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GLOBALIZATION AND THE SMEs: PROSPECTS FOR THE 1990s

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GLOBALIZATION AND THE SMEs: PROSPECTS FOR THE 1990s

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Abstract

Small and medium sized enterprises (SMEs) face a new situation as markets become more internationalized in a deregulated world. The dismantling of trade barriers, the higher internationalization of customer firms, and technological advances, force SMEs to incorporate more of global concerns into their decisions and strategies. Particularly subcontracting firms will enter a period of substantial restructuring. Based on the past development of SMEs in eight industrialized countries, complemented with a case study of Swedish SMEs, the prospects for internationalization of SMEs in the 1990s is discussed. Special emphasis is directed towards SMEs involvement in foreign direct investment.

Introduction

A significant characteristic of "industrial organisation" in the postwar era, especially up to the 1980s, is the establishment of large international firms, designed for mass-production of standardized goods. For a number of reasons, traditional wisdom has regarded production by smaller units as inferior, with small firms being expected to more or less wither away. However, since the beginning of the 1970s the increasing role of small and medium sized

enterprises (SMEs) in terms of employment and value-added has prompted a revaluation of the importance of SMEs.[1]

The issue adressed here is to assess the future opportunities of SMEs in a globalized economy, in particular the extent and direction of their foreign direct investments (FDI) in the 1990s. Evidently different types of SMEs face different options and a large part of the smallest (micro-firms) will no doubt remain domestic, particularly in the service sector. For other SMEs, notably subcontractors, with close links to one or a limited number of highly internationalized firms, the establishment of producing units abroad may be a necessary requisite for survival. Strategic networks may also become more international, especially for high-tech firms, necessitating presence abroad.

The insulation from shocks in the international economy earlier enjoyed by SMEs has, through technological advance and increased international interdependence, to a large extent been eroded in the postwar era. This influences industrial structures and the size distribution of firms. The question is then what prospects SMEs are facing in such a globalized, or regionalized, world? Furthermore, what strategies should SMEs adopt to succeed in the 1990s? How will the investment pattern and the distribution of investments between domestic and foreign markets be affected? Obviously, the chosen strategy must build on the specific capabilities and characteristics of each individual firm and the setting in which it operates.

This chapter aims at shedding light on these matters by studying the SMEs' performance during the last few decades and by defining the structural factors

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[1] See Sengenberger-Loveman-Piore (1990), arguing that this trend started already in the end of the 1960s for most of the industrialized world. See also Burns-Dewhurst (1986) and OECD Employment Outlook (1985). Cantwell-Radaccio (1990) shows that on average the size of multinational firms has decreased. Carlsson (1989) showed that the role of the Fortune 500 firms in the US diminished in the 1980s. Also, Carlsson (1992) analyzes the causes of the shift towards small business internationally and explores the consequences for industrial structure and competitiveness.

forming the capabilities and competitiveness of small firm production. Based on past performance of SMEs in the major industrialized economies, complemented with a case study of Swedish SMEs, the prospects and strategies for small firm engagement in foreign operations are discussed (as summarized in Table 11). The presentation focuses on the manufacturing industry, since FDI is concentrated to that sector. Services often have a markedly local character although a large and growing part is intimately interlinked with production. The following discussion emanates from a perspective of continuing internationalization of the world economy, ie protectionistic waves due to a collapse of the GATT negotiations etc will be disregarded.

The first section reviews the specific advantages and disadvantages, ie the competitiveness, traditionally associated with smaller batch production. Furthermore, the determinants of growth and the degree of internationalization are discussed. Thereafter the size distribution of manufacturing production over time in the industrialized world is considered. In the following section a case study of Swedish SMEs and subcontractors is presented where emphasis is on structural features rather than the evolution over time. The last section summarizes the main findings and discusses the prospects for the internationalization of SMEs in the 1990s.

Characteristics of SMEs

The key in understanding the future role of SMEs in an internationalized environment lies in defining the sources of their competitiveness. In particular, which are the capabilities of SMEs that overcome the drawbacks of being small? Already Mill (1848) claimed that a tendency towards large scale organization of businesses would lead to the demise of SMEs. This view was pursued - although for different reasons - by Marx and Schumpeter, and in the aftermath of the industrial revolution the share of employment in large units did indeed increase. At present, however, rather the opposite opinion is frequently raised.

In fact, the revival of the SME sector has induced both economists and politicians to direct more attention towards this strand of economics. For instance, the European Community (EC) has declared SMEs as an area of priority. The EC policy towards SMEs is a mixture of providing information (Euro-Info-Centres and BC-NET) and of making capital accessible to the SMEs (examples are the Venture and Consort Seed Capital program and the Eurotech Capital program). These are also the general areas where nations concentrate their eventual support to SMEs. For example, Japan and Germany are two countries that have had special legislation concerning SMEs since the beginning of the 1960s. Still, most nations have favoured, or focused on, activities by large enterprises (LEs). One explanation is that the impact of LEs in terms of employment and investment effects are easier to observe, which may be attractive from a politician's point of view.

"Small is Beautiful"

In order to discuss the "beauty", or competitive advantages, of SMEs, a distinct definition of smallness is required. The problem is, however, that the definition of SMEs varies between countries, not only with regard to which variables to use, but also as far as the level of these variables is concerned. The closest generally accepted definition for small enterprises seems to be firms with less than 200 employees while the limit for medium-sized enterprises is set at 500 employees (Burns-Dewhurst 1986).[2]

What factors determine the size distribution of firms? Even though the question may appear somewhat naive it has occupied several economists over the years, particularly since economies of scale in production is a standard assumption in much of economic modelling. Scale economies seem, however, to become increasingly important for activities outside the actual production process. Examples of such activities are R&D, marketing, finance etc, from which several production units within a firm can extract benefits. Hence, a distribution of a large number of small establishment may be compatible with a market dominated by large firms.

One reason for the changing size distribution of firms is provided by technological progress. On the one hand, production technology sets the limit for the operating units. As technology improves over time, different vintages apply to different scales. Hence, the distribution of firm size has a time aspect (Hjalmarsson 1990). Furthermore, the improvement of manufacturing technologies has revolutionized SME flexibility (Carlsson 1984, Carlsson-Taymas 1992).[3] On the other hand, information technology also affects the

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[2] National definitions are generally based on the level of employment and vary substantially, not only between nations, but also between industries within the same nation. Within the EC SMEs are defined as firms with less than 500 employees, having fixed assets of less than 75 million ECU and where ownership by another firm is restricted to a maximum of one third.

[3] See also Sabel (1983) and Piore-Sabel (1984).

plant size and the organisation of production within the firm. It gives access to information at lower costs, and also makes information easier to process and interpret, which weakens the scale argument in production. However, it could also be argued that the establishment of larger firms is facilitated since control and monitoring possibilities increase with improved information technology.

Another factor influencing size (and technology) is the characteristics of demand facing the firm. As pointed out by Taymaz (1991), if demand fluctuates with regard to product attributes, then firms should implement technologies geared towards flexibility in differentiating the product. However, if demand is volatile in terms of volume, then volume flexibility should be emphasized. Depending on the demand structure for different products, there is a trade-off between different types of flexibilities and technologies which influences the size of firms and plants. Hence, from a static point of view, the given technology, the demand pattern and the set of production factors are the main determinants of the distribution of firm size. Over time, technological progress, R&D acheivements and changes in consumer preferences influence the distribution of SMEs and LEs.

A somewhat different question - although important in an internationalization context - is whether firms stay small or eventually grow large. First, very few firms experience a smooth growth, rather a preponderant feature is recurrent crises, induced learning and the development of firm specific knowledge and niche production (Eliasson 1991a, Arthur-Hardy-Jones 1991). Furthermore, firms with R&D facilities seem to experience much higher growth than non-R&D intensive firms, although the evidence is a bit fragmented (Kamien-Schwartz 1975, Rothwell-Zegweld 1982, Drucker 1985). In an extensive survey undertaken by Pratten (1991), the most important factor is argued to be time, ie it simply takes time to grow. Others claim that sophisticated production technology must be complemented with stable and advanced customer demand, ie the relevant network (Arthur-Hardy-Jones 1991, Nutek 1991a).

Still, as shown in several studies (Jagrén 1988, Davidson 1989), only a very limited number of firms survive and become LEs.

To explain the SME success, a number of sources of diseconomies of scale have been suggested that may offset potential economies of scale. These offsetting factors are, for example, limited supply of strategic factors, decreasing efficiency of factors as scale increases, disproportionally increasing costs of management due to coordination and monitoring costs, decreasing motivation and increasing selling and distribution costs. Especially the scarcity of human capital and entrepreneurial skill are regarded as constraints to growth (Lucas 1979, Brock-Evans 1986). In addition, it has also been suggested that growth is simply not the prime goal of SMEs, rather the objective is related to private motives as independence and exploiting own ideas (Nutek 1990). Deterrents to growth are also small home country markets and difficulties in raising capital necessary for expansion. Especially the latter factor has been viewed as a major obstacle to growth (Penrose 1956, Horwitch-Pralahad 1976, Buckley 1986).[4]

Internationalization

Under the auspicies of GATT on a global level, and supplemented with regional trade arrangement, the evolution of international trade policies has led to a substantial dismantling of trade barriers in the last forty years and a considerable internationalization of the world economy. As a consequence, firms are more sensitive to changes in international competition - notably new actors - and more vulnerable to changes in macroeconomic disturbances

[4] Financial constraint is habitually regarded as a severe bottleneck for SMEs. Some studies, however, point in another direction. Lindquist (1991) for instance, in her study on small Swedish high-tech firms, finds little support for financial constraints and similar results are reported for English SMEs (Burns-Dewhurst 1986). The ongoing integration of financial markets is also favouring SMEs. However, during the transition from regulated to integrated markets it is possible for financial institutions to charge SMEs higher costs by exploiting information differences (Oxelheim 1992).

(Oxelheim 1990). A more volatile environment requires firms to react swiftly to changing conditions. Large firms have also long ago recognized the importance to act from a global perspective. As deregulation and the lowering, or diminution of protectionistic measures proceed, they also put pressure on SMEs to incorporate more of global concern into their strategies.

First, the meaning of internationalization has to be defined. In its general meaning it alludes to a wide range of international penetration and commitment, from exports to sales agents and wholly owned production units abroad. Internationalization by SMEs predominantly take the form of exports, while setting up subsidiaries abroad is less common. Furthermore, export performance by SMEs differs widely between countries. The explanation is related to different size of the home country markets, the structure of the industry, governmental policies etc.[5]

A theoretical rationale for internationalization has been provided by Hymer (1961), Buckley-Casson (1976), Williamson (1975, 1985), Caves (1982) and others.[6] In short, the argument is that the lack of markets for firm-specific assets or knowledge induces firms to internalize production in wholly owned subsidiaries abroad. Arm's length contracts are not possible since they may erode the firm-specific advantage, through opportunistic behaviour, and therefore firms prefer to expand through FDI rather then through cooperative arrangements as licensing etc.

A particular branch of the above theory is the behaviouristic approach to explain internationalization which is often regarded as particularly relevant for SMEs (Aharoni 1966, Johansson-Vahlne 1977). A sequential process is

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[5] Government policies have for example played a vital role in the internationalization of Japanese SMEs during the 1980s (Fredriksson 1992).

[6] See also Dunning's (1977) eclectic approach. This approach is also known as the OLI theory, where O stands for ownership advantages (firm level), L denote location advantages (country level) and I represent internalization within firms (multinational firm level).

visualized, where close markets - in terms of geographical and cultural distances - are first exploited. Expansion to other markets then gradually proceeds, both in terms of markets and means of internationalization, ie export agents etc are substituted for sales affiliates and finally producing subsidiaries are established.

A more novel framework is introduced by Porter (1980, 1990). He conceptualizes factors that generate specific skills and abilities to the firms in the so called "diamond", which explicitly enumerate six factors that determine the competitiveness of firms of different nations. Since "diamonds" differ between countries, trade and internationalization takes place. Porter stresses that production factors are partly created and attributes the most important role to these factors in sustaining competitiveness on the firm level. The interlinks to the industrial network approach are close, where empasis is on the establishing and developing of networks in the internationalization process (Arthur-Hardy-Jones 1991, Johansson-Mattson 1988).

To summarize, the theories outlined above all stress the importance of developing some firm-specific asset or unique product that leads to competitive capabilities which can be exploited abroad. Different sizes of firms are associated with specific advantages as well as disadvantages. Therefore it can be expected that firms of different sizes are likely to cooperate and coexist, fulfilling different and complementary tasks, a conclusion forwarded already by Marshall (1890). One indication of such co-existence is that, on average, profit levels of SMEs match large firms quite well and even surpass them in some cases (Aigingen-Tichy 1984, Burns-Dewhurst 1986, Braunerhjelm 1991a).[7] The specific strongholds of SMEs are customization and prompt deliveries, paired with flexibility and related services. Furthermore, smaller units are claimed to attain higher cost efficiency as well

[7] One explanation forwarded on the impressive profit performance by SMEs relates to different managerial organisations in SMEs and LEs. The former are claimed to be managed by owners who are more inclined towards maximizing profits then hired management.

as having flatter, non-bureaucratic, organisations and highly motivated personel (Tichy 1989, Pratten 1991). As technologies during the last decades have been adapted to suit small scale production, SMEs are often better equipped to encounter heterogeneous and volatile demand with their closer and more direct links to the market. But new technology also imposes constraints on the SMEs due to increased demand for human capital encompassing the knowledge required to handle the more advanced technology.

The disadvantage of small size production traditionally relates to the financial side, in addition to scarcity of management and marketing knowledge. Difficulties in obtaining the necessary financial funds also put constraints on other strategic activities crucial for growth, such as marketing, which may induce a vicious circle. Research is also an area where SMEs are generally weak compared to large firms, while product development is regarded as an area where SMEs are competitive.

The Role of SMEs in Industrialized Countries

Before the future role of SMEs in internationalization and FDI activities can be assessed, past behaviour of SMEs must be reconsidered. Thus, how have SMEs evolved internationally and where is the impact of SMEs most notable? First, ever since Birch's (1979) study on SMEs - where it was concluded that approximately 80 percent of employment growth emanated from SMEs - attention has been directed towards employment effects.[8] This covers both quantatitive and qualitative aspects. The latter refer to the possibilities for entrepreneurs to exploit their ideas, freedom for employees to choose between organisations of different size etc.

[8] Birch's results are confirmed, and even reinforced, in a later study (Birch 1987).

Another important aspect is the contribution to technological development, and thereby on growth and dynamics, where opinions differ widely concerning the role of SMEs (Kamien-Schwartz 1975, Doctor-Van der Haorst-Stokman 1989). Adherents to Schumpeter would argue that large firms are the main promoters of "creative destruction" and technological progress, while for instance Rothwell-Zegweld (1982) claim that the efficiency of R&D is higher in SMEs and also that the innovation rate is proportionally much higher in smaller firms. A third view is that SMEs are primarily involved in the development and modification of existing technology whereas more research orientated activities are undertaken by large firms, ie the two categories complement each other (Abernathy-Utterback 1978, Pratten 1991). The two latter views imply a larger potential for FDI activities by SMEs.

The development of SMEs in the industrialized world - in terms of primarily employment shares - has recently been investigated in two publications, covering altogether 10 countries (Sengenberger-Loveman-Piore 1990, Burns-Dewhurst 1986). In addition, some extensive country studies have been undertaken, as for instance Evan's (1991) report on SMEs in US. All the studies report that SMEs have increased in importance in spite of bottlenecks in finance, managerial know-how etc.[9]

In Sengenberg et al (1990), the authors set off with the following statement. "Just a decade ago the idea that small enterprises might be seen as the key to economic regeneration, and a road to renewed growth of employment and the fight against mass unemployment, may have seemed eccentric or even absurd. Today this view seems much less far fetched. On the contrary, many observers from different traditions and political orientations embrace the idea, though they may disagree on why and how small firm expansion and dynamism have arisen."

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[9] For a different view on the US, see Brown-Hamilton-Medoff (1991). The authors claim that the alleged success of SMEs cannot be empirically verified.

In all countries covered in the studies mentionned above, an apparent shift towards smaller units of production in terms of employment in the postwar period is reported.[10] Moreover, in all countries - with one exception - this development coincides with a loss of the LEs' part of manufacturing employment. It also remarkable how robust these findings are despite the differences between countries with regard to industrial structure, institutional setting, size distribution, different legal framework, tradition and history. However, although the trend is similar in various countries, the extent of SME growth differs quite substantially among the countries. In Tables 1 and 2 it is shown how the employment share of small enterprises and establishments have evolved during the last three to four decades. Most countries seem to have experienced a shift towards smaller units in the late 1960s or in the beginning of the 1970s. This is particularly evident for establishment data on the total economy (Table 2).[11]

As mentioned above, SMEs are most important in the service sector and the size distribution in the total economy may therefore be influenced by the expanding service sector. However, this compositional shift explains only part of the shift to smaller production units (Sengenberg et al 1990). As shown in Table 3-4, even if the manufacturing sector is isolated, the tendency towards smaller units remains, even though it is weaker (with the exception of Switzerland). If establishment size is studied, the pattern is more clearcut (Tables 2, 4).

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[10] The countries are Denmark, France, Italy, Japan, Northern Ireland, Switzerland, The Republic of Ireland, The United Kingdom, The United States and West Germany. The same pattern is observed in Canada (Laroche 1989).

[11] Data on establishments are often more reliable then firm data. In Sengenberger's et al study, data have sometimes been collected from different sources which may influence the time series. In Tables 10.1-10.4, small implies less than 100 employees while medium refers to less than 500 employees, if nothing else is stated.

Table 1. **Employment shares by enterprise size, time series for the total economy.**

Japan	**1965**	**1968**	**1971**	**1974**	**1977**	**1982**	**1985**
Small	53.7	55	55.9	57	58.9	60	
Medium*			70	70.4	72.7	73.1	73
United States	**1958**	**1963**	**1967**	**1972**	**1977**	**1982**	
Small	41.3	39.9	39.9	41.3	40.1	45.7	
Medium	55.1	52.9	53.2	53.5	52.5	58.7	
France			**1971**		**1979**		**1985**
Small			39		43.4		46.2
Medium			57.4		60.7		64.5
West Germany	**1961**		**1970**				
Small**	54.9		52.3				
Italy	**1951**	**1961**	**1971**			**1981**	
Small	60.2	63.5	61.6			69.3	
Medium	73	77.1	74.4			81.5	
Switzerland	**1955**	**1965**		**1975**			**1985**
Small***	52.5	45.4		46.1			46.3
Medium	82	78.9		77.4			73.4

* 1-300 employees ** 1-200 employees *** 1-50 employees

Source: Sengenberger et al 1990.

Table 2. **Employment shares by establishment size, time series for the total economy.**

Japan		**1969**	**1972**	**1975**	**1978**	**1981**	
Small		70.1	71.5	73.8	76.1	77.1	
Medium*		83.1	84.2	85.6	87.5	88.3	
United States	**1962**	**1965**	**1970**	**1975**	**1978**	**1982**	**1985**
Small	51.3	51.5	49.5	54	54.4	55.1	55.9
Medium				76.9	77.7	78.6	79.8
West Germany			**1977**	**1979**	**1981**	**1983**	**1985**
Small			47	47.9	48.3	49.7	49.6
Medium			70.4	71.1	71.4	72.3	72.3
Italy	**1951**	**1961**	**1971**			**1981**	
Small	67.2	61.6	69.3			72.4	
Medium	82.6	82.2	85			87.3	
Switzerland				**1975**			**1985**
Small				66.2			69.3
Medium				88.2			89

* 1-300 employees

Source: Sengenberger et al 1990.

Table 3. **Employment shares by enterprise size, time series for the manufacturing sector.**

Japan*	**1955**		**1972**	**1975**	**1979**	**1983**	
Small	57		43	45	49	47	
Medium	85		63	65	68	67	
United States	**1958**	**1963**	**1967**	**1972**	**1977**	**1982**	
Small	20.6	19.1	16.3	16.2	16.2	17.6	
Medium	37.1	34.5	30.4	28.9	29	30.3	
France			**1971**		**1979**		
Small			26.4		28.6		
Medium			49.5		50.6		
WestGermany**	**1963**		**1970**	**1976**	**1980**	**1983**	**1984**
Small	14		12.5	13.1	15.4	16	16.2
Medium	39.6		37.3	38	40.4	40.8	41.1
Italy***	**1951**	**1961**	**1971**			**1981**	
Small	50.5	53.2	50.5			55.3	
Medium	67.4	72	69.2			73.9	
Switzerland		**1965**					**1985**
Small		34.8					29.7
Medium		71					69.4
United Kingdom			**1971**	**1975**	**1978**	**1981**	**1986**
Small			15.5	16.8	17.3	20.3	22

* In 1955 small is defined as 5-99 employees and medium size as 5-999 employees. ** Handicraft is included in the figures for 1980, 1983 and 1985. *** Small is defined as 1-49 employees.

Source: Sengenberger et al 1990.

Table 4. **Employment shares by establishment size, time series for the manufacturing sector.**

Japan	**1957**	**1962**	**1971**	**1977**	**1980**	**1982**	**1984**
Small	59	52	51	56	58	56	55
Medium*	73	68	67	71	74	72	72
United States			**1974**	**1978**	**1980**	**1982**	**1985**
Small			24.4	25.3	25.2	26.9	27.6
Medium			57.2	58.3	58.2	59.6	61.4
France	**1954**	**1966**		**1974**		**1981**	
Small	52	48		45		47	
Medium	75	74		72		73	
WestGermany**	**1963**		**1970**	**1976**	**1980**		**1984**
Small	20		18.5	19.6	18.3		18.6
Medium	48.2		46.6	48.3	47.6		48.5
Italy	**1951**	**1961**	**1971**			**1981**	
Small	54.2	56.9	54.6			59.1	
Medium	74.6	78.5	76.9			80.3	
Switzerland	**1955**	**1965**			**1975**		**1985**
Small	43.6	37.8			38.4		33.3
Medium	80.1	76.8			78.3		77
United Kingdom	**1954**	**1963**	**1970**	**1975**			**1983**
Small	24.2	20.2	18.4	19.7			26.2
Medium	56.5	50.9	45.4	45			53.2

* Medium is defined as 100-299 employees. ** After 1976 the figures include handicraft sector.

Source: Sengenberger et al 1990.

A picture of a movement towards decentralized organisation structures emerges since both enterprise and establishment sizes are diminished. Furthermore, the authors argue that size in itself is not decisive for

performance but rather the organisation of production and the underlying structure in terms of policies, networks etc, supporting the theorethical approach of Porter (Porter 1980, 1990). There is no evidence that sectoral or cyclical factors determine the expansion of SMEs. Instead, the expansion of SMEs seems to be connected with increased heterogeneity in consumer demand and the implementation of new technology allowing flexibility and high quality production.

Burns and Dewhurst (1986) reports similar results where all except one country belong to the EC. Irrespective of whether countries are small or large a pattern of growing SME sectors is quite evident. Their result contrasts with the general assumption that the harmonization within EC has primarily benefited LEs. Moreover, the process of concentration observed in the 1950s and 1960s has, according to the authors, not only ceased, but also been reversed.

Finally, the evolution of the small firm sector in the US will briefly be discussed. In an comprehensive study by Evans (1991) on US small firms (less than 100 employees), it is shown how their share of employment started to rise in the early 1970s after a continuous decline since the industrial revolution. Evans sets forth the following six conceivable hypotheses explaining this remarkable SME evolution:

- Technological change favoring small firms, eg lower computer costs.
- Integration of the world economy and the emergence of more competitive manufacturing production in LDCs which has caused a greater variablility in sales and exchange rates, favouring adaptive and flexible small firms.
- Increased participation of women has decreased average wages which may have enhanced the competitiveness of small firms.
- Changing consumer tastes where specialty products are more frequently demanded at the expense of massproduced standard goods, a sort of "boutique" effect.
- A relaxation of entry barriers.

- An increased propensity to start firms and, since firms tend to be small in their initial phase, their number has increased. Such increased startup propensity can be traced to increased returns to entrepreneurs and increasing unemployment.

Evans supplement his statistical description with case studies of five industries assumed to be of specific relevance for the small firm phenomena. He concludes that two effects have dominated the small firm growth; changes in technology and changing demand.

With regard to technology a Schumpeterian effect of creative destruction is claimed to have opened up entry possibilities for smaller firms. The case studies show that this effect has occurred either by decreasing the cost of entering or by diminishing the minimum efficient scale of production. Technological progress has also facilitated the implementation of high quality technologies in smaller units.

The demand effect has favoured production of "customized" goods which is an area where SMEs often have a competitive advantage.[12] The other conceivable factors put forward by Evans to explain the emergence of SMEs attain little support and are rejected.

The case of the Swedish SME sector

The purpose of this section is to describe how structural factors within the Swedish SME sector influences the prospects for internationalization in the 1990s. To acheive this end a comparison is undertaken between Swedish large firms (MNFs and domestic firms) and SMEs with regard to:

- Specialization in production, niches.
- Level of competence.

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[12] Toffler (1985) reached the same conclusion.

- Internationalization.

The two former factors are crucial determinants of the third. Furthermore, firms which already have experience of internationalization are assumed to be better prepared to embark on strategies requiring overseas production. It is argued that the information captured in these structural factors can be generalized to other countries in order to derive the potentials for FDI.

Being a highly industrialized country with a diversified industry and a long-standing tradition of free trade policies, Sweden is an excellent candidate for a case study of SMEs' internationalization. About 30 percent of GNP, or more than 50 percent of industrial production is exported. Although the Swedish economy is dominated by comparatively few and large MNFs, the SME share of manufacturing employment amounts to approximately 50 per cent (Lindquist 1991). It indicates a high dependence of many SMEs on the larger Swedish firms. Considering that most large Swedish firms stepped up their internationalization considerably during the 1980s - EC being the main recepient of Swedish FDI - it also implied a new situation for the SMEs.

For obvoius reasons, and in stark contrast to the ample studies on the internationalization of Swedish large firms (Swedenborg 1979, 1986) less attention has been directed towards SMEs. However, in a recent study Lindquist (1991) focuses on the internationalization process of small technology intensive Swedish firms.[13] It is concluded that technology-intensive firms experience a more rapid internationalization process than other SMEs, due to a combination of a limited range of products, few customers in the home country, high R&D costs and shorter product cycles. Technology consequently acts both as a push and a pull factor. Foreign direct investment is also higher in R&D intensive firms due to proprietary control reasons and the associated appropriability problems, supporting Hymer's et al theory

[13] SMEs and internationalization are also studied by Ghauri-Kumar (1989), Miesenbock (1989), Kothari (1989), Moen (1989) and others.

(Hymer 1961).[14] Another distinguishing feature of internationalized SMEs in Lindquist's study is a comparatively higher level of complexity, a higher software content and a high preparedness for customer adaptation.

According to Lindquist, foreign markets are often selected on strategic consideration like access to advanced customers, market potentials, competitive situation, demographic and skill factors, hence opposing the predictions forwarded by the behaviouristic school (Aharoni 1966 et al). In Lindquist's study, this is reflected in a much higher representation of Swedish SMEs in Japan and US than in many neighbouring countries.

This section relies heavily on a survey directed to 230 SMEs in Sweden during 1990, supplemented by depth interviews with 20 firms. The sample of 230 firms consisted of two subsamples: one containing a random sample of 100 small firms (less than 200 employees) belonging to the engineering industry and one consisting of a random sample of medium-sized subcontractors.[15] Together they are referred to as SMEs. The distribution between subcontractors and small firms is motivated by the particular circumstances expected to encounter subcontractors as their customers become more internationalized, just-in-time deliveries gain in importance etc.[16] The underlying population for subcontractors is dispersed over several industries, although heavily concentrated to the engineering industry (particularly the transport industry). Some characteristics of the respective groups are revealed in Table 5.

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[14] For a discussion of the appropriability problem see for example Williamson 1975, Magee 1977 and Teece 1983.

[15] Small firms are defined as firms employing between 20 and 200 persons while large firms consequently have more than 200 employees. Subcontractors are defined as producers of intermediate goods exposed to international competition (to avoid firms from the sheltered part of the economy) where at least 20 percent of production goes to one customer.

[16] See also Dunning in this volume.

Table 5. Average employment, turnover and rates of return for small firms and subcontractors, 1989

	Employment	Turnover (million SEK)	Rate of return on total capital (%)	Gross margin (%)
Small firms	53	30	n.a.	9
Subcontractors	220	100	9,9	7,3

Source: Braunerhjelm 1991a.

Production specialization by SMEs

In the survey sent to the firms, they were asked to distinguish between six different production segments:

- Simple processing of raw material.
- Contractual production of simple components.
- Other production of simple components.
- System production, sophisticated components.
- Investment goods.
- Other goods (consumer goods).

The distribution of production in the subcontracting industry is shown in Figure 1a. It illustrates that approximately 75 percent of production can be categorized into the segment of simple component or raw material production. Only 5,6 percent of production belongs to the advanced systems, while roughly 16 percent of production can be attributed to the production of investment goods.[17]

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[17] Admittedly investment goods are not typical subcontractor products. However, since several firms are producing both investment goods and intermediate products it was decided that this category should be incorporated.

Looking at the specialization pattern for smaller firms it is evident that these are much less inclined to simple components production (Figure 1b). Together with processing of raw material it only amounts to 43 percent while system production is twice as large as for the subcontracting group. Most striking is, however, that production of investment goods, often customized according to specific customer demand, reaches over 40 percent. It indicates a more vulnerable situation for the subcontracting industry, where dependence on few customers is much more pronounced, and where firms are primarily involved in simple component production which could easily be imitated by other firms elsewhere. Small firms are specialized in relatively more sophisticated goods, and accustomed to adapt their products according to specific customer demand.

The dependence on different categories of customers also varies widely between the two groups. From Figure 2a it is obvious that subcontractors have a considerably closer link to large Swedish MNFs. In a process of intensified internationalization of the customer firms, subcontractors encounter special requirements in their adaptation to the new conditions. They have to ponder whether they themselves should internationalize, ie follow their customers and set off a bandwagon effect, or seek alternative ways of serving their customers. An internationalization process is coupled with considerable financial risks and requires special competences, a matter which will be elaborated further below.

Again, the group of small firms seems to be in a quite different position as depicted in Figure 2b. The dependence on Swedish MNFs is much less pronounced and the major part of customers belong to non-MNFs which are locally situated. Although many of these will also be affected by a global or regional deregulation, as the EC 1992 program, the probability of maintaining these customers is much higher, especially since products of small firms are often customized and after sales-services constitute an important ingredient in the package sold. In addition, local firms may have access to a local network which could be of value for customers.

The type of customers differs markedly between producers of different intermediate products, and in Figures 3a,b a clear pattern emerges. In the subcontracting group the producers of components sell up to 80 percent of their production to Swedish MNFs. For more sophisticated producers of systems and investment goods, the role of Swedish MNFs diminish substantially. Notably, most of the exports are within the group producing systems, suggesting that these firms have developed a certain skill - niche production - on which they base their international competitiveness. Exports by smaller firms are generally lower and the smallest system producers are closely tied to the Swedish MNFs. Hence, one interpretation is that the smallest system producers initially supply the large, advanced customers on the home market and, as they become bigger, turn to the international market. Such a development could be explained in terms of lack of knowledge of the foreign market, striving to reduce risks and costs by taking advantage of their customers' relations etc, which conforms with the network approach (Håkansson 1982, Spencer-Valla 1989, Arthur et al 1991).[18] Hence, acquiring and developing special competencies and know-how, ie niche production, seems to be the key to export successes.

Competence

The questionnaire sent out to firms also contained questions concerning the competence level. Scholars in business economics have often attributed lack of competencies in especially management as the main explanation of inferior business performance.

Competence is a multi-dimensional concept and there is no generally accepted definition.[19] It includes competence in production, marketing, organisation,

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[18] See also SIND (1990a,b) for similar conclusions.

[19] For a discussion of business competence, its composition, and the evolution of the concept in the economic literature, see Carlsson and Eliasson (1991).

distribution, R&D etc, ie all the elements that constitutes the ability to run a business successfully. It will always be tacit to a certain extent, partly related to entrepreneurial capacity, but also due to luck and other non-measurable factors. In the long run it should be revealed in firms' ability to sustain a high level of profit. Despite the difficulties associated with the measurement of competence, the questionnaire contained a limited number of variables related to competence. These were R&D expenditures, marketing and education expenditures and finally, the composition of the labor force within firms. Further, the distribution and level of profits within and between the different groups of firms will be shown. In fact, for all of the competence variables a comparison will be made between LEs, subcontractors and small firms.[20]

In Table 6 the average outlays on R&D, marketing and education - as reported in the firms' financial statements - are given. The difference between large firms and the SMEs is striking. R&D expenditures are six times higher in large firms than in subcontractors and about 11 times higher than in smaller firms. In marketing, although for the majority of large firms only domestic marketing expenditure is included, large firms display the highest expenditures, especially compared to subcontractors. This reflects the close links that subcontractors often have to a limited number of customers which makes marketing efforts less urgent. Education costs are more evenly dispersed between firms of different size, even though the SMEs report the smallest figures. On the other hand, as in-depth interviews with the firms reveal, less formal and more "on the job" training seems to be particularly important in the group of small firms.

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[20] Data on LEs emanates from a survey to 260 firms in 1989 (Braunerhjelm 1990).

Table 6. R&D, marketing, and education expenditures as percentage of total costs in small firms, subcontractors and large firms, 1989

	R&D	Marketing	Education
Small firms	.8	4	.3
Subcontractor	1.5	3	2
Large firms	9	5	2

Source: Braunerhjelm 1990, 1991a.

Table 7 pictures the differences in composition of labor forces between the three groups of firms. The five categories are ranked in descending order with regard to competence, defined as their profession status, not formal training and education. Notably, large firms have more than 40 percent of their labor force in the three higher skill categories whereas subcontractors are dominated by the least skilled employees.

Table 7. The skill composition of the labor force in small firms, subcontractors and large firms, 1990

	Small	Subcontractors	Large firms (1989)
Executive staff	5	3	2
Specialists, middle management	9	7	11
White collar	16	15	29
Skilled worker	46	35	25
Unskilled worker	24	40	33
Total	100	100	100

Source: Braunerhjelm 1990, 1991a.

The higher proportion of service related employees in the LEs could of course be due to exaggerated bureaucratic organizations. However, a more plausible interpretation is that the large firms, working in highly competitive international markets, are dependent on a large and sophisticated internal "service" sector, necessary to sustain and upgrade their international competitiveness. It is within these services activities that strategic competencies and competitiveness are created. Areas like marketing, finance, computer knowledge, logistics, and R&D, are of crucial importance. If these functions are necessary for international competitiveness, then the gap between large firms and particularly subcontractors is obvious. Note that the small firms are more abundantly endowed with skilled personnel than subcontractors. As shown in other studies, only a minor part of large firm employees are involved in the actual production of the goods (Eliasson 1991b).

Profits could also be regarded as a measure of competence and the distribution of firms of different size can be represented in a Salter diagram (Figure 4).[21] The firms are ranked such that the firms exhibiting the highest profit rates are situated in the left area of the figure.[22] It is apparent that the smaller firms and the larger firms are distributed in a similar way, whereas subcontractors is overrepresented in the lower right end, displaying comparatively weaker profitability than the other groups. Hence, again subcontractors seem to be in a worse position compared to LEs and the group of small firms.

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[21] Profits are defined as the real rate of return over the real interest rate on long-term bonds.

[22] Since each firm is represented by a pillar where the width of the base is determined by the number of employees and the heigth of the level of profit, the drawback of such an illustration is that the smallest firms becomes extremely tiny (the dotted areas).

Internationalization

Has the long standing tradition of free trade policies in Sweden encouraged internationalization by the Swedish SMEs? Such internationalization would facilitate the adjustment to a more integrated world. However, the degree of internationalization of the Swedish SMEs is generally quite low, in particularly with regard to FDI. Still, over the last 30 years the number of Swedish small firms (less than 200 employees) with production abroad has almost tripled (Table 8).

Table 8. Number of Swedish small MNF with production units abroad

Year	1965	1970	1974	1978	1986	1990
Number of firms	8	7	9	15	18	23

Source: IUI surveys 1965, 1970, 1974, 1978, 1986, 1990

The performance differs quite markedly among firms and between the groups, ie small firms and subcontractors. On average, Swedish SMEs account for approximately 7 percent of total Swedish exports. Measured as a percentage of total sales by SMEs, the figure amounts to 20 percent, where the most important market is the member countries of the EC (excluding Denmark).

In the present study, internationalization aspects are limited to exports and the establishment of subsidiaries abroad. There are no data on sales agents,

licenses, agreements with distribution chains, franchising, etc.[23] Some evidence concerning plans of establishment abroad will also be accounted for.

The tables 9a-b reveal that the EC is by far the most important market followed by the market category "rest of the world", while the Nordic ocuntries receive the smallest share of the SMEs' export. This is consistent with Lindquist's (1991) findings and contradicts the sequential approach described above (Aharoni 1966 and others). Interestingly enough, the export share to EC has increased for subcontractors while remaining constant for the smaller firms. A suggestive interpretation is that the massive FDI undertaken by Swedish MNFs during the 1980s in the EC, has had a pull effect on exports from the domestically located subcontractors. This is also confirmed by total sales being more or less constant during the period. Note also that exports to the rest of the world have fallen during the same period. In the short run it is difficult to change existing delivery structures, although in the long run these firms will be exposed to competition from foreign firms (and others). However, it also opens up possibilities for subcontracting firms to proceed and intensify their internationalization, since this is a relatively inexpensive way to establish contacts with other firms and markets.

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[23] Some regional studies show that Swedish small firms have taken precautionary actions due to the 1992 program, aiming at internationalization. In a study of South-East Sweden it was shown that over 60 percent of the small firms had taken some action to promote export of their products, ranging from contacts with sales agents to the establishment of production units abroad. The most frequent measure was participation in different fairs and likely events. The smaller the firms, the less measures had been taken (Andersson 1991, Karlsson-Larsson 1991).

Table 9a. The distribution of subcontractors' exports on different regions, percentage, 1988-1990

	EC	Nordic countries (except Denmark)	Rest of the World
1988	59	17	24
1989	59	15	26
1990	64	16	20

Source: Braunerhjelm 1991a.

Table 9b. The distribution of small firms' exports on different regions, percentage, 1988-1990

	EC	Nordic countries (except Denmark)	Rest of the World
1988	44	20	36
1989	41	24	35

Source: Braunerhjelm 1991a.

As far as production abroad is concerned, the smallest firms have virtually no foerign establishments, while subcontractors report that the overwhelming part (99 percent) of production is located within Sweden. Likewise, employment is to 95 percent tied to Sweden, where the discrepancy between production and employment is explained by more sales employees abroad. According to the planned future activities, a modest increase in foreign market is reported (Table 10).

Table 10. Distribution of Swedish subcontractors production on different regions, percent, 1988-1992

	Production			Employment	
	Sweden	Nordic countries	EC	Sweden	Abroad
1988	99	.5	.5	95	5
1989	99	.5	.5	95	5
1990	99	.5	.5	n.a.	n.a.
1992 (planned)	98	.5	1.5	n.a.	n.a.

Source: Braunerhjelm 1991a.

This section has focused on three strategic factors - specialization, competence and internationalization - with the aim of detecting strengths and weaknessess in the Swedish SME sector. It is argued that these structural factors reveal the potentials for internationalization and FDI and, moreover, can be generalized to other countries. What conclusions can then be drawn from the case study?

Overall, and in accordance with earlier empirical studies and the theoretical approach emphasizing firm-specific assets, it seems as if firms with some unique capability or competence are most succesful on the international market. More specifically, subcontractors are stuck with problems of a more structural character than small firms in general. They are more deeply involved in production of relatively simple components that do not require any particular skill or knowledge, they are more dependent on Swedish MNFs, and their internationalization degree is quite low. The latter circumstance is also true for the smaller firms but, since their customers are more local, it is of less concern. Moreover, subcontractors employ by far the largest proportion of unskilled labor and also display a lower profit performance then the other groups. Their problems are further aggravated by their customers' attempt to

outsource part of the R&D activities on subcontractors at the same time as reductions in prices are demanded. To embark on internationalization, or to move production into more specialized and sophisticated segments, constitute very delicate tasks under these circumstances. Such events are both risky and costly, especially as they coincide with a business recession. Many Swedish subcontractors have also been squeezed out of the market as their customers have been dissatisfied not only with prices, but also with quality levels.

Prospects for small firms and subcontractors in the 1990s; Some concluding remarks

The 1960s and 1970s were characterized by the establishment of large scale production units, designed for mass production of standardized goods. Organization of production followed Tayloristic and Fordistic principles, resulting in bureaucratic and hierarchic structures. Strategies to develop and sustain the competitive edge of firms was predominantly geared to low costs while less attention was paid to differentiation and quality. During the 1980s a phase of increased internationalization started, leading to stronger interdependence across national borders as firms became more global. At the same time demand shifted towards more differentiated, high quality products. As internationalization proceeds through the dismantling of trade barriers, continued integration efforts, improved and less expensive transportation systems etc, competition can be expected to increase and be extended to more sectors in the 1990s. Traditionally home market orientated firms in industrialized countries will hence become more exposed to foreign competiton.

However, the last two to three decades have also been characterized by an impressive revival of SMEs in terms of employment shares, creation of value added and profit levels. The demand effect of rising income has stimulated production of differentiated, customized products at the expense of homogeneous, mass produced and less expensive products. Not only can a

"boutique" effect - through heterogenous consumer preferences - be detected, but there is also shift toward more services which favours SME production. Furthermore, new technology, in particular information technology, yields new business oppurtunities. Since firms tend to be small in their initial phase, it suggests that technological shifts spur entrance of SMEs and thereby increase their proportion in industrial production. Furthermore, as argued by for example Gibb (1992), the potential for disaggregation in LEs is enormous. The arguments for such "externalization" of more peripheral production by LEs have, in its short-hand version, been alluded to the KISS-factor (Keep It Simple and Small), while more detailed versions also includes efficiency and cost factors in addition to attempts to let loose more of entrepreneurial spirits. Hence, income effects, technological progress and externalization can be expected to continue to support this trend, as will the entrance of new actors - NICs and "new" NICs - to the international arena.

In view of the development of SMEs during 1970-1990 - and the case study of a highly internationalized country - what can be said about the future internationalization of SMEs and their engagement in FDI? Furthermore, which strategies should - or must - they adopt to survive in the intensified competitive pressure expected in the 1990s? Obviously, FDI activities depend on both firm specific factors and ties and networks between firms and markets in which they operate. The avenue chosen will depend on the capability and characteristics of each particular firm. Some conceivable strategies are illustrated in Table 11.

Table 11. Strategies for small firms and subcontractors in the 1990s

	Strategy	**Internationalize**		**Niches,know-how,technology**		**Remain local**	
SME		FDI	Export	Net-work	R&D	Local hero	Foreign master
Advanced subcontractors		X	X	X	X		
Other Subcontractors		X		X			X
Advanced small firms		X	X	X	X		
Other small firms				X		X	X

The matrix does of course not cover all conceivable strategies or combinations of strategies, rather it presents some main alternatives. Moreover, although the strategies in the matrix give a static impression, it also entails dynamic effects. Hence, several of them implies growth of the firms. In fact, firms may grow out of their definition, ie becoming large enterprises. With these caveats in mind, the matrix suggest that advanced subcontractors, producing systems or operating within niches, should embark on FDI as their customers establish production abroad. It could also be necessary in order to get access to important networks which, in addition to continous R&D, is decisive in order to upgrade and sustain their skill level. However, depending on the degree of specialization, volumes produced etc, export may also be an adequate strategy for some advanced subcontractors.

For simple assembly of low-tech components, FDI is required in markets where production costs are competitive.[24] Otherwise such production can easily be taken over by firms in those countries. For neither of the two types of subcontractors is the "local hero" alternative, ie to gain a strategic position on the local market, a viable strategy. The advanced producers have to spread their R&D costs on a much larger market while less advanced producers will be outcompeted by cheaper foreign supply. Surrending to a "foreign master" and becoming a "secondary" subcontractor may however be a relevant strategy. Especially less advanced producers will get involved in such types of mergers and acquisitions. For small firms the options are almost identical although the "local hero" possibility is probably a more relevant strategy, especially for the less advanced. In this adjustment process a large number of SMES will fail and exit from the market, either due to take-overs or because of closings.

In all the strategy options, the formation of networks (broadly defined) is regarded as vital for success. Networks are claimed to increase flexibility, induce a higher sensitivity to the price mechanisms and to enhance learning (Asanuma 1991, Westley 1991). As networks, and network externalities, are judged to become strategically more important, they will also influence the pattern of FDI. Clustering is likely to occur since the location of large customer firms will be more influenced by such non-traditional factors as the regional composition of firms, skill levels, education etc. In addition to the possibility of exploiting network externalities this will induce SMEs to undertake FDI in certain areas. This is already taking place in Europe. Examples are the clustering of biotech firms in the south of France and the regional clustering of part of the engineering tool industry in Germany. Hence, depending on the capability of the respective firm, FDI will be located in different areas or regions. From such regional clustering of specific capabilites and competencies, a pattern of regional comparative advantage will emerge.

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[24] Compare with the textile industry where the more labor intensive stages in the production process has been located to countries where labor is relatively cheap.

With regard to the subcontracting industry, the adjustment and reorganization in the US in the last decade sets an interesting example. In the US, deregulation of the transport market and increased local presence by Japanese subcontractors - a development which is now also taking place in Europe - prompted a reorganisation of the subcontracting industry. The prime reason for the Japanese subcontractors to establish production in the US was protectionistic threats. First, Japanese car producers took up production in US to evade export quotas. However, they maintained a substantial share of import of components from Japan which induced a discussion of whether so called "screw-driver" - i.e. assembly of imported components - production should fall within the export quotas or not (compare the present discussion within EC). As a result, Japanese subcontractors followed suit and today approximately 300 Japanese subcontracting firms are represented in the US.[25] Through their presence, and their habit of undertaking part of the R&D themselves, they increased the pressure on the domestic US firms to restructure. The difference between the US and the European subcontracting industry can be illustrated by the fact that US today has 5 producers of exhaust systems whereas Europe has 18. There are many similar examples and it indicates the extent of the adjustment process to come in Europe.

A related question - and decisive for future FDI by SMEs - is of course whether the success of SMEs will continue? Obviously, size is by no means a guarantee for economic superiority. The most frequent explanations to the decreased importance of size relates to exogenous turbulence on the international markets, instability of demand, and technological acheivements which have lowered the cost of capital. According to several scholars in business economics, this trend can be expected to continue in the 1990s, where the base for competitiveness of firms continues to shift from low costs to

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[25] In 1990 the number of Japanese manufacturing companies within EC increased by 147 to a total of 676 whereof 34 could be classified as subcontractors.

quality, flexibility and innovations.[26] As evident from the case study and several other investigations, firms with specific knowledge and capabilities are best equipped to internationalize. Rapid learning will become a key factor as lead times shorten and the speed of technological progress is intensified. These dynamic sources will shape the success or failure of firms, and the skill level of employees will become even more important. Networks will become more complex, and extended, to substitute for traditional structures of vertical integration in order to reduce structural rigidities within the firms. As a result, firms will be more organized in a "fleet-of foot" manner, designed to respond quickly to changes in local production conditions by relocating to other regions or countries. Furthermore, non-traditional resources such as level of education, R&D, potential and existing networks, will increasingly govern locational decisions by firms in the 1990s (Grant 1991).

Most of this is promising for the smaller firms in the 1990s. The "boutique" effect is likely to remain - assuming that income will remain constant or increase - where SMEs can respond to local differences in preferences. Furthermore, their flexibility enables swift reactions to changes in demand and in addition the local presence often certifies that service and maintenance can be supplied adequately. As international competition intensifies, SMEs can exploit their strength of small, flat organisations and flexible organisations, promoting high "economies of learning". All these factors seem to be positive for SME production, although there are some caveats to this story. First, past evolution of SMEs is blurred by the fragmented knowledge on the birth and death of firms and its effect on the distribution of firm size. If mainly LEs exit from the market it would render the impression that SMEs increases. Related to this is the question of "externalization", networks and how subsidiaries are treated in the statistics. Further, it should be noted that the changes in size distribution are measured in terms of employment. Obviously, if a large firm substitutes labor for more capital intensive techniques, while production remains constant, it is hard to argue that the firm has diminished in size

[26] See Grant (1991) for a survey.

(Carlsson 1992, Carlsson-Taymas 1992). Hence, employment measures should perhaps be complemented with other measures.

There are also threats of another nature to SMEs, for example the indications that large firms are re-organizing to capture part of the advantages associated with SME production (Grant 1991, Buckley-Casson 1992). One aspect of this, using Porter's terminology, is multi-domestic production, implying that large firms establish production plants in a large number of countries where the objective is to adapt to specific local requirements - become local - by flexible and relatively small units. At the same time, R&D, marketing and other strategic, and costly, activities are concentrated to exploit economies of scale. Sometimes basic component production could also be concentrated to a few units, leaving the local adaptation to the respective plant. Hence, large firms may embark on strategies combining economies of scale and economies of scope, where the latter are derived from a multi-plant organisation of production. This would probably restrain FDI by SMEs.

To conclude, the success of SME production in industrialized countries is expected to continue in the 1990s, perhaps though at a lower rate. International deregulation will foster intensified competetive pressures in traditionally sheltered areas, implying that an adjustment process - where internationalization will be one ingredient - is inevitable for a large part of the SME sector. However, although trade liberalization carries on smoothly in different parts of the world (EC, NAFTA, LAFTA etc), the prospects for global deregulation is less evident. Threats of regionalization of trade as barriers may be erected, or kept, between the triad powers (Europe, Japan, USA), cannot at present be neglected. This will induce tariff-jumping FDI between these three regions where the Japanese FDI within the EC during the last years is one example.

The extent of FDI by SMEs can only be assessed in qualitative terms - it will increase - while quantitative predictions will be extremely shaky. However, something could be said about the direction. Subcontractors producing

sophisticated components or systems will establish foreign subsidiaries where they expect network externalities to materialize and where customer firms locate. This will encourage clustering in areas where factor markets (notably skilled labor) or product markets are especially attractive, ie in the industrialized countries. Low-tech subcontracting production has to relocate production into areas where production costs are competitive, indicating increased FDI in Eastern Europe and other semi-developed countries.

For SMEs in general, producing in a high-tech niche, the necessity to exploit network externalities from advanced customers and suppliers - often scattered all over the world - will induce increased FDI. These will be concentrated to Europe, US and Japan. To promote the right setting, or investment climate, for LEs, it is quite conceivable that countries will increase their efforts in the future to attract location by strategically important SMEs. Whether less advanced SMEs engage in FDI depends on the characteristics of their customers, especially whether they are local and if they demand customized products. Structural characteristics - and strategic actions taken today - as specialization in production, internationalization and competence level, will set the future path for the SMEs.

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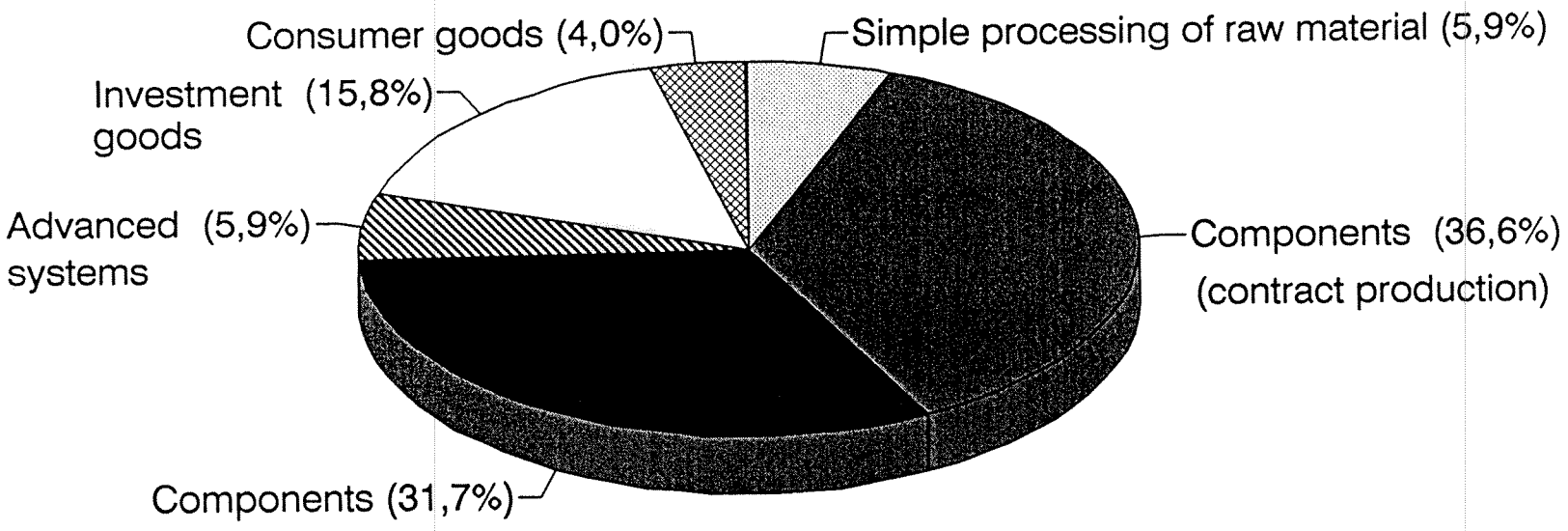
Figure 1a Production of subcontractors distributed on different product groups, 1990



Source: Braunerhjelm 1991a

Figure 1b Production of small firms distributed on different product groups, 1990

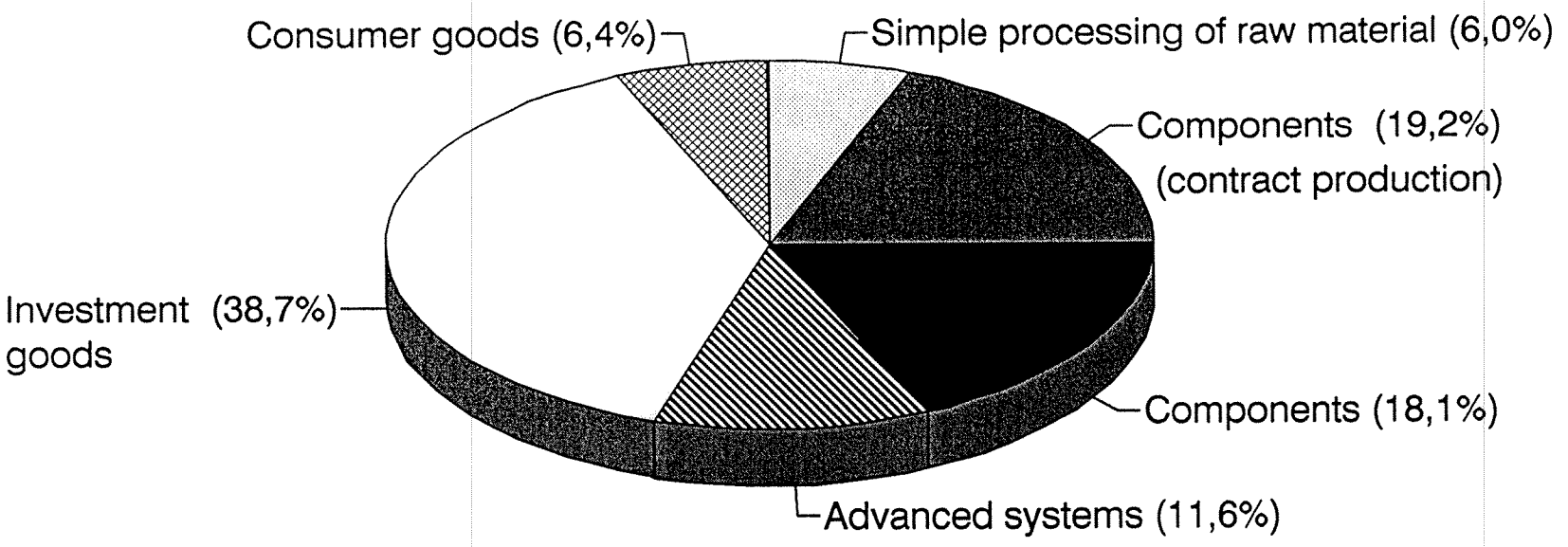


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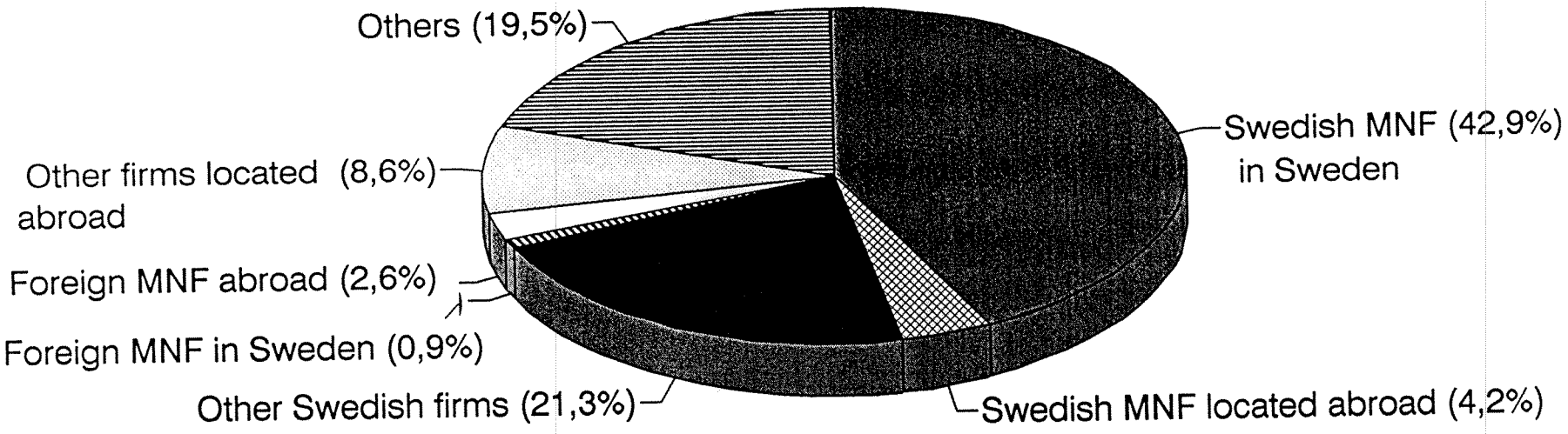
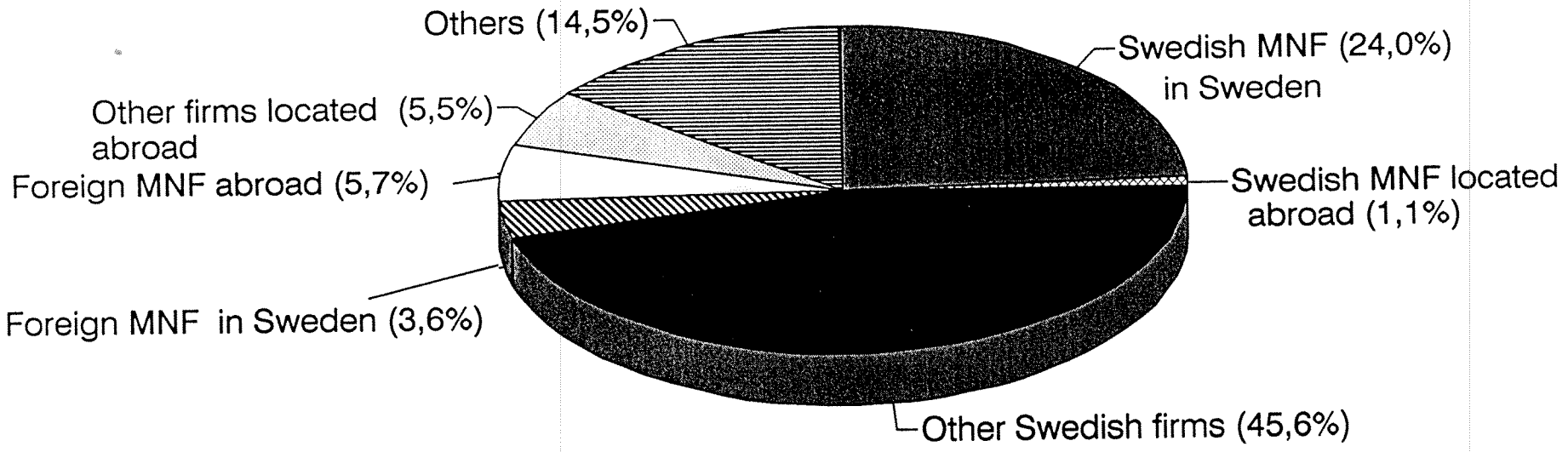
Figure 2a The deliveries of subcontractors to different groups of customers, 1990



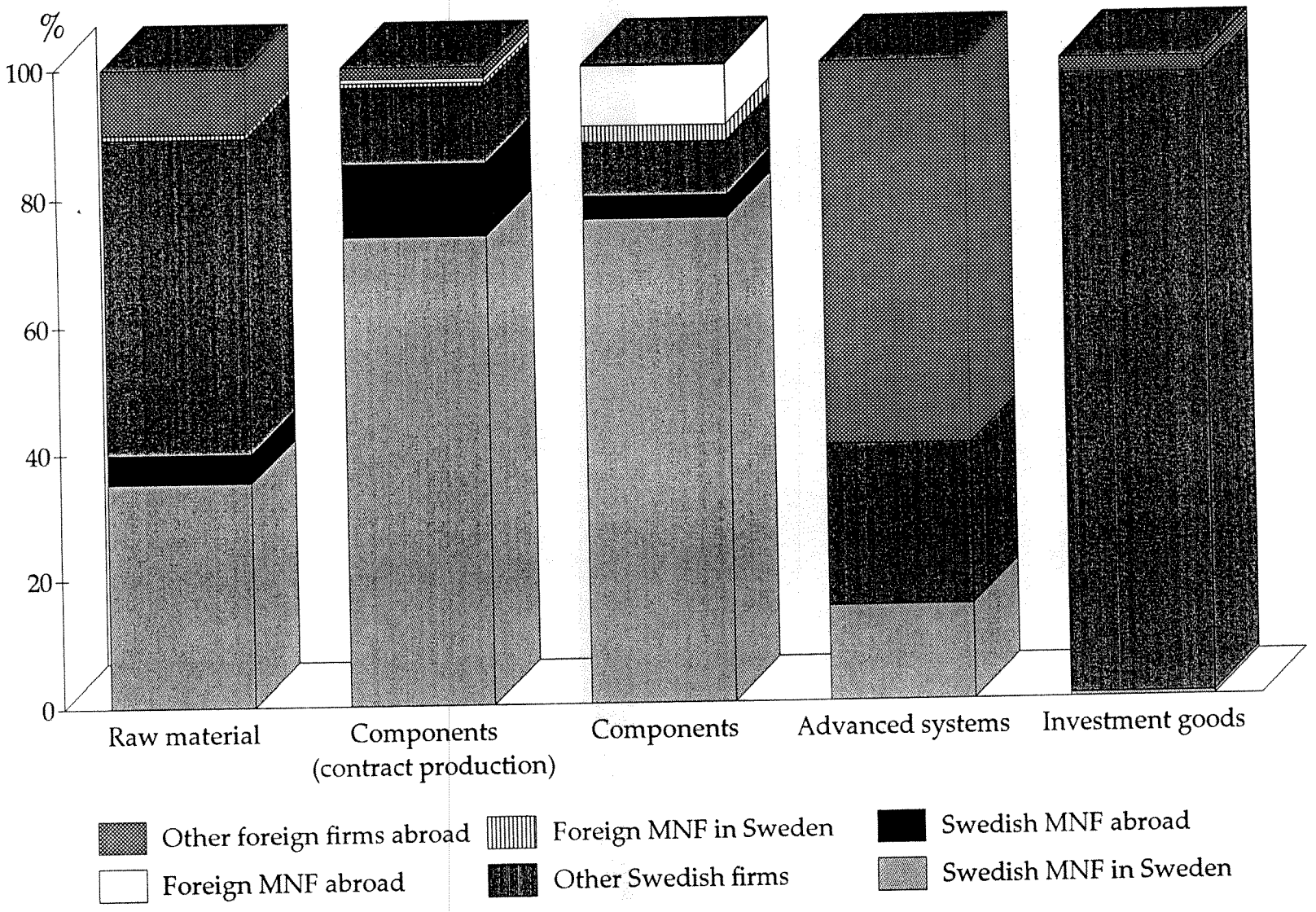
Source: Braunerhjelm 1991a

Figure 2b The deliveries of small firms to different groups of customers, 1990



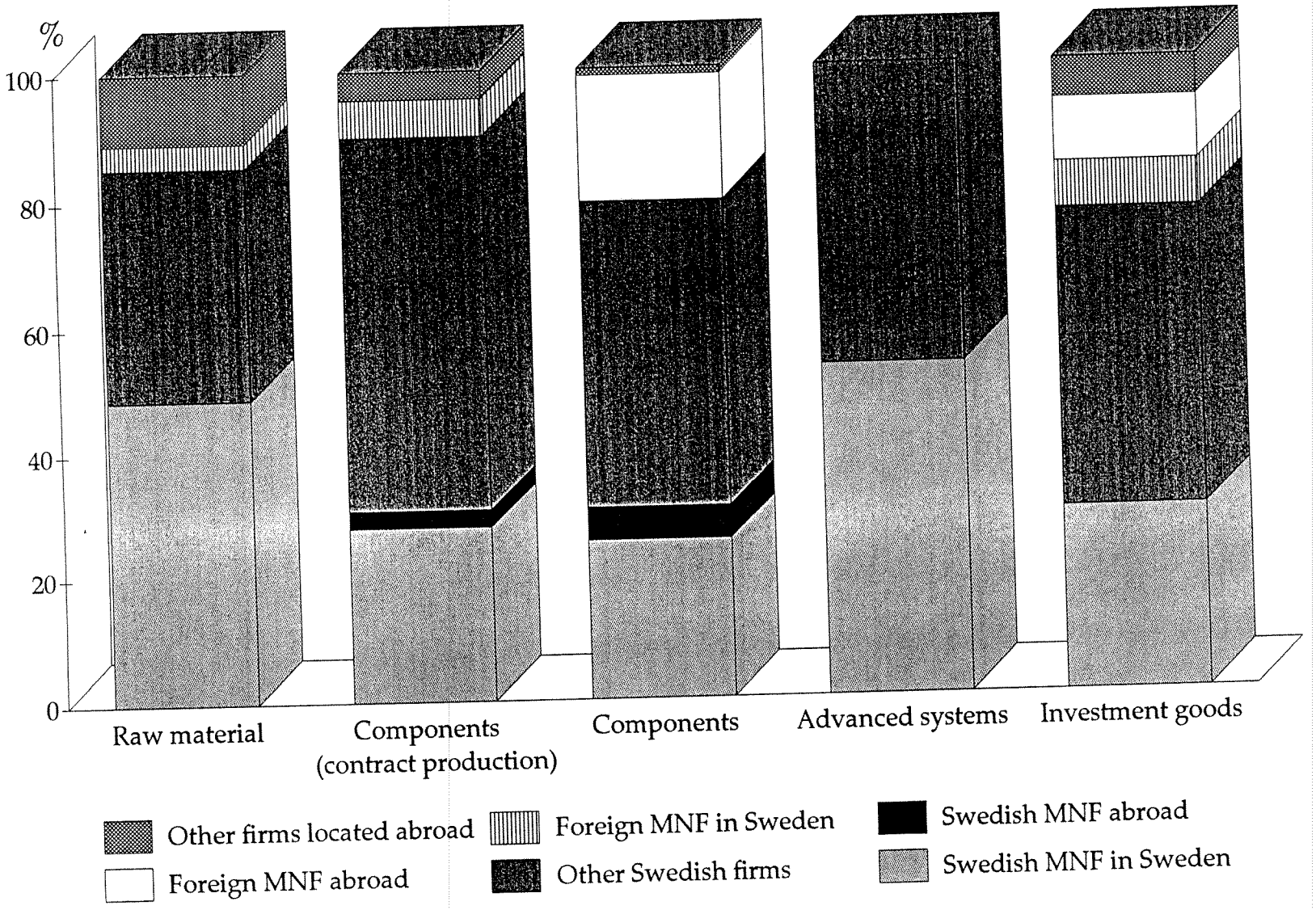
Source: Braunerhjelm 1991a

Figure 3a **The composition of customers in different subcontracting production, 1990**



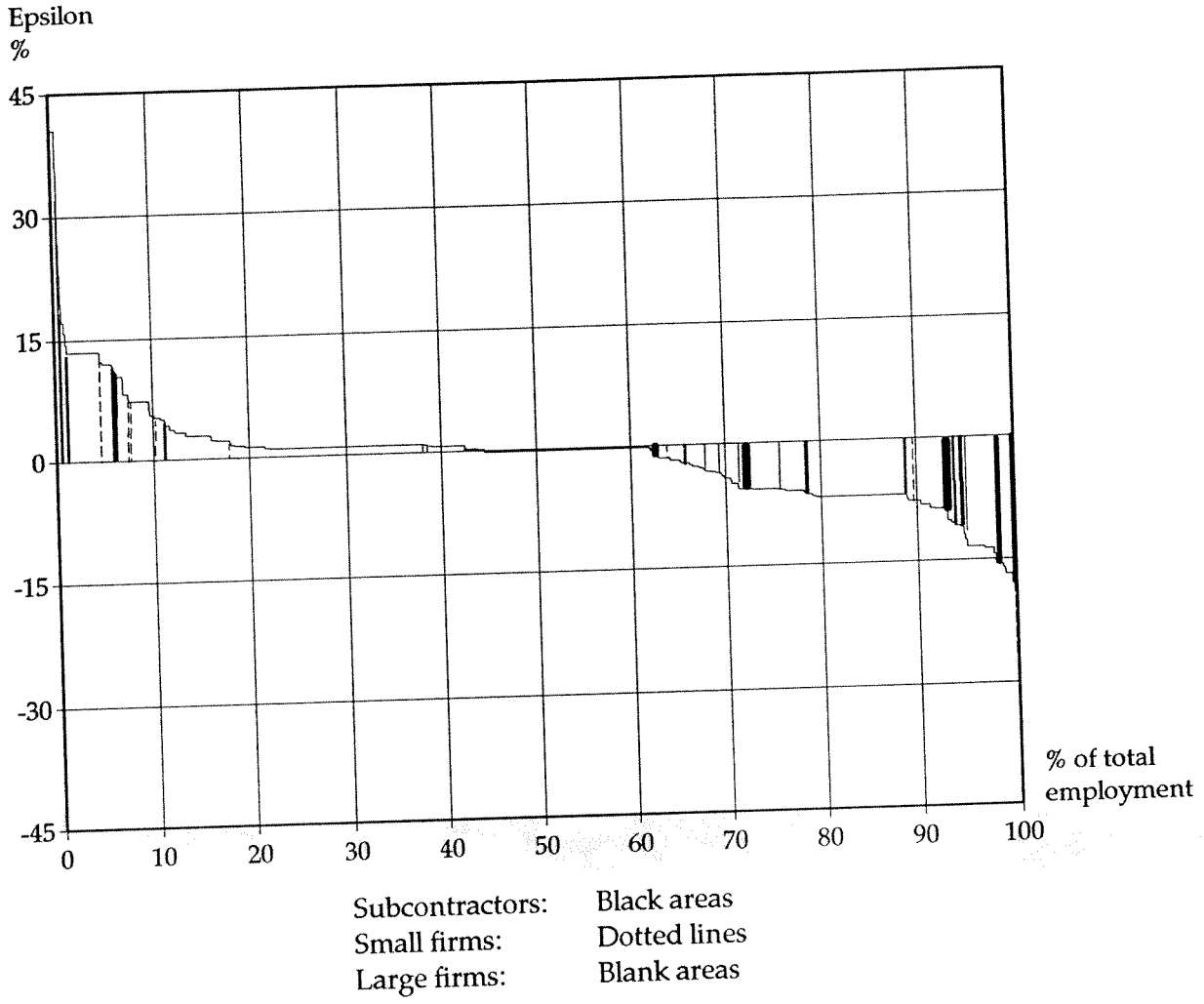
Source: Braunerhjelm 1991a.

Figure 3b The composition of customers in different small firm production, 1990



Source: Braunerhjelm 1991a.

Figure 4 **Rate of return over the interest rate (epsilon) of small firms, large firms, and of subcontractors, 1988**



Source: Braunerhjelm (1991).