur. IKED was also to suggest how the institutions of a country should be designed to maximize the benefits of FDI.

What are the prerequisites for successful FDI policies? Why do some countries seem to benefit more than others from FDI? What are the needs of companies and investors facing accelerating globalisation? These are some of the issues that this study – *The Changing Impact of Globalisation: The Case of Sweden* – seeks to address.

The study provides an assessment in a European context, though with special focus on Sweden. It is therefore divided into two parts: a Europe-oriented section in English and a more detailed, Sweden-oriented one in Swedish.

This IKED study has coincided with the publication of *What's Next? Strategic Views on Foreign Direct Investment* (Sep. 2005) by ISA in cooperation with the United Nations Conference on Trade and Development (UNCTAD) and the World Association of Investment Promotion Agencies (WAIPA). The very interesting article "coping skills" in What's Next? was written by one of the authors of this study, professor Thomas Andersson, who is also president of Jönköping University.

The topic is certainly a challenge to any policy-maker, practitioner or researcher in the area of FDI. The results of the study, which incorporates a new survey on the extent of internationalisation of small and medium sized enterprises, nevertheless explain quite a lot. The study concludes that the effects of FDI on a society are not given – they may be positive, mixed or even negative depending on the quality of the business climate, including its capacity to absorb and develop new ideas and technologies. Governments and policy-makers have an im-

portant role in getting the investment environment "right" so that FDI acts like a "vitamin injection," thus enhancing competitiveness and economic growth.

And making Europe – and in particular the EU15 countries – more attractive and competitive is indeed *a must* in light of the global competition we are facing. Today China and India are in focus; tomorrow a number of other dynamic emerging economies will challenge developed countries, not only in manufacturing, but also in advanced R&D and operations of high added value. For sure, in Europe we do not have much time to lose. We must be prepared to take advantage of increased flows of FDI, which will involve new sectors, new actors and new methods. Much will happen – and much will change.

The authors of the IKED study are Thomas Andersson and Daniel Friberg. They are solely responsible for its contents and conclusions, which do not necessarily reflect the views of ISA.

Stockholm, December 2005

Kai Hammerich
Director-General

1. Introduction

Globalisation is a pervasive force in the world economy and in most individual countries. Production factors are increasingly mobile, and knowledge is being diffused on an unprecedented scale. Still, globalisation remains controversial. Although the sizable flows of portfolio investment are more visible, the debate on globalisation commonly focuses on the role of foreign direct investment (FDI) and Multinational Enterprises (MNEs), which continue to represent the most tangible aspect of the globalisation process.

Attitudes towards FDI have been ambiguous for a long time. In developing countries, FDI was viewed early on as a continuation of colonialism. Even in developed countries, FDI was at times considered a threat, either on the ground that it would lead to overexploitation of natural resources or of local markets, or for political reasons. Gradually, however, awareness of the potential benefits of inward FDI in the form of capital inflows, access to new technology and skills, employment opportunities, and an expanded tax base, has brought a welcoming attitude in most countries. The desire to reap the benefits of inward FDI has generally become the predominant force shaping government policies in this area.

In order to maximize the gains for their economies, many developing countries imposed performance requirements on MNEs in the 1960s and 1970s. The effectiveness of such measures was increasingly questioned, however. Investments were discouraged from the outset, and investor behaviour distorted in unwanted ways. As a result, in multilateral negotiations under WTO auspices, countries have agreed to rules limiting the scope of mandatory requirements on investors. Governments and regions now commonly offer special incentives to foreign investors in order to stimulate certain actions on a voluntary basis, and/or provide targeted information as a means to attract investment. Furthermore, most governments have established an investment promotion agency (IPA).[1]

Increasingly, attention has been paid to country strategies for enhancing the gains from FDI through indirect measures. As one element of such a strategy, measures are often adopted to boost the capacity of domestic industry to benefit from inward FDI. It is widely thought that technology and know-how can be diffused from MNEs to local

industry through various mechanisms (content of goods and services, manuals, mobility of workers or managers, informal conversation, and so on), without any means for the provider to acquire full compensation for the value of the transfer. Positive spillover effects cannot be taken for granted, however, but will depend on, for example, whether domestic industry has the capacity to absorb and make use of new technologies and skills, as well as on the behaviour of MNEs.

Although most studies conclude that the overall impact of FDI tends to be positive for home as well as host countries, recent work has rendered ambiguous conclusions and painted a complex picture. The focus has gone beyond the mere size of investment flows and the number of foreign affiliates to the overall role of FDI in the economy. The significance of inward and outward FDI is related partly to the specific firm activities affected, such as headquarter (HQ) functions and research and development (R&D). The impact of FDI varies depending on the circumstances, including a range of factors and policies, incentives and conditions, prevailing in different countries.

Whereas most FDI takes place between developed countries, there is now growing competition in FDI from "new" countries, notably in Central and Eastern Europe and in East Asia. While continuing to have considerably lower wages and production costs than the industrialised world, these countries can now offer competitive conditions for many sophisticated industrial activities. A remarkable increase in high-technology exports has been noted for East Asia. Some take the form of standardised assembly output, but much is skill-intensive and produced by qualified workers at low or modest wages. A considerable portion is related to expanding capacity through FDI, and almost all patenting in these countries is pursued by foreign MNEs. Still, domestic industry is also gaining rapidly in technological sophistication. In China, this includes the rise of regional clusters of "township enterprises" which have grown to more than 100 million employees over a time span of just a few decades. In some developing countries, notably India, sophisticated services are becoming more widespread, through both FDI and domestic expansion.

At the same time, many developed countries face mounting economic problems. This applies not least to several member countries of the European Union (EU). The so-called Lisbon Agenda, adopted by the EU in 2001 to turn Europe into the most competitive economy in the world within 10 years, appears increasingly unrealistic. Among other OECD-countries, Japan has gone through more than a decade of stagnation. The United States, while recording higher productivity and overall growth rates, is plagued by an increasing current account deficit and weakening public finances. Taken together, these developments reflect changes under way in the international division of labour, primarily between Asia – especially China and India – on the one hand, and the developed countries on the other.

Liberalisation and regulatory reforms along with technical progress, notably in information and communication technologies (ICT), are paving the way for a range of organisational innovations. There is an ongoing decompartmentalisation of the value chain, with each element located in principle wherever it is most effective. Traditional hierarchical value chains are being dismantled and replaced by operations that allow multiple inter-connected horizontal units to interact over vast geographical distances. On the other hand, various studies have shown that geographical dispersion may reduce effectiveness. Proximity still matters in many cases, and the attractiveness of a particular location may crucially depend on what related activities and functions are present nearby.

A broadening range of industries and firms are being induced to rationalise and outsource certain business activities or to relocate them offshore. Further, contrary to previous trends, globalisation is no longer limited to large-scale manufacturing operations. Services now predominate in FDI, and small and medium-sized enterprises (SMEs) are increasingly involved. Industrial performance is based less on economies of scale at the plant level than on flexible and proactive strategies worked out in co-ordination of separate production, process, and product-development units within dynamic networks. SMEs are thus becoming increasingly important for economic and technological performance (OECD, 2002). Compared to large firms, SMEs tend to be more tied to local resources and capabilities, to be affected by globalisation in other ways, and to encounter special risks.

All investment decisions are taken under conditions of uncertainty and imperfect information. Today, there is a dearth of data concerning what is actually going on in SMEs as a consequence of globalisation, raising a host of new questions on the consequences, not least for employment and regional development. There is thus a need for better data, including data on the spread of globalisation to industries and kinds of firms which were much less affected in the past, and for a better understanding of the factors that determine what outcomes are obtained. The complexity of the process under way and its far-reaching implications has been elaborated in a number of studies, as most recently in *What's Next* (ISA in cooperation with UNCTAD and WAIPA, 2005). Ultimately, the effects of globalisation will hinge on the manner in which economies evolve and respond, with respect to upgrading of skills, for instance, and on the extent to which new products, firms, and jobs develop in place of those that dwindle or disappear.

In this situation, many countries are considering whether their current policies are conducive to benefiting from FDI. Reviewing current issues in this area, the present study focuses on developments in a single country – Sweden. The Swedish case is interesting for several reasons. First, Sweden is one of the most internationalised countries in the world in terms of inward as well as outward FDI. Second, Sweden has among the best data on FDI as well as MNE-behaviour together with the United States. We particularly report on conclusions based on a recent questionnaire with strong coverage of SMEs, for the purpose of casting new light on what is under way within that category of firms. Globalisation aspects are clearly important for understanding the performance of the Swedish economy as well as for determining what policy responses are warranted for countries seeking to cope with the increasing global competition in high-technology activities with high value added.

The outline of the study[2] is as follows: Section 2 reviews relevant trends and patterns in FDI, firm strategies, and organisation. Section 3 examines specific trends and patterns in inward and outward FDI in Sweden. Section 4 focuses on factors influencing location decisions, including those relating to headquarter functions and R&D facilities. The effects of FDI, and how they are determined, are explored in

Section 5. In Section 6, the changing implications of FDI are examined in greater detail in the case of Sweden, with special attention to impacts on SMEs. Conclusions and lessons for policy are presented in Section 7.

1. In total, 180 IPAs from 147 countries are now registered members of WAIPA (World Association of Investment Promotion Agencies), founded in 1995.

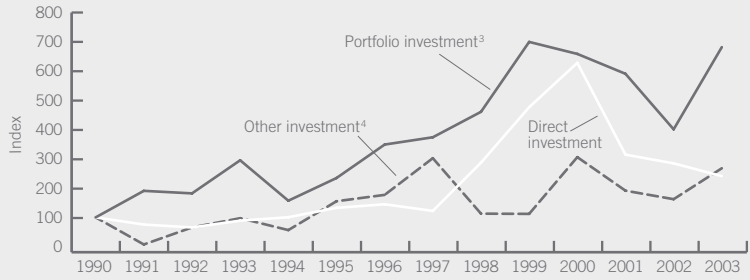
2. The authors are grateful for input and comments provided by colleagues at IKED, and Torbjörn Fredriksson, UNCTAD. Kai Hammerich and Magnus Runnbeck, ISA, and senior business representatives and experts present at two seminar discussions in 2005, provided valuable comments.

2. Trends and patterns in FDI and firm strategies

Based on traditional measures of international trade and merchandise, globalisation appears to be evolving along a fairly stable trajectory of modest expansion. Judging from the surge in capital flows in recent decades, however, globalisation has accelerated. So-called portfolio investment more than tripled between 1994 and 1999. Although declining somewhat during the ensuing economic downturn, as shown in **Figure 1**, it recovered in 2003. The most important factor in globalisation, no doubt, is the development of FDI, which peaked in 2000, then slackened in the wake of the millennium, and is now picking up again (WIR, 2004).

Because of its long-term nature, involving an equity share that is sufficiently large to acquire control over a foreign firm, FDI brings a potential for sizable flows of technology and knowledge across national borders. At both industry and firm levels, there is evidence of increasingly intensive cross-border restructuring driven by FDI. According to UNCTAD (2004), there are presently some 690,000 foreign affiliates worldwide, which account for a third of world exports and a tenth of world production.

Figure 1: Components[1] of international trade and investment for OECD[2], 1990–2003, 1990 = 100



1. Average imports + exports or average assets + liabilities.
2. OECD excluding the Czech Republic in 1990–92, Greece in 1998, and the Slovak Republic in 1990–92 and 2001.
3. Excluding financial derivatives.
4. This type of investment comprises trade credits, loans, currency and deposits, and other assets and liabilities.

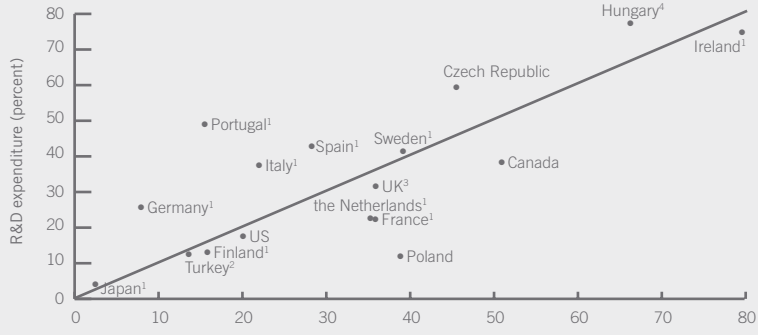
Source: OECD (2005)

As for geographical patterns, FDI is concentrated largely in North America, Europe, and East Asia. In terms of sectors, finance, trade and logistics account for the bulk of FDI. In services, the United

States, Japan, and France remain the most prominent countries of origin among the developed countries, and represent the main destination as well. The developing world, whose share of FDI declined in the late 1990s, has recently gained in importance and received some 42 percent of total FDI in 2004, compared to 27 percent during 2001–2003 (UNCTAD 2005). East and Central Europe account for a growing share. China is responsible for most of the increase, however, and is currently the world's third-largest destination for total FDI flows, and the single largest in manufacturing. Several other Asian countries are increasingly attracting FDI in services, with India in particular gaining in importance (OECD, 2004*a*).

In developed countries, MNEs have a well-established position almost everywhere. **Figure 2** shows that foreign affiliates in manufacturing tend to account for a significant share of both production and research, reaching as high as 70 percent of manufacturing R&D and turnover in Ireland and Hungary. With the exception of Japan, their shares generally exceed 10 percent. Most individual EU countries also have a higher penetration of foreign affiliates than the United States or Japan.

Figure 2: Share of R&D expenditure and turnover of affiliates under foreign control in total manufacturing R&D and turnover, 2002 or latest year



[1] Year 2001
[2] Year 2000
[3] Year 1999
[4] Year 1997

Source: OECD (2005)

In developing countries, MNEs generally account for a smaller share of the economy but tend to be highly important for international trade and investment. The most advanced developing countries are

attracting not only standardised but also increasingly knowledge-intensive operations (Yuan, 2005). China has attained the third largest R&D-capacity in the world in absolute terms and attracted some 700 foreign research facilities (UNCTAD, 2005). It is also establishing significant R&D-facilities of its own abroad (von Zedtwitz, 2005*a*).

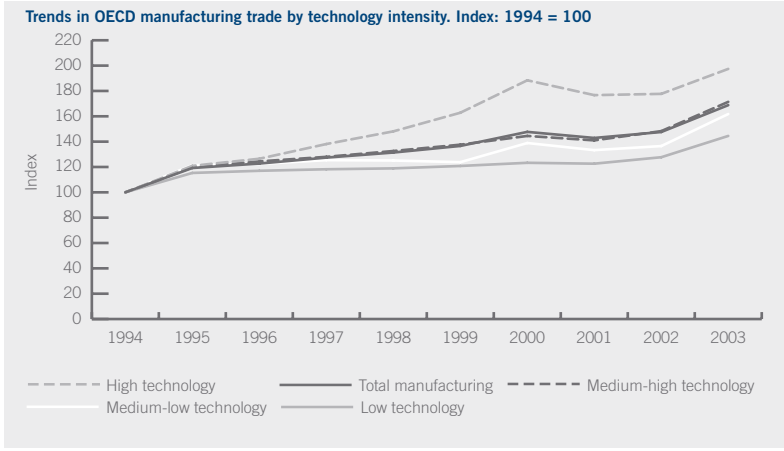
Whereas services, compared to manufacturing, used to be less prone to international trade and investment, many have now taken on configurations which enable storage and trade. Apart from having tilted towards services, FDI is undergoing sweeping organisational changes, in part induced by privatisation and regulatory reforms combined with new means for managing information, research, and innovation. The bulk of these changes consist of mergers and acquisitions (M&As), accompanied by a proliferation of strategic alliances. Greenfield establishments are much more common in developing countries and also in East Asia, although companies from those regions are becoming increasingly active in M&A as well. Compared to greenfield investments, M&A permit more rapid entry into foreign markets and more effective exploitation of existing linkages with domestic actors. Entailing changes at headquarters (HQ), M&A may have far-reaching implications for strategic business functions, such as R&D and procurement practices. M&A have been subject to dramatic fluctuations over time, however, and their success raises questions. As a mode of entry, M&A offer less flexibility in designing operations, and tend to pose challenges in terms of aligning existing organisations.

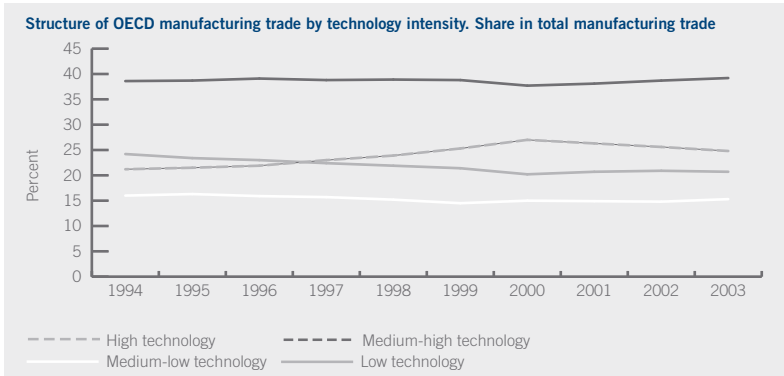
Technology- and skill-intensive industries and products are on the rise in most countries (OECD, 2005). Despite a certain downturn since 2000, as indicated by **Figure 3**, the share of high-technology products in international trade increased systematically for several decades. These changes are popularly associated with the advance of the "knowledge-based society", and reflect a dramatic drop in the costs of codifying and diffusing information in addition to previous reductions in communication and transport costs over the last century.

Meanwhile new tools have been developed for organisations to divide and specialise operations, and the boundaries between internal processing and arm's length transactions have shifted. Faced by stiffening competition, and in pursuit of enhanced efficiency, firms have increas-

ingly outsourced non-core functions to other firms or relocated them to units offshore. At the same time, tacit knowledge and proximity to other attractive activities remain significant factors. The presence of existing firms, or specific complementary functions, may thus be crucial in determining the attractiveness of a region as a location for a particular activity. Firms need to access relevant knowledge wherever it is available, and may engage in local learning processes at multiple sites (Narula and Zanfei, 2004; ISA, 2005).

Figure 3: OECD[1] manufacturing trade[2] according to technology intensity, percent



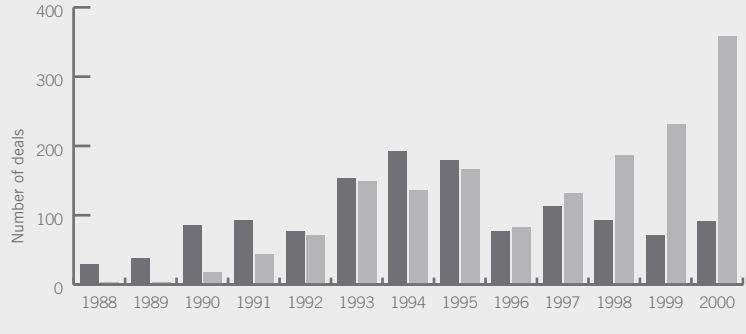


Note: [1] OECD member countries exclude Luxembourg and Slovak Republic.
[2] Average value of total OECD exports and imports of goods.

Source: OECD (2003)

Such aspects apply increasingly also to SMEs, which account for the lion's share of production and employment in most countries. Traditionally viewed as tied to local markets, SMEs are gradually becoming engaged in international restructuring. This tendency is reflected in **Figure 4**, which shows the number of cross-border alliances that involve SMEs. The figure also indicates that the focus of this kind of international linkages for SMEs has shifted from manufacturing to services. SMEs are still subjected to limitations, however, for instance when it comes to administrative capacity and handling of fixed costs, which accounts for specific challenges and risks.

Figure 4: Number of cross-border alliances involving SMEs, 1988–2000, number of deals



Source: OECD (2002)

The prevailing view of MNE organisational structures as hierarchical has been replaced by a notion of dynamic differentiated networks.[3] There is a perception of affiliates moving from "competence exploitation" to "competence creation," from "assembly-type" towards "research intensive" or "strategic asset-seeking," implying increased skill enhancement and training to develop specific assets in foreign affiliates (Dunning 1995; Kuemmerle, 1996). In terms of relations between home and host countries, the shift would be from "home-base exploiting" to "home-base augmenting" activity. With the geographical reach and independence of affiliates generally increasing, more conflict has been observed between home operations and affiliates, posing greater challenges for MNEs to co-ordinate global

operations[4] (Mudambi, 2002; Forsgren and Pedersen, 2000). **Box 1** summarises some of the changes in the strategies and structures of MNEs described in recent literature.

Box 1: Ongoing changes in MNE strategies and behaviour

- There is intensification of operations and competences around a well-defined core. The value added chain is decompartmentalised as each element, in principle, is organised and located wherever it is most effective.
- Traditional hierarchical value chains are dismantled and replaced by multiple interconnected horizontal units which may interact over vast distances.
- Organisational changes are pursued with the objective of enhancing learning processes around the "core business". "Customisation" of operations brings more decentralised management systems and enhanced research and strategic capabilities at the subsidiary level. At the same time, firms are merging with, acquiring, or linking up to partner firms. There are networks of suppliers, specialising in complementary functions. Procurement practices are used systematically to pressure suppliers in various ways: to reduce prices, improve quality, speed deliveries, assume R&D costs, etc.
- In R&D, increased specialisation is coupled with enhanced co-operation among firms, as well as between firms and universities, and firms and public laboratories. In addition to the earlier purpose of primarily adapting products to local markets, there is a desire to access sources of technology (Sachwald, 1998; Mudambi, 2002). Firms balance and combine internal capabilities and external sources for the purpose of innovating more successfully (Cassiman and Veugelers, 2002).
- Geographically concentrated agglomerations are tied together more by exchanges of knowledge than by traditional trade in intermediary goods, and by pooling risk in R&D. There is particularly strong clustering in technology-intensive activities, and follow-the-leader behaviour in movements of headquarters and R&D facilities (Florida, 1997; Birkinshaw et al., 2003).
- SMEs, which may enjoy an advantage in flexibility compared to large firms, have become more prominent in the application of new technology and innovation (Jovanovic and Nyarko, 1996). Disadvantaged by lacking economies of scale at the firm level, many SMEs are entering networks that allow them to obtain advantages of scale and scope at the level of company groups or clusters of related firms (Lazerson and Lorenzoni, 1999).
- SMEs are heavily influenced by the rapid internationalisation and outsourcing of responsibilities by larger partner firms, while also themselves increasingly engaged in offshoring and outsourcing of non-core elements.

Table 1 illustrates what a decision to invest abroad may entail in a specific case. The table concerns a manufacturing company headquartered in Stockholm that is considering whether to locate a production unit in the city of Kalmar, Sweden, or, through outward FDI, in Ventpils in Lithuania. The two options are compared according to a number of variables. Based on production costs as well as other factors, the estimated returns from locating in Lithuania are considerably higher than those from locating in Sweden. Foregoing the opportunity for FDI in Lithuania could have serious negative consequences for the enterprise.

Table 1: Factors determining production unit location

Variable	Kalmar (Sweden)	Ventspils (Lithuania)
Distance to HQ	350 km	320 km
Land connection to HQ	Yes	No
Harbour in the Baltic Sea	Insignificant	Large
Closeness to airport	Yes	Yes
Labour cost/h and worker	SEK 196	SEK 22
Hours worked/year	1,564	2,101
Productivity/h worked	100%	35%
Price of heavy fuel oil	€ 653.34/ton	€ 150–200/ton[e]
Price of diesel oil (/1,000 litre)	€ 901.54	€ 640.28
Corporate tax	28%	15%
VAT	25%	18%
Taxation of dividends	30%	10%
Wealth taxation	Yes	No
Tax credits	No	Yes
Zone-investment subsidies	No	Yes
Free-trade	EU	EU

e = Estimate

Note: The precise estimations pertain only to a particular point in time, and merely serve to illustrate the presence of a considerable differential between countries in a range of factors relevant for investment decisions.

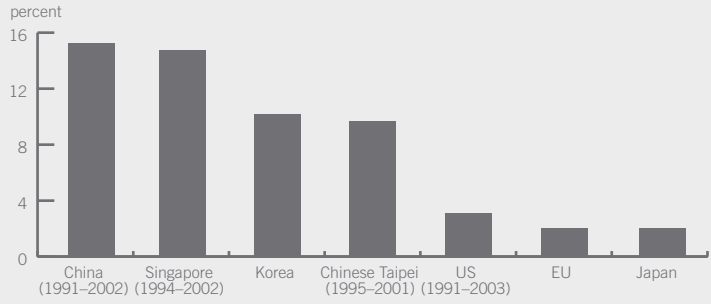
Source: Wigström (2004)

For firms in a comparatively high-cost environment like Sweden, efficiency-enhancing opportunities such as this one tend to be widely available through FDI. The scope of such opportunities depends, among other things, on the cost differential between the home country and potential host countries in relevant economic activities. On the other hand, FDI is also associated with costs, some of which may be unexpected, or underestimated, at the outset. These may arise from new requirements of administration, or from disturbances that reduce the reliability and flexibility of operations or delivery. The more a firm relies on price competition and cost control, the more preoccupied it will be with options for improving efficiency through FDI. Conversely, the more dependent a firm is on quality, precision, just-in-time delivery, and continuous innovation, the less it emphasises cost considerations in a narrow sense and the more it focuses, for example, on skilled workers, creativity-enhancing work organisation, strong ICT infrastructure, and effective R&D.

A significant ongoing development is the growing weight, accessibility and reliability of markets in developing countries. This tendency is particularly apparent in Eastern and Central Europe and the rapidly industrialising economies of Asia. These countries offer increasingly attractive locations for FDI, and not only for activities where there is a need to reduce costs. **Figure 5** shows that growth in R&D expenditure for some Asian countries has been considerable, vastly surpassing that of most western countries. The trend is particularly impressive for China, which has noted an average annual increase of 15.2 percent between 1991 and 2002. Contributing strongly to this development, MNEs are establishing R&D facilities on a grand scale in China. The purposes of such investments include adaptation of products to local markets, as well as pursuing radical innovation. It is also noteworthy that R&D continues to grow more slowly in the EU than in the US, and that this gap keeps widening.

Although a range of regulations and institutions needed for well-functioning markets are still lacking, for example as regards protection of intellectual capital, conditions are rapidly improving in countries such as China and India. There, the greatest change under way is the enormous increase in highly qualified workers coupled with advances in ICT (World Bank, 2005). Demands for higher wages and social security, and tensions between the national government and regional authorities in the development process, represent major issues in both

Figure 5: Growth of R&D expenditure, annual average growth rate 1991–2001, percent*



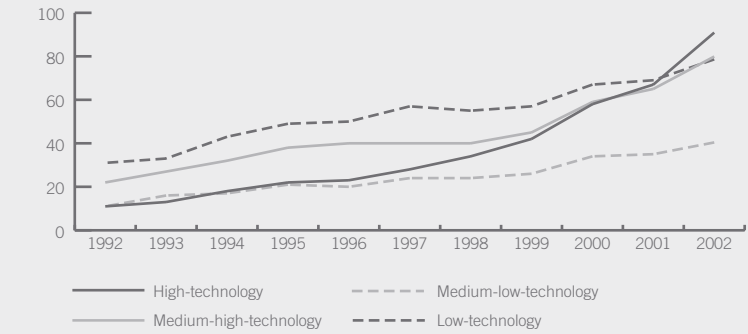
Notes: There is a break in the series for China between 1999 and 2000, as well as breaks in the series for the United States in 1997 and 1998. Furthermore, the US data for 2002 and 2003 are provisional.

Source: OECD, MSTI database * Based on national currencies in constant prices

countries. On the other hand, as their industries and governance structures mature, they are able to learn from failures in developed countries, and may thereby avoid creating counterproductive incentives in critical areas.

While high-technology exports from China are surging, as shown in **Figures 6** and **7**, Western Europe in particular has seen a considerable shift away from specialisation in such exports. In addition, China is in the process of closing its gap relative to the US, largely because MNEs are locating increasingly complex operations in China. Recent studies indicate that FDI in China is now crowding out FDI in OECD countries rather than in other developing countries (Eichengreen and Tong, 2005). In Estonia, there are indications of a weakening attractiveness for standardised production, which raises pressure for reforms in support of knowledge-intensive operations as a prerequisite for FDI (Tiits et al., 2005).

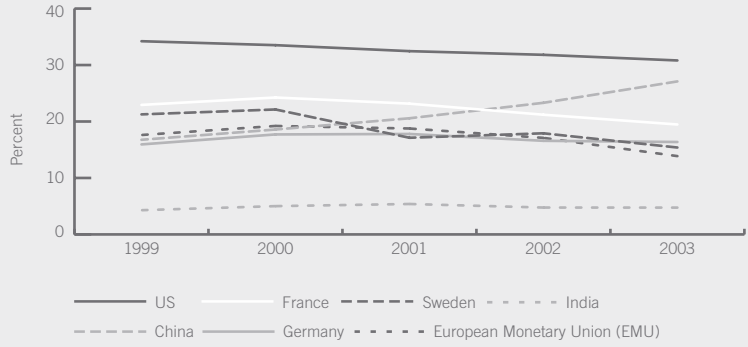
Figure 6: Evolution of Chinese trade by technology-intensity, 1992–2002, billions of USD in current prices[1]



Note: [1] Average of imports and exports.

Source: OECD, ITCS database

Figure 7: High-technology exports in percent of manufactured exports, 1999–2003

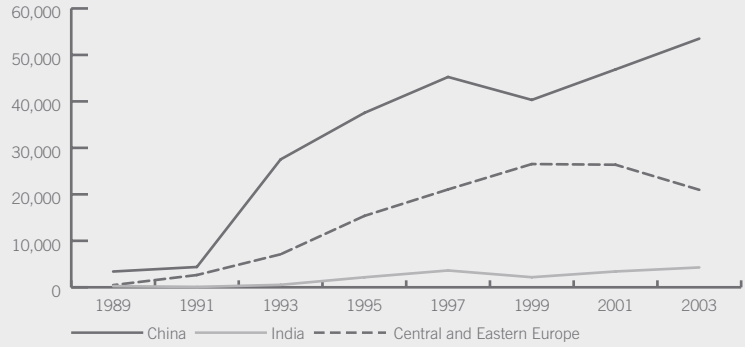


Source: WDI (2005)

Among the current changes in FDI patterns, we are witnessing a certain convergence of "cost-driven" and "quality-driven" localisation. The evolution of FDI is interrelated with the restructuring processes under way in different regions. Most notably China, India and Central and Eastern Europe are managing to produce quality prod-

ucts at high cost-effectiveness, as shown by the characteristics of their inward FDI flows. While India so far has received rather limited FDI, as shown in **Figure 8**, "pockets" of such leading-edge, high-skill operations are now well established there and are evolving rapidly. There are examples of individual ventures employing vast numbers of PhD's from leading international universities, and of a rapid increase in skilled workers.

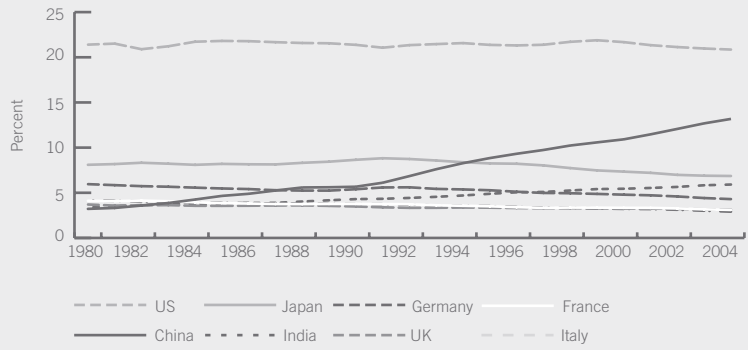
Figure 8: FDI inflows, 1989–2003, millions of USD



Source: UNCTAD, FDI database

In the meantime, many firms and industries in developed countries are reaping rapid gains in efficiency from outsourcing and offshoring of activities to increasingly dynamic developing countries where production costs are modest. At the same time, some developed countries face serious adjustment problems, with the EU particularly slow to adapt. Measured in terms of aggregate economic activity, the share of the EU in world income has fallen radically. **Figure 9** shows the weak record displayed specifically by Germany, France, Italy and the United Kingdom, and also shows that the share of the United States has stagnated. As can se seen, Asia's share has risen markedly, in part thanks to the development in China and India.

Figure 9: Changing composition of world income, 1980–2004, percent of world GDP



Source: IMF World Economic Outlook (WEO) database

3. This has been referred to as a state of "heterarchy" (Hedlund, 1986).

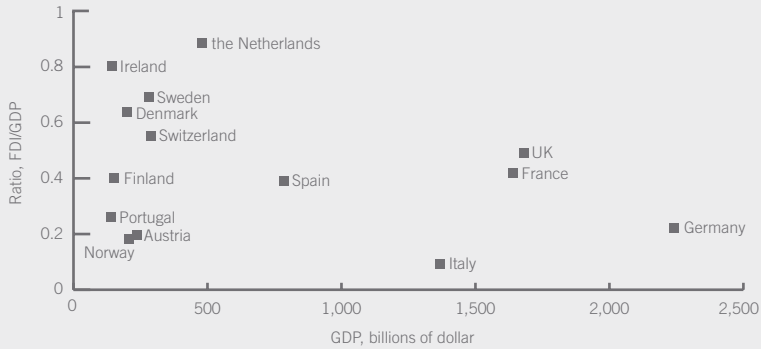
4. The home base is traditionally thought of as the place where the company has its core competence, which is then exploited elsewhere in "home base exploiting" operations. "Home base augmenting" operations aim at augmenting that activity, e.g., by means of locating "listening posts" or R&D units in strategic locations with the intent of absorbing spillovers that may then be transferred back to the home base. Arguing that the home base is no longer critical, some refer to asset-exploiting versus asset-augmenting investments (Narula and Zanfei 2004).

3. Country-specifics: the Swedish case

The opportunities and challenges raised by globalisation play out differently in each individual country. Yet most studies, and detailed data related to FDI, focus on US investment flows. Today, however, many countries are strongly affected by globalisation. Broadly speaking, the degree of internationalisation is reversely related to country size, meaning that smaller economies tend to be more internationalised. Meanwhile there has been a notion that industries characterised by high value added benefit from increasing returns to scale, due to high fixed costs in R&D, and would have a tendency to concentrate in relatively large countries (Krugman, 1991). By contrast, industries with constant returns to scale, and with standardised low value-added production, would rather locate in smaller and peripheral economies. Contributing to such impacts might be the capacity of a large domestic market to support variation in new enterprise and product development, depth in financial market institutions, greater scope of public R&D, or that the supply of skilled personnel may be less restrained in countries with a relatively large work force.

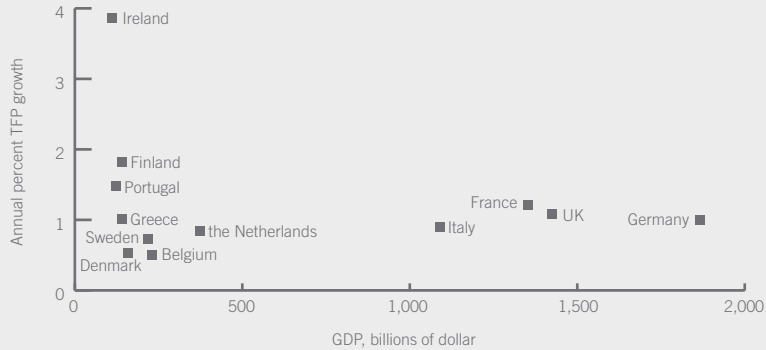
While country size seems to favour some knowledge-intensive activities, as is suggested by the relatively high concentration of foreign R&D in large host countries (Florida, 1996; OECD, 2003), small market size may offer other, more important advantages. One is a greater pressure on political institutions to dismantle trade and investment barriers, or to pursue needed structural reforms.[5] Examining patterns in the European Union, as is shown in **Figure 10**, country size indeed does display a negative correlation with FDI relative to GDP, i.e. the bigger European economies record small inflows in relative terms. As seen from **Figure 11**, total factor productivity growth is unrelated to country size, if anything the larger economies display a lower growth rate. Conversely, Ireland, the Netherlands, Denmark, Switzerland and, in recent years, Finland and Sweden have a relatively strong record, not only in inward FDI, but also in R&D and economic growth. All these countries undertook structural reforms and achieved high stability early on, and that helped feed the development of internationally competitive industries. In terms of economic results, they outperform the EU average. Small market size may clearly be compensated for by openness and policies conducive to the creation of knowledge.

Figure 10: GDP, 2003, and accumulated FDI flows relative to GDP, 1999–2003



Source: UNCTAD; FDI database and Handbook of Statistics

Figure 11: GDP 2001 and average annual TFP growth 1990–2001



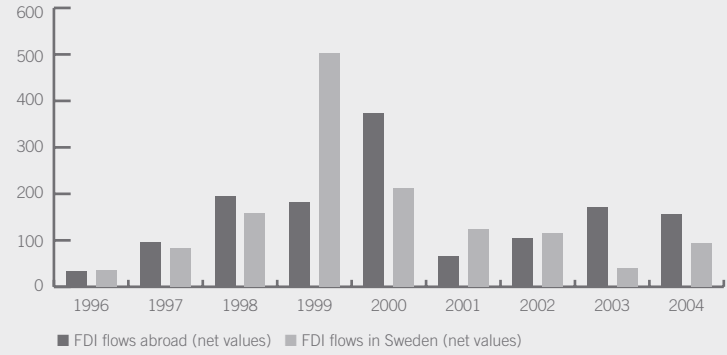
Note: Data for Portugal excludes 1990–1994.

Source: UNCTAD handbook of statistics and OECD database

What is the role of inward and outward FDI in shaping specialisation patterns? The interplay between firms and national economies will be strongy dependent on country-specific characteristics and development paths. In the following, we take a close look at the magnitude and nature of both outward and inward FDI in the case of Sweden.

In Sweden, foreign control of domestic industry used to be restricted. Whereas production was expanding abroad, firms remained nationally controlled. Outflows of FDI vastly outweighed inflows until the early 1990s. Following regulatory reforms, and the announcement of Sweden's intention to seek membership in the European Union, however, inflows increased strongly and, since 1994, they roughly equalled outflows. In recent years, both have declined, with outflows again predominating in 2003 and 2004, as can be seen in **Figure 12**.

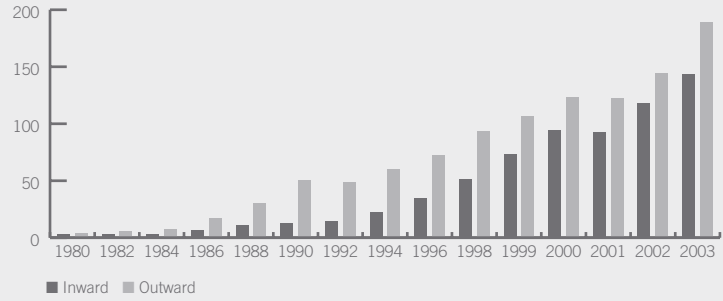
Figure 12: Net FDI flows, Sweden, 1996–2004, billions of SEK



Source: Central Bank of Sweden (2005)

Figure 13 shows that the stock of outward FDI remains larger than the stock of inward investment following the previous expansion, although the gap has narrowed since 1996.[6] These trends are reflected, for instance, in employment. In 2003, Swedish enterprises reportedly had more than 950,000 employees abroad, while foreign firms employed some 560,000 in Sweden. In 2004, the number of employed by foreign-owned firms declined to 544,000 (ITPS, 2005*b*). Below, we briefly review some of the main patterns of outward and inward flows, respectively.

Figure 13: FDI stock, Sweden, 1980–2003, billions of USD



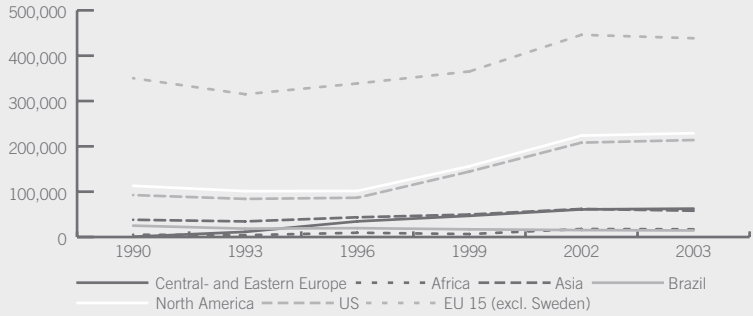
Note: Values for 2003 are preliminary estimates.

Sources: UNCTAD (2004) and UNCTAD FDI database

Outward FDI

Looking at outward FDI, Swedish-based MNEs first established turnover offices and then production units abroad. Today, some 65 percent of their employment and 43 percent of their R&D is accounted for by foreign affiliates (ITPS 2004*a*; ITPS, 2003).[7] Most of their overall expansion has been in the EU and the US, primarily through sizable M&A. Sweden's outward FDI rose substantially in 1990 with the acquisitions of Feldmühle in Germany and Reedpack in the United Kingdom by Stora and SCA, respectively. As of 2003, around a fifth of all employees abroad were in the US and almost 50 percent in the EU15 (**Figure 14**). For Swedish international companies as a whole, 84 percent of their employees abroad were located in OECD countries. The share of employees in Asia has been steadily increasing, with China and India gaining in importance; each of these countries currently accounts for about two percent of Swedish MNE employees. In Latin America, Brazil is the principal host country, though it has become less dominating recently. Numbers are on the increase, especially in China and Eastern Europe.

Figure 14: Number of employees in Swedish MNEs by region, 1990–2003



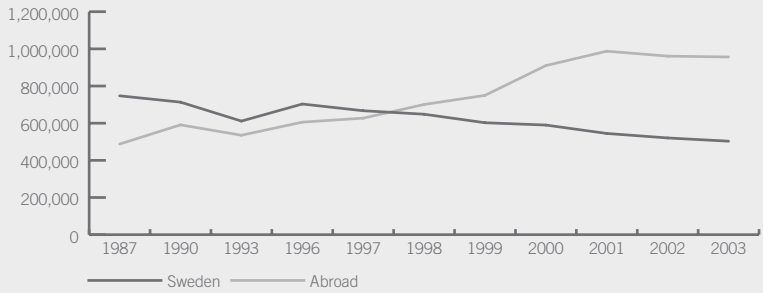
Note: EU-15 include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

Source: ITPS (2005*a*), ITPS (2003*b*), ITPS (2001), ITPS (1996)

The number of employees abroad was stagnant for the largest manufacturing firms but rose sharply for the 40 largest service companies in the period 1990–2001 (ITPS 2004*a*). **Figure 15** shows that since 1998, Swedish-owned MNEs have had more employees in other countries than in Sweden. The 20 largest and most internationalised Swedish companies had more than four times as many employees abroad as in Sweden. Between 1996 and 2001, the number of employees abroad almost doubled, increasing by some 300,000. In Sweden, by contrast, the number of employees dropped by 27,000 during the same period.

Until recently, the major Swedish MNEs completely dominated business R&D. As will be shown, however, foreign-owned firms have now attained a sizable share.

Figure 15: Number of employees in Swedish-owned MNEs, 1987–2003



Note: The population of Swedish MNEs changes over time. Foreign takeovers have had a significant impact on the statistical aggregate figures since some MNEs were removed from the sample when they ceased to be classified as Swedish.

Source: ITPS (2004*a*) and ITPS (2005*a*)

Inward FDI

Table 2 shows the growing presence of inward FDI in the Swedish economy as measured by various indicators. As of 2002, foreign-owned firms accounted for almost 32 percent of turnover and 36 percent of R&D expenditure in Sweden. Their share of exports was a full 48 percent, indicating the export oriented emphasis of Swedish inward FDI. By international comparison, Sweden scores relatively high in R&D-intensity as well as in turnover of affiliates under foreign control. Between 1995 and 2002, both the number and the proportion of employees in foreign-owned enterprises doubled in Sweden. By the latter year, half were employed in the service sector.

Table 2: Foreign-owned companies' share of the Swedish business sector, 1990–2002, percent

	Net turnover	Value added	Exports	Investment	R&D
1990	11.2	10.3	20.8	8.8	15.7
1991	11.4	11.2	22.9	10.6	17.1
1992	11.5	11.6	22.6	9.9	18.3
1993	12.6	11.7	21.0	11.4	14.7
1994	14.1	12.3	21.5	12.0	10.3
1995	16.3	14.3	26.2	12.7	18.4
1996	17.8	16.0	26.1	12.5	19.7
1997	17.6	15.2	26.2	11.1	16.0
1998	18.4	16.1	27.9	11.4	17.4
1999	22.3	20.1	39.0	16.8	34.1
2000	24.4	21.9	42.2	16.3	34.0
2001	30.7	27.1	47.3	22.4	33.2
2002	31.7	28.1	48.4	30.2	36.0

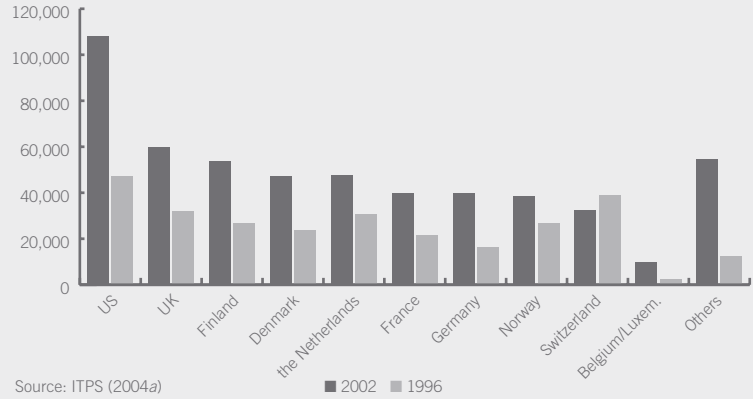
Note: The dramatic shift in 1999 concerning exports and R&D is explained by a few large-size M&A in this year which, e.g., shifted the ownership of Volvo to Ford and merged Astra with Zeneca.

Source: ITPS (2004*b*) and SIF (2004)

High-technology industries, such as chemicals (including pharmaceuticals), had the greatest share of employees in foreign-owned companies, 62 percent in 2002. This was due primarily to large M&A in pharmaceuticals in recent years. Non-metallic products and transport equipment have seen a major increase as well. The numbers have gone up in all sectors (ITPS, 2004*a*).

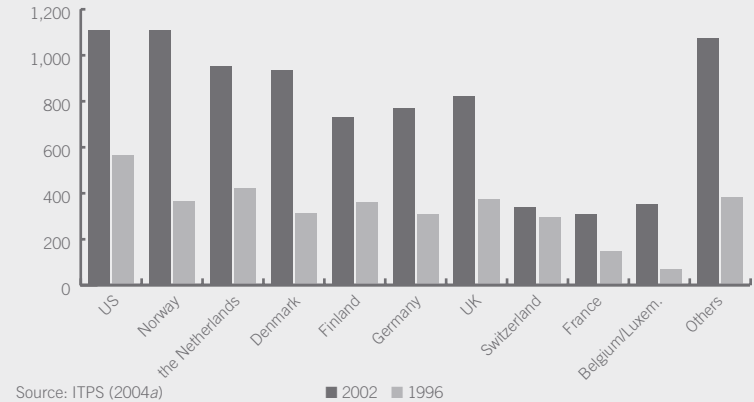
In terms of source countries and employees, **Figure 16** shows that US companies have recorded the largest increase, followed by the United Kingdom, Germany, Finland and Denmark. The varying number of persons employed by foreign-owned companies, as shown in **Figure 17**, is explained by differences in the scale of the ventures concerned. The number of employees increased less than the number of companies, reflecting a reduction in the size of investments as well as substantial cutbacks in personnel.

Figure 16: Number of employees in foreign-owned firms, 1996 and 2002, by country of ownership



Source: ITPS (2004*a*)

Figure 17: Number of foreign-owned companies, 1996 and 2002, by country of ownership

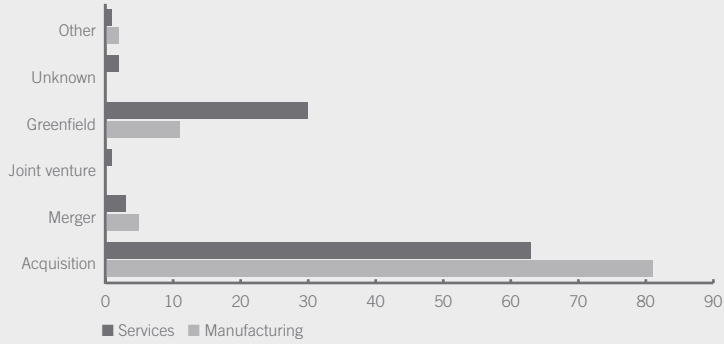


Source: ITPS (2004*a*)

Only a few large foreign-owned companies have entered Sweden as greenfield investments, most of them during or before the early 1990s. Between 1996 and 2002, only 18 foreign-owned companies with more than 250 employees were established by greenfield (ITPS 2004*a*). The systematic shift over time from greenfield to M&A as

the preferred mode of entry is a reflection of international trends. Although this tendency has been present across industries, there is a certain systematic variation. In the service sector, for instance, FDI by greenfield investment remains relatively common, as shown in **Figure 18**.

Figure 18: Forms of establishment for foreign-owned companies in the manufacturing and service sectors respectively, 1996–2006 in percent of total establishments



Source: ITPS (2004*a*)

In 2004, there were 9,864 foreign-owned companies in Sweden. A much greater share of them than previously consisted of small firms (less than 50 employees), although these accounted for only 11 percent of employees in foreign-owned companies. Middle-sized enterprises (50–249 employees) constituted 10 percent of foreign-owned companies and accounted for 20 percent of employees at these firms. The remainder, 4 percent, were large companies (249–) and employed 69 percent (ITPS 2005*b*). The substantial increase over time in the number of small foreign-owned companies, as well as in the share of total business-sector employees at foreign-owned firms in basically all size categories, is apparent when 1990 and 2004 are compared in **Tables 3 and 4**.

In conclusion, this chapter started out with a few observations on the role of country size in regard to FDI and economic performance. In the EU, there is no sign of growing concentration of FDI in the largest host countries, or of any superior economic performance by those

countries. On the contrary, a few relatively small economies stand out as the most dynamic both in terms of attracting and serving as a basis for FDI, and in terms of economic performance.

Nailing down the role of FDI in the economy requires extensive consideration of country-specific conditions. We have taken a fairly close look at developments in Sweden, which now belongs to the most internationalised countries, viewed on the basis of accumulated outflows as well as inflows of FDI. The major Swedish-based MNEs now conduct most of their operations outside Sweden, while very substantial shares of production, employment, and R&D in Sweden itself are under foreign control. Cross-border investments and restructuring have laid the foundation for remarkably extensive R&D, which is heavily concentrated in a few highly internationalised corporate groups, with some 65 percent in telecommunications, transport, and pharmaceuticals. At the same time, the prevalence of HQ functions has diminished in Sweden. Gradually, globalisation has come to embrace SMEs as well. The activities that are attracted to Sweden and those that are invested abroad influence a very large portion of the economy. We will return to the Swedish situation in ensuing chapters, for some more specific observations on what may drive various impacts of globalisation on national economies.

Table 3: Foreign-owned companies and their employees as percentages of all companies and employees respectively, in the Swedish business sector, 2004, according to firm size

	2004				
Company size, employees	Number of companies	Share of companies	Number of employees	Share of employees	Share of total employees in the business sector
0	3,604	37	0	0	0
1–9	2,788	28	10,806	2	2
10–49	2,054	21	47,483	9	9
50–249	1,019	10	110,961	20	25
250–499	207	2	71,789	13	41
500–	192	2	303,540	56	37
Total	**9,864**	**100**	**544,579**	**100**	**23**

Source: ITPS (2005*b*)

Table 4: Foreign-owned companies and employees as percentages of all companies and employees respectively, in the Swedish business sector, 1990, according to firm size

	1990				
Company size, employees	Number of companies	Share of total companies in the business sector	Number of employees	Share of employees	Share of total employees in the business sector
0	352	14	0	0	0
1–9	752	29	3,325	2	1
10–49	797	31	18,952	9	4
50–249	479	19	53,158	26	13
250–499	96	4	32,976	16	18
500–	87	3	95,340	47	10
Total	**2,563**	**100**	**203,752**	**100**	**9**

Source: ITPS (2003)

5. In the context of regional integration, Casella (1996) argues that small countries would become more attractive for high-value added production as markets become more integrated.

6. The gap diminished fairly steadily from 52 percent in 1996 to 14 percent in 2002. It increased again in 2003 to almost 25 percent.

7. The data are derived for 20 large Swedish companies (corporate groups).

4. Determinants of location

Traditionally, most studies of locational factors have focused on explaining the direction of FDI flows. It was typically assumed that MNEs draw on a source of competitiveness located within the home country and serving as the primary basis for establishing foreign operations. As originally stated by Dunning (1977), FDI is generally viewed as motivated by a combination of advantages in regard to ownership, location, and internalisation (see **Box 2**). Among theories that provide important complementary considerations, the transaction cost approach views the limits of the firm as determined by the incentive to minimise transaction costs (Williamson, 1975; Grossman and Hart, 1986).

Box 2: The rationale for FDI and the OLI approach

FDI used to be viewed as motivated primarily by macro-related factors, such as international differences in the rate of return on capital. The mainstream framework in recent decades, however, has been that of the so-called *OLI approach* (Dunning, 1977). The underlying basic assumption, as expressed by Hymer (1960), is that an investor is less familiar with markets and institutions abroad, where establishment consequently entails a fixed cost, which becomes sunk there. Whether a firm opts to undertake FDI in a particular location and thus bear that cost depends on a combination of three compensatory factors:

– **O**wnership advantages, which may arise from economies of scale or scope with respect to firm-specific assets, e.g., in management capacity or organisational know-how;

– **L**ocation advantages, which make a particular location superior to any other alternative;

– **I**nternalisation advantages, or the benefits to the firm from internalising the activity within its organisation rather than contracting for it at arm's length.

In order for FDI to be undertaken in a particular country, rather than alternative activities such as trade in goods, licensing, the formation of alliances, or portfolio investment, all these conditions must be fulfilled.

For years, a number of factors have been considered to determine the location of FDI; these include market structure and particularly oligopolistic rivalry between firms (Caves, 1982; Cantwell, 1988). Other traditionally cited motives for FDI are economies of scale, information problems, and the costs of exercising control over the quality or diffusion of technology (Ethier, 1986; Horstmann and Markusen, 1987; Ethier and Markusen, 1991). Variation in multinational investment has also been explained by country-specific features such as market size, proximity, openness, or factor costs

(Lipsey et al. 1982; Culem, 1988). It has been recognised that there may be a trade-off between the benefits of concentrating all activities in a few locations and the advantages of adapting to the specific conditions in each country (Brainard, 1993; Venables, 1999). Related but special issues arise in the location of knowledge-creating activities and "headquarter services" (Mansfield et al., 1979; Mowery and Teece, 1993; Dunning and Narula, 1995). Whereas some concentration is generally beneficial in these cases, MNEs also derive competitive advantages from their ability to respond to heterogeneity in the form of differences between locations, actual and potential, and to combine them with the evolving and anticipated structures of their global networks.

It has become highly important for firms both to develop their own technology and to absorb new and already pre-existing technologies from others (Mudambi 2002). One demonstrated benefit of high R&D-intensity in firms is that it increases their capacity to absorb technology, even over great distances (Andersson, 1998). Firms in small countries may thus have a particularly strong incentive to engage in outward FDI, which helps explain why some mid-size economies have achieved leading positions in R&D and the generation of new knowledge. More generally, challenges related to the development and management of technology have implications for the organisational features of FDI (Puga and Trefler, 2002).

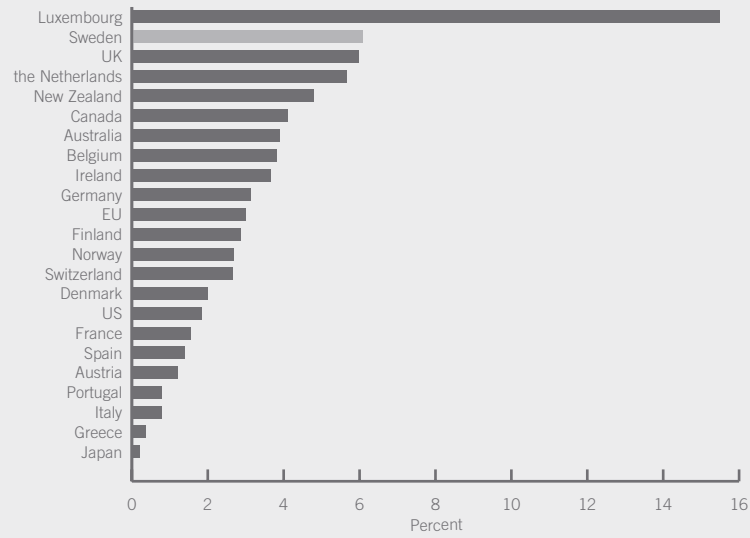
With respect to technology, one can broadly differentiate between two associated sets of locational factors for FDI. In accordance with the OLI framework, the purpose may be to *exploit* the MNEs own technology in a certain location. This is the form of FDI traditionally associated with positive productivity spillover effects from the investing MNE to the host economy. Entry in a foreign market, however, may also be motivated by technology *sourcing*, implying that technology is obtained in the host country and possibly transferred to the home base or to other parts of the MNE. Sourcing can occur through acquiring firms that in themselves possess valuable technological capabilities, or through positioning an affiliate in an environment where participation in local knowledge-generating activities can allow for continuous access to new technologies. The source in any given country or sector might be an already present foreign affiliate of another MNE; thus, MNEs may learn from each other in third countries (Cantwell, 1995). The "price" of sourcing technology will

depend on institutions and market conditions. For instance, in an environment with diverse sources of seed- and venture capital funding as well as dynamic entrepreneurship, there will likely be more opportunities, but also higher prices, for acquiring new technologies.

A strong domestic industry may serve to attract FDI for various reasons. If technology sourcing is a motive, entry through M&A may be anticipated. The need for rapidly accessing local competencies is one of the principal reasons for M&As. Joining local networks or clusters will be more attractive for an MNE the greater its ability to assimilate and draw upon its pre-existing local assets or technologies. Conversely, a strong domestic industry, and the prospects that technology diffusion may make it even more productive, may represent a threat to the investor. Likewise, MNEs with superior technology of their own may take steps to reduce spillover to local actors. A foreign firm dependent on its own technology and risking undesirable diffusion of that technology may prefer, for an instance, to rely on greenfield investment rather than M&A.

As previously noted, FDI is increasingly taking the form of M&A. Faster processes of technological and economic renewal, entailing higher R&D costs and making it more important to reduce time to market, have apparently led to a scramble among firms for first-mover advantages in a number of markets. M&A are relatively more common in industrialised countries, which tend to offer more numerous attractive local firms and operations to purchase. Since the mid-1980s, a growing share of M&A has concerned firms based in Europe, in part reflecting the acceleration of trans-border industrial restructuring processes in the EU (Commission, 2003). Apart from Luxembourg, which appears high in the statistics due to financial flows caused by special considerations, Sweden was the largest target of M&A within the OECD during 1996–2002, relative to GDP, followed by the United Kingdom and the Netherlands; see **Figure 19**. Moreover, the average for the EU was clearly above that of the United States.

Figure 19: M&As in relation to GDP according to vendor country, 1996–2002, percent



Note: Values of acquisitions in US dollars in relation to average GDP for 1996–2002.

Source: ITPS (2004*a*)

Explaining M&A is not straightforward, however, given that valuations of appropriating companies typically understated (Andrade et al., 2001). According to AT Kearney, two thirds of mergers in 1993–1996 in terms of equity value turned out to be failures (Berggren 2003). In fact, there is a systematic decrease in the value of company shares after M&A. In banking, results of almost 200 case studies showed no indications of decreasing costs subsequent to M&A (Larsson, 1997). There are various explanations for such paradoxical results, that is, the prevalence of M&A despite the apparently high incidence of failure. As will be discussed subsequently, it is difficult to determine the opportunity cost of FDI (and M&A in particular), as merely abstaining from investment may or may not be an option in the specific case. An additional observation is that localisation decisions may sometimes be well understood only if the motives of company stakeholders are properly considered. Several studies have documented the influence of managerial self-interest, including short-term profits for managers made possible through the dilution of

owner influence resulting from the diversification and larger size of the company (Morck et al., 1990; Yermack, 1997). Private benefits for managers, associated with abundant cash and untapped debt capacity, have been identified as a motive for counter-productive M&A (ISA, 2001; Malmendier and Tate, 2004; Gorton et al., 2005).

In practice, all investment decisions are taken under conditions of imperfect information. The motives of shareholders and managers are hard to distinguish, competitors are on the move, and opportunities may be lost unless speedy, and therefore sometimes too hasty, action is taken. Locational decisions of MNEs are influenced by country-specific risk factors, economic as well as political (Wheeler and Mody, 1991; Bevan and Estrin, 2000), but also by the overall strategies of the enterprise. Asset portfolios need to be balanced, and ventures to be located with regard to aggregate exposure to risk. While particularly important in portfolio investment, such considerations matter for FDI as well since firms need to keep alternative expansion paths open in different locations.

The impacts of policies on investment decisions vary. In the case of intellectual property rights (IPR), the literature has not demonstrated any systematic influence on FDI patterns (Maskus, 1998). However, Narula and Wakelin (2001) concluded that domestically produced patents were an important long-run determinant of FDI from the US into Germany, the Netherlands, and Sweden in the period 1973–1993. In China, recently improved opportunities for MNEs to arrange for IPR protection through domestic institutions has been shown to strengthen inward FDI and a similar development may be under way in India. In previously sheltered industries, liberalisation and regulatory reforms are important drivers of FDI. Directly or indirectly, a range of other policies also influences investment decisions. There is a risk of vicious circles in the sense that countries may out-bid each other to attract FDI (Oxelheim and Ghauri, 2003).[8] With investment decisions influenced by perceived advantages of being the first mover, by follow-the-leader behaviour and by path-dependency, separate investment decisions are likely to be interrelated. Strategic considerations of that sort play a particular role in the location and organisation of MNE headquarters (HQ).

Headquarter functions

Since most FDI now takes the form of M&A, relocation of HQ is often involved. When a firm acquires or merges with another firm, headquarter functions are normally rationalised. The location of headquarters may nevertheless be seen as a separate issue. Ongoing developments may be taken to reflect increased mobility of headquarter functions. HQ are thus becoming increasingly disconnected from some of their historical roots, but it is an open question to what extent they retain their ties with various production units or other critical firm operations.

The factors determining the location of HQ should be given special consideration. A company's HQ is normally composed of the top management team, and various HQ staff functions, and it serves as the legal domicile. HQ may include a range of functions with features that vary according to the category of firm, the industry, and the country of location. Some functions, such as R&D, purchasing, and logistics, are not necessarily present at corporate HQ but may be located elsewhere. There is evidence of recent proliferation of some traditional headquarter functions to the sub-unit level of companies.

As for factors determining the location of HQ, reliable regulatory systems, transparency, access to management support, proximity to political decisions and to financial services, customers and suppliers, information density, wages, and general economic conditions, are all known to be important. Taxes, notably conditions for transfer pricing and personal tax rates,[9] geographical distance, and efficient communications, followed by proximity to customers and attractive regulatory systems, have been rated very important in the case of HQ-location decisions taken from a Swedish base (ISA, 2001). This holds true for both the corporate and the sub-unit HQ levels. Some studies have identified foreign ownership, international activity (e.g. employees abroad), income taxes, and the importance of foreign customers as significantly influencing HQ relocation (Birkinshaw et al., 2003). In Europe, EU membership has also been an important factor in recent years. Proximity to R&D matters especially for technology-intensive firms, whereas that factor appears unimportant for service-oriented companies.

Inward M&A are typically accompanied by an increase in relocation of HQ elsewhere, often after a time lag. However, this is not inevitably the case. The internationalisation of MNEs, defined as having more than 50 percent of employees abroad, has also been found to be a highly influential factor in HQ emigration. Outward FDI combined with inward FDI through M&A may thus lead to relocation of headquarters abroad.

The location of R&D merits special consideration although, as noted, there are often linkages with other HQ functions. Whereas R&D traditionally used to be an integral part of HQ, the role of R&D has evolved in recent years. Location decisions are heavily influenced by factors such as costs, the quality of infrastructure, and the availability of skilled personnel. Further, R&D-intensive industries display a strong tendency to cluster geographically (Almedia and Kogut, 1997). Thus, the presence of attractive related R&D-facilities may be highly important (Saxenian, 1994). Business R&D generally needs to be located where it has close and continuous access to information on production and marketing, and where the results can be commercialised as effectively as possible, either by the investing firm or through licensing or turnover. Conversely, the presence of R&D in a location may serve as a reason to maintain critical elements of production there, whereas establishment of extensive sophisticated production at a particular site may well be followed by R&D.

There is a popular notion that R&D tends to internationalise in an evolutionary process along certain trajectories (Bartlett and Ghoshal, 1990). Being close to the core of firm-specific advantages and typically developed within a particular home country, as well as for historical reasons, R&D would normally internationalise more slowly than marketing and production operations. Today, it is becoming untenable for firms to rely solely on domestic skills and facilities in the generation of knowledge. With the exception of Japan, R&D is now extensively internationalised at MNEs based in most developed countries. This tendency is also appearing in developing countries, most prominently in the case of Chinese firms, which are in the process of establishing R&D facilities especially in developed countries.

The pace of internationalisation in R&D is particularly high in MNEs based in small economies (Åkerblom, 1994; Andersson et al., 1996). For Swedish-based MNEs, Norgren (1995) noted that the share of

foreign R&D aimed at developing new products and processes, rather than adapting to existing ones, increased from 25 to 60 percent between 1980 and 1990. According to Florida (1996), foreign-affiliated R&D-units in the US enjoy increasing autonomy in preparing their own technical agendas. When different countries are examined, highly decentralised R&D-organisations are now found to be common; some feature many centres, whereas others take the form of integrated R&D networks in which units are equal partners in sharing information (Gassmann and von Zedtwitz, 1999). There may also be complementary relationships between units engaged in generating fundamental technology generation, and in the adapting and sourcing of technology (Sachwald, 2004).

SME-specific factors

Relatively little attention has been paid to FDI related to SMEs. These firms are typically more labour-intensive and less prone to relocate than large firms. Early studies demonstrated that SMEs internationalise marketing and production operations relatively slowly and consistently start by investing in a few neighbouring markets, subsequently advancing to more distant and alien regions to a much lesser degree than large firms (Johansson and Vahlne, 1977). With technical progress, reduced communication costs, as well as liberalisation and regulatory reforms, outsourcing and off-shoring of operations are now occurring in SMEs as well as in larger firms. However, various factors influence the internationalisation of SMEs in particular ways:

– In the absence of economies of scale at the firm level, SMEs often need to carve out a niche where they are highly dependent on a limited number of customers or suppliers;
– Size in part determines firms' ability to carry fixed costs, and thus their ability to undertake R&D or invest in skills needed to manage internationally diffused operations;
– Size influences firms' vulnerability to regulatory burdens or bullying by customers through late-payment or the threat of litigation costs;
– Size makes firms more able to control key assets and also to resist acquisition.

SMEs face increasing pressure from larger customers to reduce costs and delivery times, and to adapt in other ways. Reduced information costs and more transparent markets typically make the greatest difference for SMEs, which may thereby be able to overcome disadvan-

tages in scale while exploiting advantages in flexibility and niche strategies. At the same time, SMEs may be subjected to higher risk in processes of internationalisation. They may have to act on less comprehensive information, and with relatively less capacity to evaluate the information available. They consequently incur higher risks of making mistakes in the process.[10] As SMEs internationalise parts of their operations, the implications for the parent company and headquarters likewise differ from those in the case of large firms.

In sum, the processes and decisions determining locational decisions for FDI are complex. They are strongly dominated by M&A and are based not only on well-founded estimates of costs and benefits. Decisions depend on considerations related to the globally evolving structures of MNEs as well as to the opportunities of specialisation in different countries. At the same time, the decisions by MNEs are pivotal for SMEs which face increasing pressure to internationalise. Decisions are critically dependent on what alternative options are available to firms. What are competitor firms and partner firms anticipated to do? How is a firm likely to be affected by nondecisions as well as by decisions actively to pursue certain changes in its present operations?

8. Where there are policies explicitly designed to attract or influence FDI, such competition may, however, limit the ability of individual countries to distort investment decisions out of line with natural advantages (Doyle and van Wijnbergen, 1984; Andersson, 1991).

9. Taxes on management are particularly important for the location of HQ. In view of the variation among countries in this respect, nationality of ownership is a significant factor in the location of HQ. In the Swedish case, it is the most important explanatory variable (Strandell and Lööf, 2003).

10. Kinnander (2004), for instance, claims that the potential usage of innate production resources in Sweden has been partly neglected. Offshoring has been favoured by lack of production technology, leadership and interest together with inadequate support for R&D and training at SMEs.

5. Impact of FDI

As discussed in the preceding chapter, firms located in a relatively high-cost country are likely to have many options for capturing efficiency gains by establishing operations abroad. Through FDI they are also likely to find various opportunities to improve access to technology, establishing wider sales networks or financial markets, and so on. On the other hand, undertaking FDI is almost always associated with extensive costs, some of which may be difficult to estimate beforehand. As a general rule, firms are less able to gauge what outcomes will result in a new environment outside their current scope of experience and expertise. For this reason, FDI is typically associated with high entry costs and also risks for the firms involved.

Beyond the consequences for firms that undertake or are directly affected by FDI, the socio-economic costs and benefits are more difficult to assess. A fundamental question concerns what would have happened in the absence of FDI. It is generally difficult to determine the counterfactual case, i.e., to compare the contribution of FDI relative to the situation that might have prevailed otherwise. For instance, if Firm A had not been acquired by Firm B, would it have been acquired by Firm C, or might it have closed down altogether? In many studies intended to estimate various effects of FDI, it is simply assumed that the alternative would have been "business-as-usual," which cannot be taken for granted. It is generally difficult to establish the direction of causal effects. Is a certain performance the result of FDI, or was FDI driven by such performance in the first place?

Further, which gains are internalised by firms, and which take the form of spillovers, is not easily determined. Firms are motivated in their investment and operational decisions by the desire to maximize profits. Countries, as well as societies, benefit primarily from those effects which are unaccounted for by the actors in the market. When the two kinds of gains are compatible and mutually re-enforcing, what is good for investors will be good for countries. In some cases, however, there is conflict. A crucial question has to do with the ability of an economy to respond and adjust to changing circumstances. When certain products and activities retreat, what others come in their place? In the following discussion, we review some possible effects, both positive and negative. Outward and inward FDI are discussed jointly in the same context.

Multiple effects

The traditionally emphasised effects of FDI include the impact on the *balance of payments*, which for a host country may strengthen through inflows of capital or exports generated by foreign affiliates, but may also be adversely affected by repatriation of profits or increased imports of inputs by affiliates. Similarly, home countries may benefit from increased exports and from capital imports due to profit repatriation. With enhanced efficiency, e.g. resulting from an improved division of labour, both host and home countries may gain in these ways. In the case of inward FDI, another commonly stressed source of benefits is enhanced *competition* leading to consumer gains through lower prices as well as new and/or higher-quality goods, as well as greater efficiency in domestic firms. In sheltered sectors, on the other hand, FDI may increase market concentration and reduce competition (OECD, 2001*a*).

Productivity clearly tends to increase in acquired companies and in some cases in the industry where they operate (Doms and Jensen, 1998; Girma et al., 2002; Griffith and Simpson, 2001). Similar effects on domestic operations have been noted for outward FDI (Braconier et al., 2001; AlAzzawi, 2004). Other studies show positive links to the volume of operations as indicated by turnover and production. The effect on *employment* is more ambiguous. FDI generally has a positive impact on *real wages* in acquired companies, but often leads to aggressive elimination of jobs. In developing countries, domestic firms that are relatively labor-intensive may be put out of business by the establishment of more capital-intensive foreign affiliates. At the same time, enhanced competitiveness may indirectly give rise to economic expansion and the creation of new jobs.

The impact of FDI on the *environment* has been widely discussed over the years. The reason why affiliates are present in a particular country may be to avoid internalising the costs of environmental damage. Competition between countries to attract FDI may also restrain environmental protection across countries by regimes that downplay environmental values.[11] In practice, there is little evidence that FDI would be attracted by lax environmental laws (Leonard, 1988), which tend to be associated with conditions that are adverse in a number of respects and could result in costly negative publicity. MNEs normally use cleaner production processes than domestic

firms in developing countries and may boost local awareness of "green" demands.

The factor generally receiving the most attention today is that of *technological spillovers*. MNEs are involved in massive cross-border flows of embodied as well as disembodied technologies, while encountering inherent difficulties in appropriating the full rents of these technologies. With inward FDI, there may be spillovers to domestic actors through various mechanisms. These may have to do with the *training* and *mobility* of workers (Zucker et al., 1998; Agrawal et al., 2003; Breschi and Lissoni, 2003). Diffusion may also occur through demonstration effects and exchanges of ideas, trade in goods, etc. When MNEs apply countermeasures, e.g., offer higher wages to workers in order to retain them, the local economy benefits from the increased *wages*. When more competitive domestic firms are present, wage premiums may be higher (Glass and Saggi 1999). Co-operation with domestic suppliers may further the transfer of skills as well as generate indirect spillovers to the rest of the host economy (Girma et al., 2004).

At the aggregate level, technological spillovers would be anticipated to show up in higher total factor productivity (TFP).[12] The contributions to TFP come partly from existing firms, but also through the exit of firms which are no longer competitive as well as the entry of new firms. There are considerable differences between countries in regard to the mechanisms through which these different functions contribute to growth, and various impediments may critically reduce the potential for improved overall performance (Brandt, 2004). For instance, there may be barriers to adjustment in the home country, hindering investment or the transfer of workers from declining firms and industries to new growth sectors.

Most of the arguments noted above concern the impact of FDI on host countries, but spillover effects are highly relevant for home countries as well. When foreign units expand, an MNE may strengthen its home operations because it obtains new resources for investment at HQ or upgrading domestic production. It may also gain from the absorption of technology and skills from operations abroad; these gains, too, may spill over to other domestic actors. The home country will further benefit to the extent that economic activities are offshored to foreign locations where they can be performed more effec-

tively, provided the resulting profits are repatriated and resources at home are redistributed to other activities which can be produced more efficiently, given the country's resource and technology base. At the same time, however, there may also be trade-offs in investment and substitution effects to the extent that expansion abroad occurs at the expense of home country investment.

Changing empirical evidence

Although most studies conclude that the positive effects tend to predominate for both outward and inward FDI, the evidence is inconclusive and has become more so in recent years. In particular, several recent studies cast doubt on the prevalence of technological spillovers from inward FDI in EU-countries. Using different sets of data, Lichtenberg and van Pottelsberghe de la Potterie (1996 and 1998), and Braconnier et al. (2001), found no evidence of significant spillovers from inward FDI or related R&D. However, the first two of these studies observed such benefits from outward FDI. In a more recent study of FDI flows between industrialised countries over 20 years, Van Pottelsberghe de la Potterie and Lichtenberg (2001) found that outward FDI contributes positively to domestic total factor productivity. Similarly, using a sample of 13 OECD countries covering 1983–1990, Xu and Wang (2000) found evidence of spillovers from outward FDI back to home countries, but no indications of technological spillovers from inward FDI.

A number of studies have called attention to the effects of extensive changes in HQ functions. A systematic exodus, for instance, implies that the former home country loses strategic capabilities as well as extensive training and career opportunities for the future. Overly limited FDI, on the other hand, is likely to be equally damaging as it entails a lack of exposure in this respect. At the same time, the nature of changes in behaviour due to transfers of ownership is not necessarily the same in all cases. Studies comparing domestic to foreign MNEs in Sweden, for instance, found foreign-owned firms to be more resilient than their Swedish-owned counterparts during times of recession. Foreign ownership clearly saved some Swedish production from termination during periods of adversity, possibly thanks to superior resources (ISA, 2003).

Ongoing changes in the nature of FDI may also be altering the character of its effects. During the late 1980s and 1990s, US investment

in the UK apparently shifted away from sectors in which US multinationals were technologically strong towards those in which the UK had significant technological expertise (Cantwell and Janne, 1999). There are numerous examples of MNEs establishing "listening posts" around the world, notably in high-tech activities. These observations are consistent with a move towards a technology-sourcing approach, where the technology gap is a determinant of whether a country receives technology or is used as a source of it. At the same time, the disturbing pattern of frequent failures among M&A was reinforced around the turn of the millennium, when extraordinary losses resulted from the inflated costs of takeovers at the time.

Rather than depending solely on localisation trends in the size and direction of FDI, the effects are determined crucially by the kind of restructuring and specialisation entailed by internationalisation. Compared to the United States, offshoring in the case of France or Italy has been less targeted to countries in which distinct efficiency gains can be made, and the effects on trade appear to have been less favourable. A related aspect concerns whether FDI entails specialisation towards higher or lower value-added in an economy.

The United States has better data on FDI than most other countries and has long been the object of most studies in this field. By international comparison, US MNEs have achieved a relatively high degree of penetration in developing countries, with as much as 20 percent of foreign production in developing countries, compared with only 7 percent for Swedish firms. This, along with pressures on US skilled labour to upgrade as a result of outward FDI, indicates that relatively high-skilled jobs have remained in the US while less demanding ones have been relocated abroad (Slaughter, 2000). Head and Ries (2002) drew similar conclusions for outward Japanese FDI. Examining recent data on German and Austrian outward FDI in Central and Eastern Europe, however, Marin (2004) found evidence of skill-seeking relocation. For the United States there are now similar indications.

Many services currently offshored belong in the ICT sector and may involve simpler computer programming and business functions as well as telemarketing and support, but also be motivated by efficiency gains in sophisticated operations. A British bank found that its Indian call centre could deliver 20 percent more transactions with higher

accuracy than its home office, and at lower cost (Agrawal et al. 2003), reflecting an Indian edge in essential high-quality functions. New international competition is on the rise even for the very highest levels of competence and leading R&D facilities. In Silicon Valley, as many as 37 job categories are claimed to be threatened. In the United States as a whole, research-intensive companies have downsized their share of domestic R&D investments from 78 to 75 percent between 1999 and 2004, whereas there has been a one-percent decline in Western Europe. Ventures are moving to China, India, and Eastern Europe. Plans for the next five years indicate that such a transfer is in progress in R&D, with a decrease in North America, Western Europe, Japan, Korea, and Chinese Taipei (Karlsson, 2005).

FDI is heterogeneous. Whereas past internationalisation apparently served to reinforce a specialisation at home in high value-added activities, more diverse effects are now observable. Outcomes are affected by a number of factors. It is not possible to rank the effects on host or home countries of different kinds of FDI, such as M&A or greenfield operations, or technology-exploiting or technology-sourcing ventures, in any general sense. The impact varies depending on industrial sector, mode of entry, competition, corporate culture, the prevalence of well-functioning markets, and the mechanisms for industrial restructuring. In the following discussion, we consider factors that influence such effects.

Linkages and spillovers

If MNEs establish in enclaves where neither products nor technologies have much in common with local firms, there may be little scope for spillovers in either direction. MNEs are generally viewed as more prone to networking the more competitive local industry is, since that implies the existence of more attractive partner firms. Further, through M&A, MNEs can build on existing assets and networks, whereas domestic suppliers gain access to the more widespread turnover networks of the appropriating firms. In the case of greenfield FDI, fewer or no linkages exist at the outset. In either case, however, the cost, quality, reliability, and flexibility of local suppliers matter crucially for the choice of strategies. Both the "receiving capacity" of domestic firms, i.e. their ability to absorb and utilise the technology/knowledge that enters a host country with a foreign MNE, and their capacity to generate returns from technology on their own, make a difference.[13] When local suppliers are relatively weak in technological

terms, there will most likely either be no significant transfers at all, or transfers from foreign affiliates to domestic suppliers. In the case of stronger and more technologically capable suppliers, the flows can go in either direction.

In some developing countries, foreign affiliates transfer obsolete technologies to the host country while tying local customers into relationships that may result in technological lock-in (Mansfield and Romeo, 1980; Ramachandran, 1993). The products introduced may be substitutes for existing ones, being "new" only in terms of more prestigious brand names which establish market dominance and ultimately lead to higher costs for consumers. The risk of such outcomes is greater the less sophisticated the domestic market and the more sheltered the industries of the host country. Once such problems have been overcome, technological upgrading and accumulation of local capabilities may eventually make it possible to break free of the initial dependence (Vishwasrao and Bosshardt, 2001).

The balance of influences may play out differently in developed countries. Examining the variation in FDI and TFP growth within the EU, Castellani and Zanfei (2001) found spillovers from inward FDI to the host country only where the technology gap between investors and home countries was significant. For FDI flowing between technologically comparable countries, the potential for FDI to have a favourable impact on the TFP of the receiving economy was found to be greatly reduced. Further, Girma and Wakelin (2000) noted spillover effects that raised TFP growth in local UK firms where MNEs operate in the same sector and region. They also observed that domestic firms "lose out" if they are in the same sector but not in the same region. Girma et al. (2002) found negative spillovers in the case of firms in low-skill sectors with a large technology[14] gap, presumably due to crowding-out of local firms that could neither compete with, nor learn from, the MNE, given the discrepancy in human capital and technology[14]. The most important spillovers were recorded for firms with medium-technology.

Fosfuri and Motta (1999) and Siotis (1999), modelling FDI decisions in part on technology sourcing, show that technological laggards may choose to enter a foreign market through FDI, even at substantial cost, because they may benefit from spillover effects of proximity to a technological leader. Various studies conclude that technology

sourcing has become an important determinant of foreign R&D. In UK manufacturing, the foreign sector has been found to derive substantial productivity gains from spillovers from UK-owned firms in relatively R&D-intensive sectors (Driffield and Love, 2002).[15] According to van Pottelsberghe de la Potterie and Lichtenberg (2001), the motive of sourcing is important for explaining the predominance of FDI flows between industrialised countries. At the same time, the recent internationalisation of R&D in Chinese companies is clearly driven by the benefits of technology sourcing in foreign markets (von Zedtwitz, 2005*a*).

Griffith et al. (2004) verified the importance of technology sourcing for US investment in the UK. Inward FDI may be driven by the expected gains from sourcing technology, especially where domestic firms are technologically strong. The result may be abusive exploitation, and weakening, of local industry. The less the capability of domestic actors to exploit technological strengths, the greater the risk, for the host country, of losing out from inward FDI.

The nature and significance of spillover effects greatly depend on what specific linkages are established between foreign affiliates and the local economy, on the strategies on both sides, and on the capabilities of domestic actors. The form of organisation also makes a difference. *Backward linkages* exist when foreign affiliates acquire goods or services from domestic firms, and *forward linkages* when foreign affiliates sell goods or services to domestic firms. (Both are denominated *vertical linkages*.) *Horizontal linkages* involve interaction with domestic firms engaged in competing activities. Linkages, broadly defined, may also be established with non-business entities such as universities, training centres, research and technology institutes, export promotion agencies, and other official or private institutions.

Aitken and Harrison (1991), among others, argue that backward linkages tend to generate significant spillovers from FDI to host countries. Fors (1996) found technology transfers from parents to be strengthened by forward vertical integration, measured as imports of intermediate products from the parent company. R&D of affiliates themselves was found not to be decisive, either for their own productivity or for other parts of corporate groups, but a highly significant interactive effect of affiliate R&D and parent R&D on the productivity of affiliates was identified. Given that R&D in affiliates enhances

their ability to utilise parent technology, foreign R&D would not be expected to replace R&D at headquarters. To the extent that the internationalisation of R&D is explained by an increase in intra-firm exports from home countries, it should thus strengthen knowledge-creation at headquarters. The same may or may not apply when local R&D serves as an instrument for technology sourcing. When foreign R&D constitutes an integral part of horizontal integration, on the other hand, there are typically fewer prospects for complementarity with R&D at home.

Figure 20 illustrates that the nature of the spillover effects from inward FDI on a host country are likely to be influenced by the combination of types of investment and competition effects. As noted, FDI may promote competition in the host country but may also result in market dominance. The presence of technology spillovers and the nature of the competition effects are in part related.

Figure 20: Anticipated spillover effects for a host country[16]

		Competition effect		
		"Negative"	"Neutral"	"Positive"
Type of Investment	Technology exploiting	+/–	+	++
	Technology sourcing	–	+/–	+/–

Note: The figure indicates the likely direction and magnitude of the spillover effect from inward FDI on a host country, as contingent on the combination of investment types and competition effects.

According to this simplifying dichotomy, the net effect of FDI on the host economy will be positive or negative depending on the size and direction of spillover effects and competition effects (assuming that other effects are negligible). If the motivation for FDI is technology-exploiting, i.e. to build on a technological advantage, spillovers to the host industry are probable. When such spillovers are present, the impact of FDI on the host country will be positive unless outweighed by an even stronger negative competition effect. Where there is also a positive competition effect, technology-exploiting FDI will exert an unambiguously positive effect.[17] Technology sourcing, if associated with adequate returns for the host country, may also be beneficial. Favourable competition effects increase the likelihood that technology-sourcing FDI is beneficial for the host country. When combined with a negative competition effect, however, technology sourcing is espe-

cially likely to be associated with losses for the host country. A weakening of competing marketing avenues will reduce the bargaining power of firms that offer new technology solutions. The risk of costly consequences will depend on various other factors as well. For instance, well-functioning *intellectual property rights* help innovators obtain returns. Healthy conditions for the provision of seed-funding and venture capital will further strengthen alternative routes for commercialisation of new technology and thus tend to improve returns for a host country from technology sourcing.

Meanwhile, the mechanisms for restructuring in an economy exert an overriding influence on the expected impact of FDI. As productivity rises, some activities are curtailed and some become less competitive; *labour mobility* and mechanisms for effective *retraining* are then highly important for channelling workers into other industries and new jobs. A flexible *labour market* marked by low transaction costs may also support the diffusion of technology and skills, and facilitate effective industrial restructuring. At the same time, it is important that flexibility not be introduced in a way that reduces the incentives of employers to invest in the skills of their employees. Firms primarily seeking to minimise labour costs may improve performance in the short term, but long-term performance may be critically dependent on continuous investment in a well-trained workforce. A social safety net can also facilitate restructuring, since it may make workers more willing to accept layoffs. Spillovers will thus be influenced by the extent to which industrial relations combine flexibility and mobility of labour markets with substantial investment in employee skills.

Spillovers are also dependent on *infrastructure*. This applies to traditional means for transportation such as roads, airports, harbours, and railways. With the expansion of air transport, especially because it permits fast, reliable deliveries of high value-added goods and services, access to efficient airports and transport networks has grown tremendously in importance. Effective linkages between local transport and logistics solutions on the one hand, and more extensive international or global networks on the other, make a major difference in regard to FDI and in supporting spillovers. A strong position in information and communication technologies is very important in this context. For high-technology ventures, advances in infrastructure such as broadband and wireless technology may be crucial.

Financial markets, corporate governance practices, and *entrepreneurship* influence conditions for risk management and the capacity of an economy to nurture new high-growth firms. Today, those factors critically affect the extent to which new experimental enterprises and job opportunities arise to replace those that are moved elsewhere in the globalisation process. As noted, negative competition effects will counteract such processes. The ability of investors to evaluate risk is dependent on corporate governance structures that influence the conditions for portfolio management and monitoring of managers (Rajan and Zingales, 2001; Carlin and Mayer, 2002; Maher and Andersson, 2002). Banking systems such as those traditionally found in Germany and Japan tend to feature strong monitoring by owners, steady piecemeal improvement in mature industries, proliferation of existing technologies, and continued dominance of incumbent firms. The more open financial markets traditionally associated with the United States and the United Kingdom favour diversity in funding mechanisms and provide better conditions for risk management, radical innovation, and entry by new firms. The trend in most countries is now toward the advancement of such mechanisms along with enhanced institutional ownership, while challenges are arising with respect to responsible equity management and monitoring of management. In parts of the world, including most of Western Europe, factors including general attitudes towards risk-taking and the lack of social acceptance for failure, as well as tax structures and social security systems, are known to stifle risk-taking and entrepreneurship.

In summary, FDI may impact home and host countries in a variety of ways, reflecting the contribution of the specific assets internalised by firms in foreign markets, and notably the extent to which transfers are associated with effects not fully priced in markets but diffused through other mechanisms. In this chapter, we have paid particular attention to technology and skills. In a broad sense, affiliates may channel technologies and skills into enhancement of their position, and/or package them so as to produce benefits elsewhere in the corporate organisation. While it is generally difficult to draw a sharp distinction between these functions in practice, various factors may push MNE and affiliate behaviour in one direction or another. Possibly, but not necessarily, there may be a trade-off in spillovers flowing between host and home countries. A dynamic, knowledge-intensive region may be anticipated to display extensive knowledge transfers

and rents that flow in both directions. This kind of environment is also likely to be marked by a well-developed ability to restructure as an element of dynamic adjustment processes. Strategies for firms to exploit their own technology rather than sourcing local technology cannot be associated simply with benefits or costs for a host country or for a home country.

Firms and individuals increasingly need to identify the most favourable locations and organisational forms for various ventures in research, commercialisation, and production. Given an effective reallocation of resources, FDI will support opportunities for the emergence of new products, firms, and jobs to replace those that are eliminated or relocated. The potential result is greater gains from specialisation for all actors and countries involved. On the other hand, where there are systematic deficiencies, such as lack of incentives for upgrading skills, low labour mobility, barriers to entrepreneurship, absence of mechanisms for sustaining commercialisation of technology in the early stages, or practices in governance which tend to produce rigid organisations and technological lock-in, industrial relations are likely to lean more towards firm rivalry based on strategies of secrecy and technology-sourcing, and less towards continuous sharing for mutual gains from spillovers and learning processes.

11. Experience as well as public-choice arguments suggest that public demand for transparency in the environmental record of firms or governments is unlikely to be fully effective (Olson, 1965; Baumol, 1971).

12. Growth in TFP, or total factor productivity, is the share of productivity growth that cannot be ascribed to individual production factors such as capital or labour. TFP is typically associated with the development and use of new technologies and organisational change.

13. See Pavitt (1998), Kokko (1994) in the case of Mexico, Kokko et al. (2001) for Uruguay, Kathuria for India (2001), and Görg and Strobl (2001) in the case of Ireland and India.

14. Girma and Wakelin (2000) define a small technology gap in terms of a 15-percent difference in technology intensity, a medium gap as 15–33 percent, and a large gap as more than 33 percent. A small gap between foreign and domestic firms may facilitate spillovers although gains may flow in either direction.

15. See also (Niosi, 1999), and Serapio and Dalton (1999).

16. The analysis represents an extension and adjustment of Driffield and Love (2002).

17. Direct competition between foreign affiliates and local firms has been found conducive to spillovers from MNEs to local firms (Kokko, 1994).

6. FDI and developments in Sweden

Today, the combination of technological and organisational changes and the contrasting conditions offered to FDI in different categories of countries, is speeding processes of industrial restructuring across an expanding set of industries and firms. Taking note of the growing complexity of outward and inward FDI in the case of Sweden, and the way in which their role in the economy is evolving, this chapter examines new data on the changes under way. Special attention is paid to the implications for SMEs.

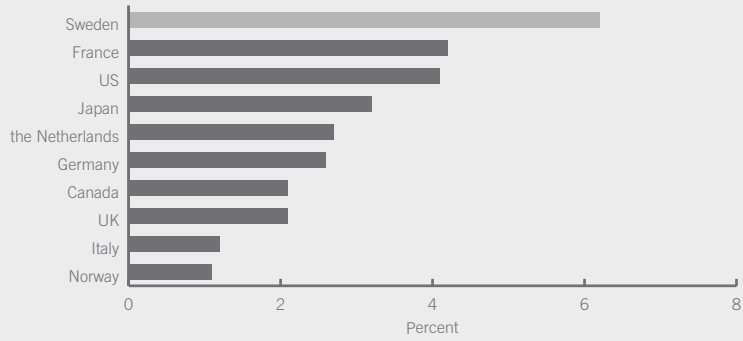
Over several decades, studies concluded that the impact of outward FDI on the home operations of Swedish-based MNEs was largely positive. The dependent variables in these studies have included exports from home operations and employment (Swedenborg, 1982). Positive consequences for R&D were also found, with the evidence pointing to a two-way, mutually reinforcing effect in the sense that higher R&D intensity led to outward FDI, which in turn generated internal funds to sustain more R&D at headquarters (Andersson et al., 1996; Fors, 1998). A special characteristic concerns the way in which groups, or clusters, of industrially and technologically interlinked firms have evolved together. Larger, rapidly internationalising firms have generally led the way into foreign markets through combined trade and investment strategies, but have been accompanied by supportive networks of SMEs (Dahmén, 1950).

There is solid evidence that such processes have played an important role in the establishment of a strong research community in Sweden covering a number of high-value-added industries. For several years, Sweden has shown the highest R&D intensity in the OECD. It has also been among the leaders in number of scientific articles published and in patenting in major markets, and it has one of the highest levels of innovativeness as measured by most comparable indices (OECD, 2004b; Commission of European Communities, 2003; Marklund et al., 2004). Leaving aside the academic record, however, the bulk of the activities underpinning these performances remain concentrated in a few extensively internationalised firms.

In some respects, the positive impact of outward FDI on home operations appears to have weakened from the 1970s onward. Firm-level data suggest that production abroad tended to replace exports from home in the 1980s, including those to third markets (Svensson, 1996). More recent studies have found a substitution effect between outward

FDI and employment at home (Kokko and Gustavsson, 2003; Becker et al., 2005), though Swedish industry has continued to display high productivity growth, as shown by **Figure 21**. The figures may have been overestimated, however, since production increasingly occurs abroad whereas profits continue to be reported in Sweden. Nevertheless, the rapid downsizing and rationalisation of existing operations, coupled with insufficient industrial renewal in Sweden, has clearly contributed to the pattern observed.

Figure 21: Labour productivity growth measured as annual average productivity increase in manufacturing, 1993–2002, percent

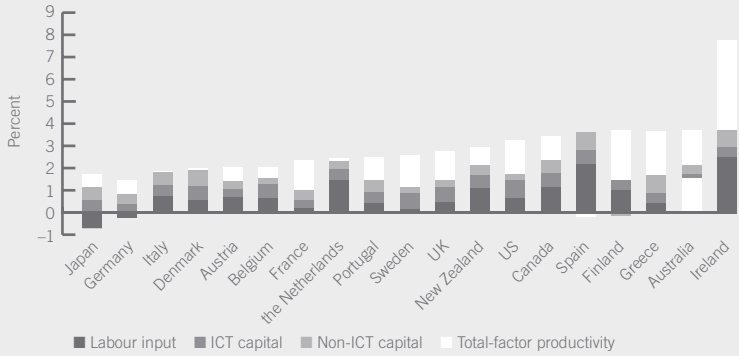


Source: US Department of Labour (2004)

Growth in total factor productivity – as previously noted, a better indicator of knowledge-induced efficiency gains – has been less impressive in Sweden. **Figure 22** illustrates the contribution of labour input, ICT capital, non-ICT capital and total factor productivity to overall GDP growth in a number of countries for the period 1995–2003. As can be seen, the contribution of total factor productivity relative to other production factors was rather high in Sweden during these years, but the absolute contributon was smaller than in some other countries, including notably Ireland and Finland. Private sector investment relative to GDP has declined sharply since the 1970s, and today Sweden is a major net exporter of capital (Bergström, 2005), with a current-account surplus of about 8.5 percent of GDP in 2004. To a considerable degree, the reason for this development has been that Swedish-based MNEs have refrained from investing in Sweden

while expanding capacity overseas. Terms of trade, i.e. prices of exports relative to prices of imports, fell by 13 percent between 1995 and 2003, indicating an erosion of value-added. The sectoral composition displays a neutral profile compared to other countries in terms of technology- and knowledge-intensity, see **Figure 23**.[18] A striking contrast appears between the high performance of Swedish industry in R&D and patenting and its much weaker record in investment and production, including knowledge- and technology-intensive activities. FDI clearly serves as one of the vehicles through which some research output is channelled into new production abroad. Various measures, including the relatively slow growth of real wages, indicate a gradual catch-up in the skill-intensity of the foreign operations of Swedish-owned MNEs relative to the parent companies.

Figure 22: Contributions to GDP growth, all OECD countries, 1995–2003[1], percent

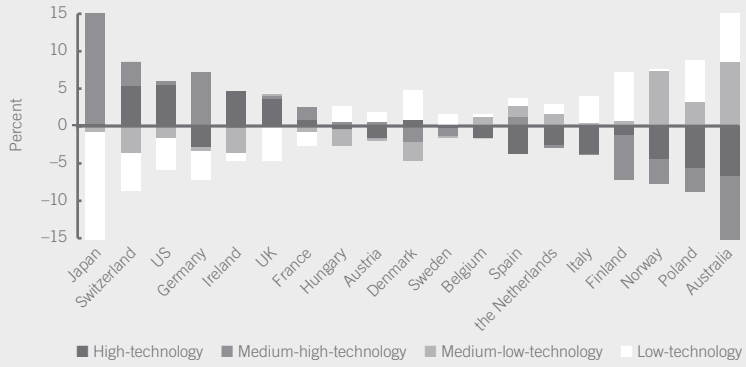


Note: [1] 1995–2001 for Italy; 1995–2002 for Australia, France, Japan, New Zealand and Spain.
Source: OECD database

So far, the bulk of outward FDI has targeted developed countries with production costs similar to those of Sweden. This has been seen as evidence that outward FDI generally has not been driven by high wage or production costs, but by other concerns like market access, innovation and technology, and strategic considerations. FDI directed at developing countries, representing only a minor part of total FDI, has been viewed as a means of reducing costs in standardised production. Investigating the 80 largest Swedish-based MNEs, Hansson (2004) found that outward FDI in developing

countries reinforced a specialisation tendency in home operations towards a higher share of well-educated workers, i.e. brought a decrease in standardised production. He found no significant relationship in the case of outward FDI in developed countries, which so far has constituted 90 percent of the outflow. While developed countries still account for the bulk of outward FDI, the share undertaken in countries with notably lower costs is on the rise but so is the quality of operations in these countries.

Figure 23: "Revealed Comparative Advantage" of OECD countries, 2001, percent



Note: Revealed Comparative Advantage (RCA) measures countries' specialisation profiles in terms of structural strengths and weaknesses based on the contribution of different industries to the trade balance. It takes into account not only exports, but also imports, and tries to eliminate business cycle fluctuations by comparing an industry's trade balance with the overall trade balance. It indicates whether an industry performs relatively better or worse than the manufacturing total, whether the manufacturing total itself is in deficit or surplus.

Source: OECD (2003)

As in the case of outward FDI, the impacts of inward flows used to be considered as markedly positive in Sweden. Modén (1998) found that foreign-owned companies in Swedish manufacturing showed higher productivity levels than Swedish-owned firms. Karpaty and Lundberg (2004) estimated the effects of M&A on productivity per employee while controlling for capital intensity, company size, investment in human capital and R&D, etc. On that basis, they similarly concluded that foreign ownership leads to higher productivity in acquired companies. Internationalisation of headquarters has increased dramatically in recent years, however, as a consequence of M&A and associated organisational changes. Interviews with busi-

ness leaders among half of the 400 largest companies in Sweden showed some 7 percent to have had their HQ abroad in 1990, whereas the proportion reached 37 percent in 2003 (Axelsson et al., 2003). None of the companies with HQ abroad were Swedish, implying that the increase emanated entirely from increased foreign ownership.

According to general observations, foreign-owned companies in Sweden on average report higher export and R&D-intensity, pay higher salaries, have higher labour productivity, and contribute strongly to Swedish technological development. On the other hand, they appear less profitable, cut employment more radically, and reinvest less than the domestic-owned business sector. Focusing on employment effects, Fölster et al. (2002) claimed that firms acquired by foreign entities sharply reduced employment compared to those remaining under domestic ownership. An examination of eight specific companies acquired in the 1990s found that personnel had been downsized by an average of 16 percent compared to a 12-percent increase in a reference group of firms under domestic ownership during the same period (Fransson et al., 2003).[19] These results are hardly surprising since M&A generally tend to involve rationalisation and streamlining, the potential for which represents a reason for the investment in the first place. As noted, however, determining the direction of causal effects is far from straightforward. It cannot be known *a priori* how the appropriated firms would have fared in the absence of inward FDI. A partial explanation for the labour cutbacks observed may be that foreign-owned companies are more inclined to outsource non-core activities.

Anecdotal evidence demonstrates the importance of comprehensive assessment. In the case of Saab, the alternative to acquisition by General Motors in 1999 was most probably the complete termination of the Swedish operation, followed by the downfall of the supplier industry that was dependent on it. Through the involvement of General Motors, on the other hand, Saab and its suppliers gained access to a vast international "internal market," including opportunities to provide intermediate goods for other GM brands of motor vehicles. Moreover, because of the superior information channels as well as bargaining strength of the international giant, Saab "over night" acquired better insight into what to pay for a range of inputs. This effect had various implications for the Swedish producer and

the broader domestic industry. Purchases from other foreign suppliers could often be renegotiated and prices reduced, or existing suppliers could be replaced by more competitive ones. Some Swedish suppliers lost out because of the stiffer competition, but those who managed to upgrade their quality obtained access to wider markets.

The involvement of General Motors in Saab is a case where a foreign investor contributes skills, access to valuable information, integration with a much larger international network of research facilities, and turnover channels, etc. At the same time, the foreign investor gained access to valuable local technology, which could be used to generate value elsewhere in the international organisation. However, GM has apparently been unable so far to obtain net positive returns on its involvement, either in Saab or in other European car producers.[20] In the case of Volvo, by contrast, the Swedish operation has been profitable, and the foreign investor – Ford – has also been able to benefit in ways like gaining access to environmental and safety technologies for exploitation on a global scale. In the latter case, substantive spillovers materialised in both directions.

The structural changes brought about by flows of FDI need not be permanent. It is natural that firms pursue various activities for a limited time and then adjust as new experience is acquired. In some cases, the adjustment will entail withdrawal and re-establishment of previous structures. What matters is systematic performance. It is well known that internationalisation is risky and that numerous errors are made in decisions on outsourcing, both nationally and internationally; some of these mistakes may become visible only after a long time.[21] In various firms, there have been observations of weakened links between production and research because of outsourcing and/or offshoring.

In the Swedish case, there is recent evidence that some companies engaged in extensive outward FDI have brought production units back home from countries such as China, India, and the Czech Republic. In general, the reasons have to do with benefits of concentrating production in order to reduce fixed costs, addressing problems with communication and collaboration, regaining advantages of scale, etc. In addition, such action is often taken because of "overcapacity," exchange rates, or wage costs (Eliasson and Eliasson, 2005). When it comes to R&D, reasons for reconcentrating facilities

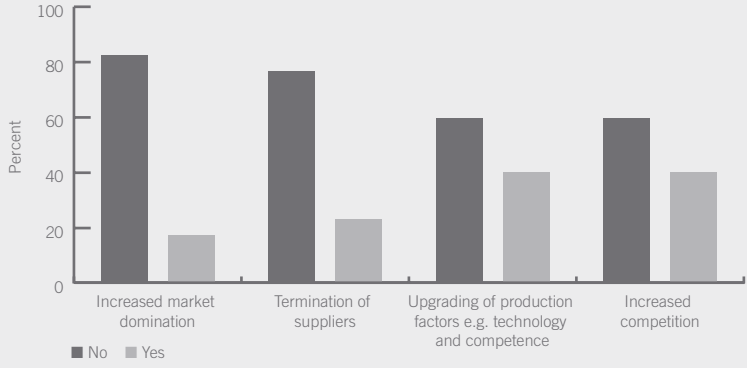
in Sweden appear to have included unique competence, strong traditions in research, an ample supply of qualified labour at a reasonable cost, and sophisticated demand for products.

SMEs and indirect effects

SMEs are increasingly affected by various aspects of globalisation, in part because of their dependence on larger customer firms. In the case of Sweden, it was evident years ago that the internationalisation of big business brought pressures that led to a more consolidated and competitive supplier industry (Braunerhjelm, 1991). With increased flows of both inward and outward FDI, effects are accumulating and becoming more complex. Based on a survey of more than 900 companies, Uvell and Selberg (2004) found manufacturing output to have increased by 47 percent during the preceding 10 years, whereas the increase for industry suppliers was less than 30 percent. Part of the reason was attributed to foreign takeover of previously Swedish-owned customer firms. A third of all enterprises with 10–49 employees claimed to have lost turnover after customers had moved business activity abroad. According to available estimates, about one third of all suppliers in Sweden are currently under severe pressure to start locating parts of their production abroad in order to remain competitive and maintain their turnover channels to larger internationalising MNEs.

Although changes in purchasing behaviour in the wake of inward FDI clearly hurt many local subcontractors, productive resources may be upgraded by intensified competition, and, as already noted, some suppliers gain access to wider markets. Examining a population of firms (primarily SMEs) in the county of Småland, the survey conducted by IKED as part of this study[22] found that companies experienced significant positive competition effects (**Figure 24**). Less than 20 percent of firms saw evidence of negative market dominance from the increased presence of foreign-owned firms. Upgrading of production factors with respect to technology and competence was also reported to be a prominent effect. Slightly more than 20 percent of respondents stated that an increased presence of foreign-owned firms has led to the termination of suppliers.

Figure 24: Share of firms reporting various effects of a foreign presence, 2004, percent



Source: IKED database

The effects of inward FDI on SMEs, due to changes in procurement patterns as HQ-functions move abroad, have received increasing attention. HQ are especially important customers to firms providing legal, financial, and ICT services. A cut-back in procurement from such units will consequently reduce demand for high-skill services. Fölster et al. (2002) estimated that purchases of inputs from Swedish suppliers decrease by roughly half following M&A. When supplier effects were added to estimated direct effects, massive losses in employment were noted. Braunerhjelm (2003) found lesser but still significant effects, also mainly indirect.[23]

The impact of inward FDI or changes in HQ functions cannot, however, be calculated without consideration of what would have happened to the targeted firms in the absence of acquisition. There may be a fine line between favourable and adverse outcomes, as can be illustrated by the example of Norba, a middle-sized company that is one of Europe's leading manufacturers of equipment in refuse and recycling material.[24] Following previous downsizing in the wake of a foreign acquisition, and after having achieved high profitability, Norba was subjected to a potentially devastating downsizing decision. There would also have been dire consequences for at least three domestic suppliers. Realising that internal opposition was futile, the entire local management team resigned in protest. As discontent spread

among staff, the US headquarters unexpectedly intervened, overruling the decision and firing the European manager, putting the affiliate back on track (Barometern Oskarshamnstidningen, 2004).

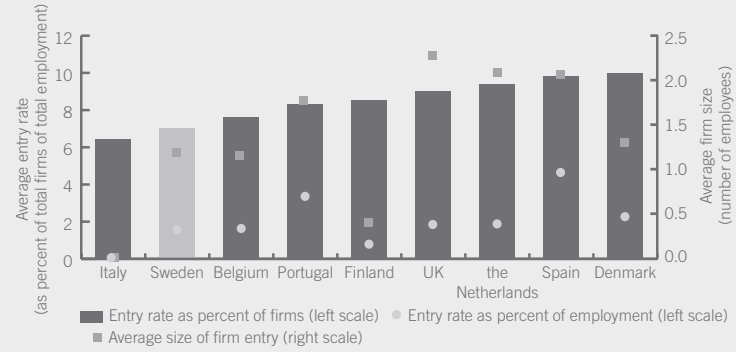
The case illustrates the "strategic" nature of decision processes internal to MNEs, which can no longer be assumed to consist of homogeneous building blocks. Individual affiliates have often been granted greater authority and independence. However, small differences may determine whether an affiliate falls prey to the parent company's desire for consolidation or becomes a high-priority nexus of expansion. SMEs are indirectly affected as suppliers to larger firms that invest abroad or are acquired by foreign investors. Whether a foreign affiliate is destined for disappearance or prominence may determine the fate of many subcontractors. In the case of Saab and GM, some 20,000 employment opportunities and the eventual fate of an entire industry in Sweden may be at stake.

The ultimate impact of FDI will crucially depend, however, on the capacity of the economy for self-renewal, including reallocation of resources to activities with higher potential value-added. Subsequent to foreign take-over and slimming of operations, financial and human resources may be freed up and utilised by other, more productive firms or contribute to the start-up of new businesses. In this case, both inward and outward FDI are likely to bring productivity gains accompanied by value-enhancing reallocation of resources to other activities. On the other hand, where there are barriers to labour mobility, to upgrading of skills, and to development of new products, productivity gains resulting from FDI may be accompanied by more idle resources.

It is well known today that growth in TFP depends on improvements in efficiency within firms, the exit of nonviable firms, and the rise of new ones. Over the last few decades there has been an increased contribution from both "entry" and "exit" in most economies, especially in years of recession. Contributions have changed the most in services and in manufacturing industries marked by rapid technological renewal (Brandt, 2004). Most European countries, including Sweden, display weakness in this respect (OECD, 2003; Zoltan et al. 2005). **Figure 25** compares firm entry rates, job creation, and firm size, and **Figure 26** shows the relative position of different countries with regard to firm entry and exit both in manufacturing and

in business services. Average entry rates were highest in Denmark, but survival rates there have been low. Survival rates have been substantially higher in Sweden, where 87 percent of entries in 1998 were still in operation as of 2000. While most firms have initially been small, surviving firms have generally grown over time in all countries. In Spain, employment in firms started in 1998 increased from 2.1 to 3.2 persons per firm in 2000. All in all, however, firm entry and exit have contributed rather little to industrial restructuring in Sweden, although the contribution of entry has been relatively larger in services. Also, while reliable and internationally comparable data in this respect are difficult to obtain, Sweden clearly produces relatively few new high-growth firms (Lindholm Dahlstrand, 1997*a* and 1997*b*; NUTEK, 2005).

Figure 25: Firm entry rates, job creation and average size of new firms in total non-farm industry, 1997–2000[1]



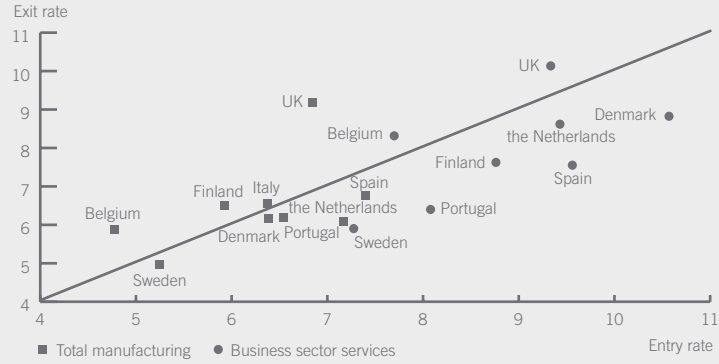
Note: [1]Data on persons employed for Denmark, Finland and the Netherlands are expressed in full-time equivalents.

Source: OECD (2003)

With SMEs entering a stage of intensive internationalisation, it is very important to improve our understanding of the way that FDI and conditions for business growth and entrepreneurship relate to each other. Technical advances are in the process of enhancing the capability of SMEs for outsourcing and offshoring, but significant challenges remain. Geographical separation of the value chain may now be less dependent on advantages of scale in administrative services, allowing SMEs, like larger firms, to coordinate dispersed organisations across vast distances. At the same time, managing risks

and internationally dispersed distribution networks still requires considerable skill. There are anecdotal observations, though little systematic evidence, of considerable changes in SME behaviour. In the case of Sweden, however, several recent surveys have provided new data on these developments.

Figure 26: Share of entry and exit of firms in manufacturing and business services, 1997–2000, percent



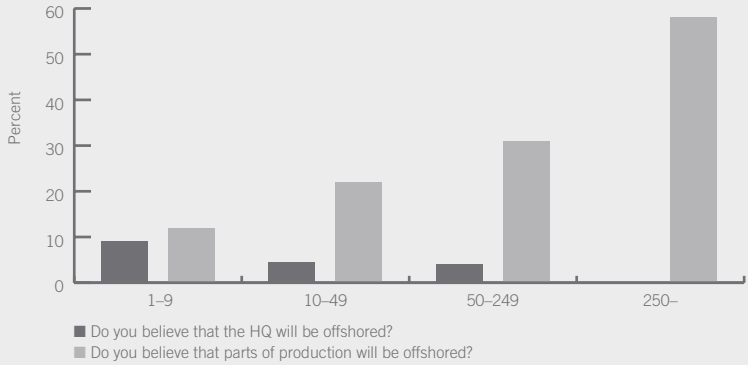
Note: Offshoring activity was reportedly planned by 26 percent of firms in the population, which is in line with results reported by some other recent surveys, such as those made by SIF, and the Confederation of Swedish Enterprise, whereas the West Sweden Chamber of Commerce and Industry has reported considerably higher figures. The distribution of activity types across main regions is depicted. More in-depth surveys are required for obtaining statistically significant relationships.

Source: OECD (2003)

According to a survey by SIF (2004) in Småland, 26 percent of companies (primarily SMEs) had moved some of their activities abroad during the preceding five years.[25] Suppliers considered it necessary to offshore, both to reduce costs and to become more responsive to the needs of internationalised client firms. The Confederation of Swedish Enterprise (2005) reported that one out of every five companies in Sweden is planning to proceed with offshoring in some form. According to that study, almost one-third of companies expect to lose customers as a consequence of such relocation. The combined effect, it was argued, would be a loss of 500,000 jobs, all else being equal.[26] According to SIF (2004), some 2,000 jobs were lost in the county of Småland in recent years, mainly because of outward FDI in developing and transition economies, especially China and the Baltic countries.

In order to obtain a clearer picture, the IKED survey examined the size factor more carefully. We found that 21 percent of firms with 1–9 employees anticipate that either production or headquarters will be located abroad within five years. Of those with 10–49 employees, almost 30 percent view it as probable. In the size class 50–249 employees, 35 percent consider it likely. Firms with more than 250 employees put the likelihood at 58 percent. A systematic relationship with firm size is obvious from **Figure 27**. The expectation of offshoring correlates with firm size, whereas the opposite applies to HQ.

Figure: 27: Share of companies which forecast that parts of production or headquarters will be relocated abroad within five years, according to firm size, 2004, percent

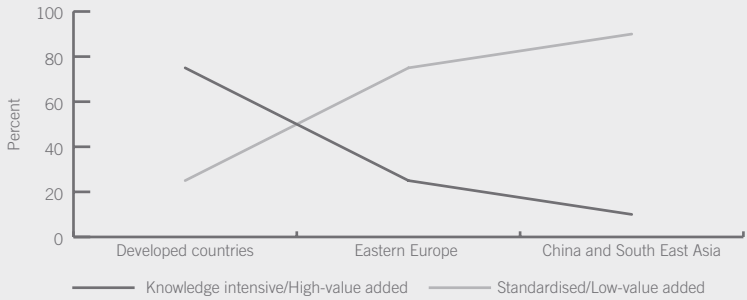


Source: IKED database

A firm's ability to successfully outsource and/or offshore some of its activities successfully may hold the key to their survival. In this regard, it is crucial what activities are moved abroad, what stays, how the remaining activities develop, and what may eventually emerge in the place of what has been moved. According to the West Sweden Chamber of Commerce and Industry, nearly 70 percent of the largest companies in western Sweden are now contemplating moving production abroad, primarily to China, the Baltic countries and Poland (Bellman, 2005). Factors such as proximity to markets have traditionally played a part, but cost reduction was now found to be the principal reason.[27] Examining the nature of outsourcing, however, we have attempted a more detailed mapping of the types of activities

SMEs plan to relocate abroad. According to the IKED survey, outward FDI to relatively low-cost countries shows signs of an increasing knowledge-intensity, as well as a tendency towards higher value-added. As can be seen from **Figure 28**, this applies especially in the case of Central and Eastern Europe, albeit still less so than in developed countries.

Figure 28: Reported relocalisation plans, across country groups, according to type of activity, 2004, percent



Note: Offshoring activity was reportedly planned by 26 percent of firms in the population, which is in line with findings of some other recent surveys, such as those made by SIF, and the Confederation of Swedish Enterprise. Considerably higher figures have been reported by the West Sweden Chamber of Commerce and Industry. The distribution of activity types across main regions is depicted. More in-depth surveys are required for obtaining statistically significant effects.

Source: IKED database

Plans for the future entail considerably larger outflows of FDI. Currently, the proportion of companies planning to offshore standardised production abroad is slightly above 70 percent, whereas an estimated 20 percent are contemplating relocation of production deemed knowledge-intensive, and almost 4 percent intend to move R&D to another country. A five-year forecast anticipates that the share of standardised production will decline to some 60 percent and that of knowledge-intensive production will rise to almost 40 percent. However, these differences may be somewhat exaggerated since responses are not entirely consistent.[28] For relocation of value added, the expected changes over time are more modest. On the whole, however, the figures still indicate an ongoing shift in strategy.[29]

In this situation, the performance of domestic operations will strongly depend on the ability of the firm to reorganise itself and to upgrade

and adjust its competencies as required for managing an internationally distributed production network. The extent of any job losses hinges on what restructuring takes place. Adjustment processes may lead to the creation of new employment opportunities. As offshoring is likely to reduce costs of inputs, resources may be freed up to support other, more productive activities. For this reason, gross estimates of layoffs are insufficient for drawing conclusions about the impact on employment.

Recent research in several countries raises questions about the effects of offshoring on SMEs.[30] In the case of Sweden, one study concludes that Swedish-based SMEs tend to claim offshoring a success, but that the actual evidence shows the opposite, i.e. that results tend to be negative.[31] On this point, our survey found no significant difference in productivity between companies that invest abroad and those that do not.[32] On the one hand, it is plausible that successful internationalisation is now highly important to the competitiveness of the SME sector as a whole. On the other hand, since outsourcing to developing countries in particular is typically expected to reduce costs, this conclusion may not be valid for various reasons. The interaction between international units may not function as planned, resulting in unexpected costs arising from poorer quality and prolonged hours of production, among other things. SMEs may be particularly hard-hit because of difficulties in taking precautionary action, stemming from less extensive experience of internationalisation coupled with challenges in upgrading relevant competencies. Meanwhile, SMEs are particularly vulnerable to bureaucratic hurdles, generally less able to cope with liquidity constraints and to recuperate from a downturn, and financiers and customers tend to be less lenient and understanding toward SMEs with respect to delivery or quality problems. Such problems are likely to worsen further in the case of discriminatory financing costs or terms for ownership, compared to larger investors.

To the extent that extensive failures in establishing operations weaken firm performance, the result may be more frequent bankruptcies or, as an alternative, acquisition by other firms. While individual SMEs may view offshoring as necessary for their survival, the collective effect may be further weakening of production as well as HQ functions in the home country. Ongoing developments highlight the importance of upgrading firm competencies, including management

capabilities necessary for linking and effectively coordinating complex operations in diverse countries.

Many significant innovations require collaborative networks that span the globe, since effective dispersion of knowledge and skills in a situation of technological convergence becomes critical for developing or maintaining a competitive edge. It is becoming necessary for many firms, irrespective of size, to outsource and offshore non-core activities, and also in many cases to team up with foreign investors that can contribute valuable technological know-how and expertise. For an individual investment location to be competitive in knowledge-intensive operations, its environment must form a viable node in such exchanges, i.e., a knowledge hub in a wider network. In very few cases, if any, will knowledge-intensive, high value-added operations be able to prosper in isolation.

Summing up, an outward-looking strategy has been a primary source of strength in Swedish industry over the years. It remains one of the principal drivers of the high R&D intensity and innovativeness of Swedish industry. Compared to the EU average, Sweden has performed relatively well in the last few years, and productivity growth has soared. On the other hand, investment and employment are on the decline. R&D intensity remains high, but the economy shows an "average profile" in terms of knowledge-intensity as measured by specialisation in international trade. Terms of trade have eroded over the past decade, and the development of wage profiles as well as structural changes indicate that the country's specialisation towards skill-intensive domestic operations has become less pronounced than in the past. Meanwhile, new technology-based activities and fast-growing firms are relatively few and far between.

There are now indications of more open-ended patterns of specialisation, as increasingly sophisticated operations are relocated to developing countries and transition economies, notably in East Asia and Central and Eastern Europe. New data presented in this chapter indicates that the SME sector is becoming more inclined to engage in offshoring of this kind, while also displaying heightened risks and levels of foreign control. SMEs are faced with hurdles and challenges, not least in upgrading competencies in ways which can enhance their capacity to capture the benefits and counter the risks of internationalisation.

The critical question is what evolution and direction of industrial restructuring is being driven by FDI in conjunction with other more fundamental conditions in an economy. The answer will much depend on what motives investors will have for entering or exiting, as well as on what adjustments in response to FDI are taking place on a broad front in the economy.

18. Figure 23 is based on a calculation of each country's degree of specialisation across sectors, evaluated on the basis of "revealed comparative advantage" (RCA).

19. The acquired companies were ESAB, ASG, Svedala, AGA, PLM, Procordia Food, Scancem, and Kalmar Industries. The non-acquired reference group of firms consisted of Nefab, Sardus, Atlas Copco, NCC, Scandia Transport, Höganäs, Cardo, and VBG.

20. This cannot be known with certainty, though. The development of GM had Saab not been acquired is of course a matter of speculation.

21. In the case of Ericsson, for instance, some studies have argued that decisions undertaken in past years led to increased delivery times, higher costs, and reduced revenue, compared to Nokia's greater reliance on in-house control.

22. Although not all companies responded to all questions, the differences were minor, producing negligible discrepancies in response rates for individual questions. See further Appendix.

23. According to these estimates, some 5,000 to 120,000 jobs in Sweden would be lost as an employment effect, including reductions in appropriated HQ as well as in related sectors.

24. Norba was founded in 1913 as "Norrbacken's Mechanical Workshop". In 1976 the company was acquired by "Sponsor OY" of Finland, and a year later it became part of another Finnish company, "Partek OY". In the year 2000 Norba was sold to "Powell Duffryn" of the United Kingdom, which in 2001 then sold the "Geesink Norba Group" (of which Norba forms a part) to the "Oshkosh Truck Corporation" of the United States. Today Norba employs 160 people with turnover of SEK 255 million.

25. All in all, the estimated number of job "transfers" reportedly reached 1,850. In 23 percent of cases, service jobs were included. Estimates indicate that one out of every 10 jobs concerned belongs in that category (SIF, 2004).

26. According to this report, some 300,000 jobs were estimated to have been lost during the last five years as a combined direct and indirect effect of outward FDI.

27. The survey conducted by IKED supports this picture. We find that China is by far the hottest location for Swedish SMEs, followed by Lithuania, and Eastern Europe as a group. See Appendix Figure A7.

28. See Appendix Figures A3 and A8.

29. Knowledge-intensive production may thus not necessarily be equivalent to high value added activities. See Appendix Figure A9.

30. Calabrese and Erbetta (2004) observe that offshoring of manufacturing has been largely unprofitable in a population of Italian SMEs, whereas offshoring of services was found to be beneficial. Görg and Hanley (2004) conclude that offshoring has been unprofitable for SMEs based in Ireland.

31. It is argued that manufacturing companies which outsource production do not perform as well as those which do not (Bengtsson et al., 2005). Selection problems appear to complicate the interpretation of the results.

32. See Appendix Figure A4.

7. Evolving policy challenges

The desire to obtain more FDI remains a major preoccupation in government policies towards globalisation. Rather than the size of investment flows or the number of foreign affiliates, however, the central question is what role FDI plays in the economy. New evidence shows that the effects of FDI are sensitive to the specific conditions in each country. Still, the interface between domestic policies and FDI has been granted little attention.

Whereas the socio-economic effects of FDI used to be viewed as primarily positive and supportive of industrial strongholds based on internationally competitive production and research, recent evidence paints a more complex picture. There are current indications of an ongoing restructuring process with more open-ended outcomes for different economies. Future patterns of specialisation, regarding where and how knowledge-intensive and high-value-added operations are to excel, for example, are not self-evident.

In particular, we have noted that various studies point to mixed or negative effects of inward FDI in EU countries, underlining the impression of a European problem in offering competitive conditions for important activities. Europe's difficulties are due in part to intensifying competition from other regions. Just as importantly, the environment for FDI in the EU is marked by insufficient renewal and growth of new enterprises. Contrary to most other European countries, Sweden is not a laggard in R&D or in knowledge-creation, but the country is suffering from a low rate of domestic investment combined with too little entrepreneurship.

In Sweden, as elsewhere, FDI is undertaken primarily by large firms and serves as a major driver for restructuring, enhanced flows of knowledge, access to international turnover networks, and efficiency gains. However, SMEs are now becoming extensively involved as well. For this category of firms, it is equally pivotal to exploit globalisation to become more competitive, by following customers abroad, upgrading the specialisation of operations, and so on. But being vulnerable to deficiencies in local financial markets, and inexperienced in coping with the hurdles involved in internationalisation, these firms are in particular need of upgrading relevant competencies for managing the ongoing process of restructuring.

With respect to inward FDI, Sweden features a strong base in sciences combined with conditions unfavourable to entrepreneurship and fast-growing new firms. This environment may provide foreign investors with incentives to establish a strong presence, including local R&D facilities, for the sake of sourcing domestic technology. A lack of alternative paths of commercialisation for innovators is likely to induce them to sell their ideas to other actors (and countries).

So far, Sweden remains a world-class performer in R&D expenditure, although there was a decline from 4.3 to 4.0 percent of GDP between 2001 and 2003. Some 75 percent of R&D expenses are accounted for by the private sector, where the cutbacks have taken place. Furthermore, foreign-owned companies performed 45 percent of R&D in 2003, an increase by 4 percentage points since 2001. The strong foreign presence has followed acquisitions of R&D-intensive companies, but also subsequent expansion of their R&D activities (ITPS 2005*c*). On the other hand, investment in productive capacity has been weak for years, and employment is declining in domestic- and foreign-owned operations alike. The benefits of research efforts for the domestic economy are thus more limited, raising questions about the future viability of research under such circumstances. How well can R&D continue to develop if advanced production and ownership control are moving out?

FDI flows to and from other developed countries predominate in Sweden as in other European countries. In a range of industries, however, stiffer competition from some developing and transition economies in terms of costs, as well as in terms of the quality of production factors, is now heavily influencing international processes of restructuring. Competition from countries with lower wages, production costs, and taxes, as well as more flexible labour markets, is not a new phenomenon. The principal change is that countries such as China and India are able to combine such conditions with an enormous increase in education and research, coupled with a strong drive for commercial success and rapidly improving infrastructures and regulatory frameworks. Naturally, these countries face challenges of their own, including regional divisions, inadequate protection of the environment, and tensions arising from the lack of social security for workers. Bureaucracies are still seriously lacking in transparency, and intellectual property rights remain poorly protected. Despite such shortcomings, however, these countries are already offering

increasingly competitive conditions for sophisticated economic activities. As they can design appropriate legislation after learning from the experience of others, they may manage to avoid some of the costly distortions of economic activity present in developed countries.

It is beyond the scope of this study to discuss in detail the precise factors that have shaped the behaviour of outward and inward FDI in individual countries. Several factors are at work in each situation, as the interplay between firm strategies and country policies is intensifying. Let us nevertheless consider a few aspects which require consideration in the case of Sweden, and which are also of great importance for many countries. Outward FDI remains driven in part by a need to expand within or near large foreign markets. On the other hand, consumer sentiments and attitudes are highly important as well, although they vary from sector to sector. One reason why the Nordic markets are attractive, especially in high-tech consumer goods, is their generally favourable attitude among consumers to try out new products and kinds of product functionality. Another positive factor is transparency in regulatory provisions and in market transactions, which accounts for the exceptionally high reliability and trustfulness in day-to-day commercial relations, as illustrated, for example, by relatively small problems with late payment. Given the previously mentioned presence of dynamic industrial clusters and high-quality infrastructure in several respects, it does not appear that Sweden suffers from a serious inherent disadvantage with respect to market access, although the situation differs between sectors. Ireland provides another example of an apparently remote location that has been successful in attracting high-value-added FDI.

Modern communications infrastructure represents another important area in which Sweden was exceptionally strong at the outset; the country's position is still favourable although perhaps developing less dynamically relative to other countries in recent years. Sweden's transport and logistics infrastructure, on the other hand, is less impressive, with insufficient efforts to co-ordinate intermodal solutions. There has been too little progress in bringing together complementary interests, such as public-private partnership, and in joint efforts to respond to new demands. The status of infrastructure and logistics around the capital, Stockholm, provides a case in point. The most decisive factor for the future, however, has to do with the fundamental condi-

tions offered for upgrading skills, innovation, and organisational change in the economy. Many countries need to take steps to improve conditions for acquiring new knowledge throughout working life, putting in place the modes and means for creative learning that can last late into an individual's career. In ageing societies, the mature and experienced will have to be enticed to contribute, and to learn anew, for a longer time. Many established industrialised countries ought to remove current disincentives to education and training, particularly the development of skills in SMEs, and to mobility of personnel.

The public knowledge infrastructure needs to support progress in such respects. In the case of Sweden, the sector of industrial research institutes is relatively small and not well positioned to promote technology diffusion and innovation in SMEs. In the university sector, where R&D funding is dominated by public sources, there are areas of recognised academic strength as measured, for example, by publication in scientific journals.[33] Whereas universities now face numerous demands to promote industrial links and exert a favourable influence on societal developments, their effectiveness in doing so is hampered by the inherent conflict between the striving for scientific progress and offering instruction in general skills, on the one hand, and meeting the highly specific demands for competence development among private firms, notably SMEs, on the other. Remaining public regulations and tight government control over resource allocation in the university sector also limit the flexibility of universities and their ability to carve out niches where they can specialise effectively. A further hindrance is the continued prevalence of taxes and labour market conditions which discriminate against risk-taking, training, and entrepreneurship on the part of individual workers and prospective entrepreneurs.

While a country should refrain from a "pick-the-winner" policy in terms of supporting individual firms or ventures, measures to attract FDI are warranted in many cases because of the presence of barriers and the inadequate information confronting foreign investors in any economy. At the same time, FDI policies need to consider the kinds of effects that will result from attracting investment. Deficiencies in resource allocation among domestic and foreign firms alike require attention. Sharpening international competition and the technological and organisational changes under way are making present distortions increasingly costly.

The developed countries must not fear globalisation or shut the door to the restructuring that it entails. The number of firms and jobs lost from restructuring is not the issue. The critical question concerns what comes in their place, and whether potential opportunities for new products, firms, and industries are present. Currently, there is a dearth of data on the interface between domestic factors and transnational investments and economic restructuring. The consequences are particularly unclear in some areas like service industries and SMEs, which used to be less directly involved in globalisation but are now strongly affected. There is a need for better data and understanding of the factors that determine what outcomes are obtained under specific circumstances.

Transition economies and developing countries are faced with their own set of challenges. These include managing acute needs without compromising long-term progress. All countries need to remove the red tape that commonly impedes both FDI and the development of domestic enterprises. Each society will have to improve its ability to identify its principal weaknesses relative to conditions elsewhere. There is the need to prioritize and to bring together key stakeholders so as to remedy these specific, most harmful deficiencies faster and more decisively.

FDI flows and MNE strategies are increasingly swift in adapting to the conditions prevailing in individual countries and regions. Still, all investment decisions are undertaken under conditions of uncertainty. The impact of globalisation ultimately hinges on the evolution of local economies and their ability to choose promising avenues for specialisation in such respects as the upgrading of skills, economic restructuring, and the emergence of new products, firms, and jobs in place of those that diminish, or disappear.

33. On a per-capita basis, Sweden leads all countries except for Switzerland in the number of articles published in scientific journals, especially in engineering and medical science. Studies of references, on the other hand, indicate a certain weakening since the early 1980s relative to countries such as the United States, Denmark, and the Netherlands.

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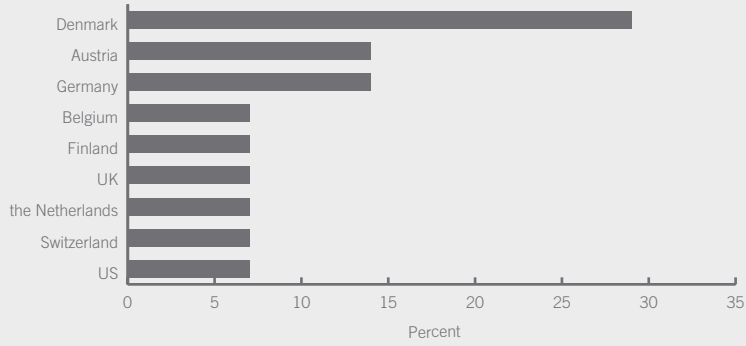
Appendix: IKED survey

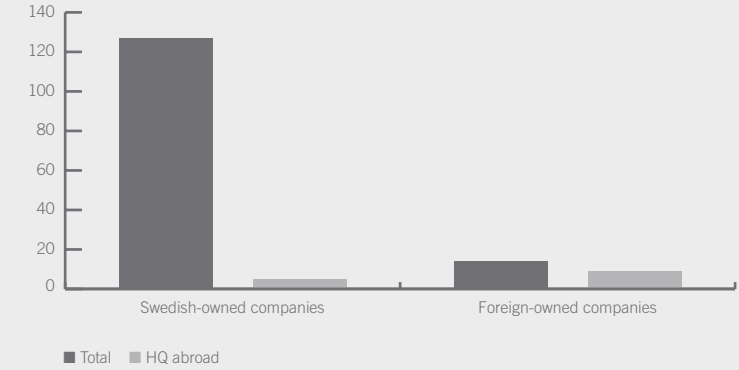
As a part of the study, IKED conducted a survey in collaboration with the Jönköping Chamber of Commerce for the purpose of examining the effects of globalisation and foreign direct investment for firms belonging to varying size categories in terms of number employed, particularly within the SME sector. Responses were obtained from 141 out of 500 companies, a 28 percent response rate. Some 40 percent of the companies that responded had 1–9 employees; for 33 percent the number of employees was 10–49, for 18 percent it was 50–249, for 4 percent between 250–499, and 5 percent had 500 or more employees. Although not all companies responded to all questions, the differences were minor, resulting in a negligible discrepancy in response rates for individual questions. The investigation was conducted between October 2004 and January 2005.

Figure A1: HQ location for companies with HQ abroad



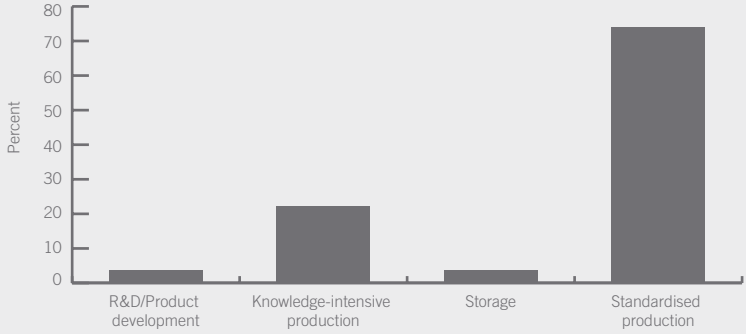
Note: For 11 percent of the respondents, HQ is located abroad

Figure A2: Number of companies with HQ in Sweden and abroad, respectively, according to foreign and Swedish ownership



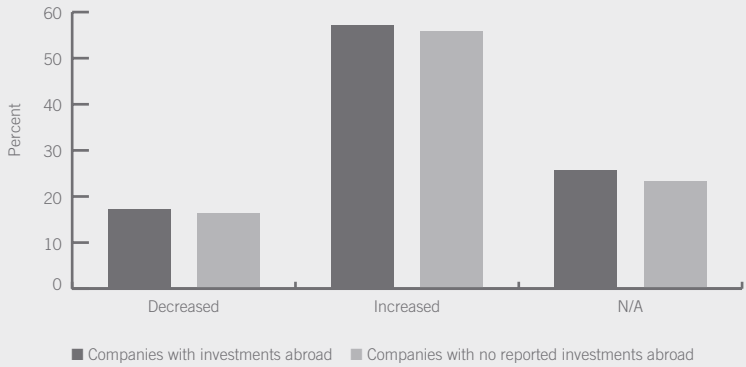
Note: * including mergers to the level of 10 percent

Figure A3: Type of activities abroad, percent



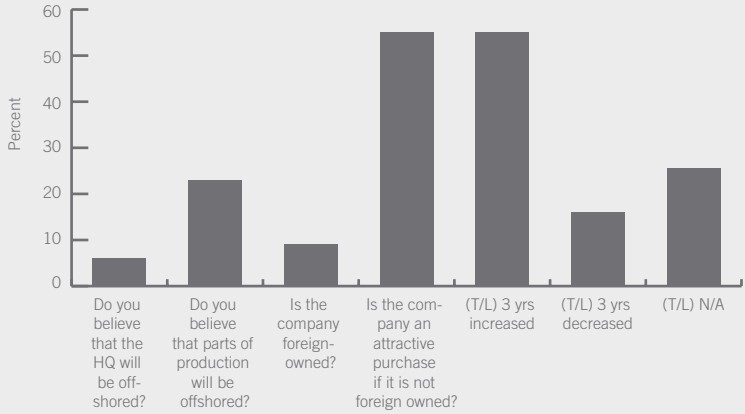
Note: 35 companies, or about 25 percent of the respondents, have investments abroad

Figure A4: Productivity in relation to FDI, percent



Note: Outward FDI alone does not axplain differences in productivity

Figure A5: Firm expectations and variables for the entire population, percent answering "yes" to each question.



Note: Turnover/Labour (T/L) is the change in turnover divided by labour for a three-year period

Figure A6: Firm expectations and variables divided on company size, according to company size, percent

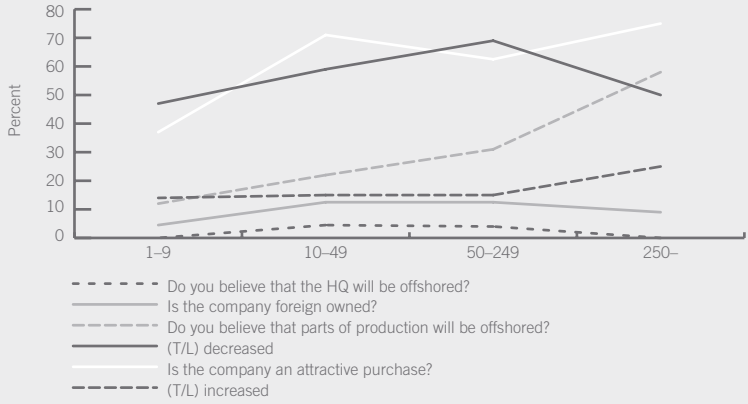
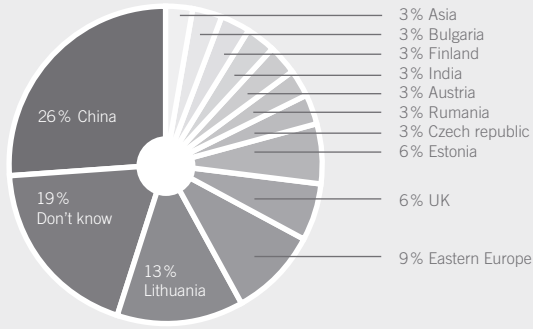


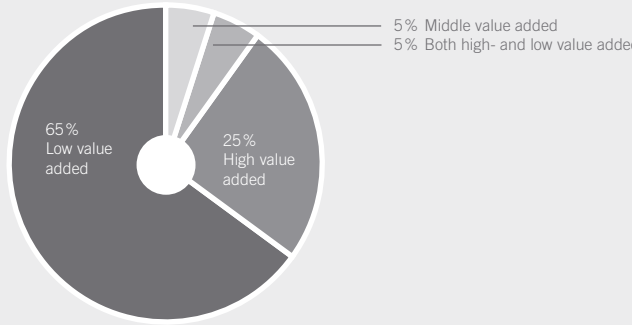
Figure A7: Countries reported for localisation of production



Note: 23 percent of companies stated that they intend to relocate production to other countries within a five-year period

Figure A8: Companies' anticipation of what kind of activities will be moved abroad within a five-year period, percent

Figure A9: Planned offshoring of activities, within a five-year period, according to value added, percent



Figures

Tables and boxes

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